

Male pygofer with fewer than 10 setae; plates distinctly narrowed apically, with three to five setae, two-thirds length of pygofer; connective expanded and bifid apically, approximately equal in length to style; style with preapical lobe rounded, apical extension curved laterad; aedeagus robust, curved dorsally, shaft in lateral view bulbous from midlength to apical fifth which is conspicuously narrowed, bifid apically in posteroventral view.

Color basically stramineous; legs brown; pronotum and scutellum with a longitudinal median bright yellow line, a yellow line on either side of median line on pronotum; forewings semi-opaque with irregular bright yellow markings, third apical cell with costal two-thirds marked with a darkened band that extends slightly into the antepical cell area.

Holotype male, Rio Caraquata, Matto Grosso, Brazil, March 1953, (F. Plaumann); one male and one female paratype, same label data (KU).

*Balclutha delongi*, new species, appears to be closely related to *B. lineata* (Osborn) but can be distinguished by the shape of the aedeagus. This species is named in honor of Dr. Dwight M. DeLong of Ohio State University.

#### LITERATURE CITED

- Blocker, H. D. 1967. Classification of the Western Hemisphere *Balclutha* (Homoptera: Cicadellidae). Proc. U. S. National Museum 122(3581): 1-55.

## NEW SPECIES OF CRANE FLIES FROM TROPICAL AMERICA. IV. (Diptera: Tipulidae)<sup>1</sup>

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#### ABSTRACT

New species of crane flies include *Austrolimnophila* (*Austrolimnophila*) **byersiana** and *Limonia* (*Neolimonia*) **scabristyla**, from Mexico; *Limonia* (*Dicranomyia*) **borinquenia**, *Limonia* (*Dicranomyia*) **torulosa**, *Shannonomyia* **parvicellula**, *Hexatoma* (*Eriocera*) **luteicolor**, and *Hexatoma* (*Eriocera*) **melanonota**, from Puerto Rico; *Teucholabis* (*Euparatropesa*) **angustifascia**, from Peru; *Teucholabis* (*Teucholabis*) **homilacantha**, from Ecuador; and *Teucholabis* (*Teucholabis*) **megaphallus**, from Colombia.

The species discussed at this time are from Middle America and northern South America. Two species from Mexico were collected by Dr. George W. Byers, several others from Puerto Rico by Dr. Harry D. Pratt, Julio Garcia-Diaz and Jenaro Maldonado Capriles, the re-

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maining species being from Colombia, Ecuador and Peru, taken by Juan Foerster and Luis E. Peña. My sincere thanks are extended to the various collectors for the privilege of studying these interesting species. Except where indicated otherwise the types of the novelties are preserved in the Alexander Collection.

*Limonia* (*Dicranomyia*) **borinquenia**, new species

Allied to *trinitatis*; general coloration of body dark brown, praescutum light brown medially; wings dirty white with a conspicuous pale brown crossbanded pattern that includes about five areas before the cord and two beyond, the bands narrower than the ground interspaces; *Sc* short, *Sc*<sub>1</sub> very long, cell *M*<sub>2</sub> open by atrophy of *m*; male hypopygium with the ventral dististyle very large and fleshy, its area nearly five times that of the basistyle.

*Male*. Length about 5–5.5 mm; wing 6–7 mm; antenna about 0.7–0.9 mm.

*Female*. Length about 4–4.5 mm; wing 5.5–6 mm.

Rostrum brownish black, palpi black. Antennae short, brownish black to black throughout; flagellar segments short-oval to oval, the first and last longer, verticils subequal to the segments. Head dark brown.

Pronotum brown, darker laterally. Mesonotal praescutum light brown to chestnut brown medially, the lateral stripes darker, continued across the suture to include the scutal lobes, scutellum and postnotum darker brown. Pleura dark brown. Halteres with stem yellowed, knob dark brown. Legs with fore coxae dark brown, remaining coxae and all trochanters yellowed; remainder of legs brownish yellow, terminal tarsal segments darker. Wings with ground dirty white, with conspicuous pale brown crossbanded pattern that includes about five such bands before cord and two beyond, the bands about one-half as wide as the ground interspaces; band at arculus darker, not involving the Anal cells; stigma brown, its center paler; veins light brown, not appreciably darker in the patterned areas except in the costal field. Venation: *Sc* short, *Sc*<sub>1</sub> ending opposite origin of *Rs*, *Sc*<sub>2</sub> far retracted, *Sc*<sub>1</sub> alone about one-half longer than *Rs*; cell *M*<sub>2</sub> open by atrophy of *m*; *m-cu* before fork of *M*, in cases the distance subequal to its own length.

Abdominal tergites and hypopygium dark brown, sternites paler. Male hypopygium with tergite relatively long, narrowed outwardly, posterior border with a shallow emargination, each lobe with relatively few setae; tergal margins and central bar not heavily sclerotized as in *trinitatis*. Basistyle small, ventromesal lobe oval. Dorsal dististyle a strongly curved yellow rod; ventral style very large and fleshy, its area approximately four to five times that of the basistyle; rostral prolongation small, with two slightly separated straight spines that are a little shorter than the prolongation. Gonapophysis with mesal-apical lobe relatively small, curved gently to the acute tip.

Holotype, male El Yunque, Luquillo National Forest, Puerto Rico, in Sierra Palm association, at light, altitude 2,600 feet, May 25, 1945 (H. D. Pratt). Allotopotype, female. Paratopotypes, numerous males and females, May 25-30, 1945.

Although it is similar in general appearance to the Cuban *Limonia* (*Dicranomyia*) *trinitatis* Alexander, the present fly is quite distinct in hypopygial characters, including especially the tergite and very large fleshy ventral dististyle.

*Limonia* (*Dicranomyia*) **torulosa**, new species

General coloration of thorax brown; antennae with flagellar segments oval, the outer ones slightly smaller, verticils short; wings suffused with brown, stigma darker, oval,  $Sc_1$  ending shortly before origin of  $R_s$ ; male hypopygium with ventromesal lobe of basistyle conspicuously bilobed, the lobules subequal, the more pointed basal one provided with longer setae.

*Male*. Length about 5-5.3 mm; wing 5-5.8 mm.

Rostrum dark brown, about one-third as long as remainder of head, palpi black. Antennae black; flagellar segments oval, the outer ones slightly smaller than those at near midlength, verticils short. Head dark brown; eyes large, on vertex contiguous or virtually so.

Pronotum brown. Mesonotal praescutum and scutum brown, darker in the holotype, more cinnamon brown in paratype; scutellum extensively yellowed, mediotergite dark brown, pleurotergite more yellowed. Pleura brown, virtually concolorous with the notum. Halteres dark brown. Legs with coxae brown, trochanters more yellowed; remainder of legs brown, femora slightly darker, with yellowed bases. Wings with a brownish suffusion, the oval stigma darker brown; veins brown. Macrotrichia on longitudinal veins beyond general level of origin of  $R_s$ , lacking on  $Sc$  and both Anals. Venation:  $Sc_1$  ending a variable distance before origin of  $R_s$ , in the paratype slightly exceeding one-half the length of the latter; *m-cu* close to fork of  $M$ .

Abdominal tergites brown, sternites more yellowed. Male hypopygium with tergite transverse, its posterior border very slightly emarginate to virtually truncate, the border thickened, provided with long setae. Total area of the basistyle subequal to that of the ventral dististyle, ventromesal lobe conspicuously bilobed, the lobules subequal, with conspicuous setae, those of the more pointed basal lobule longer. Dorsal dististyle a nearly straight rod, tip short, acute; ventral style with body oval, prolongation long, gradually narrowed, at near midlength with two elongate spines that are directed obliquely outward, with no additional lobe as in *divisa*. Gonapophysis with mesal-apical lobe slender, tip acute. Lobes subtending base of aedeagus densely hairy.

Holotype, male, El Yunque, Luquillo National Forest, Puerto Rico, in Sierra Palm association, 2,600 feet, June 6, 1945 (H. D. Pratt). Paratopotype, one male, June 4, 1945.

Among regional species, *Limonia (Dicranomyia) torulosa* is most similar to *L. (D.) coheri* Alexander, of Jamaica, differing especially in details of coloration and in the structure of the antennae and male hypopygium, including the ventromesal lobe of the ventral style. It differs from the associated *L. (D.) divisa* Alexander in the hypopygial structure, most evidently in the simple rostral prolongation of the ventral dististyle.

*Limonia (Neolimonia) scabristyla*, new species

General coloration of thorax yellow; front light silvery gray, vertex darker; wings yellowed, stigma barely indicated, *Sc* short, *Sc*<sub>1</sub> ending just beyond origin of *Rs*; male hypopygium with ventromesal lobe of basistyle extended into a slender pale lobe; dorsal dististyle with outer fourth dilated into a strongly spinulose head, ventral style unequally bilobed, rostral prolongation long and slender, pointed at apex, at base on face of style with a dense cushion of long yellow setae that encircle the two widely separated rostral spines; gonapophysis with mesal-apical lobe slender, blackened.

*Male.* Length about 6.5 mm; wing 7 mm; antenna about 1.0 mm.

Rostrum brownish black, palpi black. Antennae with scape brown, remainder more brownish yellow; proximal flagellar segments oval, the outer ones longer, all with long strong verticils that exceed the segments. Front light silvery gray, vertex darker brownish gray; anterior vertex narrow, about one-third diameter of scape.

Pronotum brown medially, sides broadly light yellow. Mesonotum fulvous yellow medially, sides clearer yellow, anterior end of praescutum restrictedly darkened; scutellum and central part of mediotergite weakly infuscated. Pleura clear light yellow. Halteres with stem pale, knob dark brown. Legs with coxae and trochanters light yellow; femora light yellow, tips vaguely darker, remainder of legs obscure yellow, outer tarsal segments dark brown; claws long, outer spine long and slender, the others small, crowded at base. Wings yellowed, base and costal region clear light yellow, stigma barely indicated; veins brown, basal ones yellowed. Longitudinal veins beyond general level of *Rs* with strong black trichia, including also outer third of 2nd *A*. Venation: *Sc* short, *Sc*<sub>1</sub> ending shortly beyond origin of *Rs*, *Sc*<sub>2</sub> slightly before this point; *R*<sub>4+5</sub> long, exceeding one-half *Rs*, gently arcuated; cell 1st *M*<sub>2</sub> rectangular, a little shorter than distal section of *M*<sub>1+2</sub>; *m-cu* at fork of *M*.

Abdominal tergites brown, sternites slightly more yellowed, including also eighth and ninth tergites. Male hypopygium with tergite large, length about one-half breadth, posterior border very shallowly emarginate to form two low rounded lobes with numerous setae. Basistyle larger than ventral dististyle, ventromesal lobe at apex narrowed into a slender pale lobe. Dorsal dististyle pale at base, darkened outwardly, outer fourth an enlarged slightly decurved triangular head

that terminates in an acute spine; provided with abundant blackened erect spinules, the stem with smaller appressed points virtually to base; ventral style pale, unequally bilobed; rostral prolongation long and slender, straight, apex farther produced into a point; face of style above base of prolongation with a dense cushion of long yellow setae that surround two separated rostral spines. Gonapophysis with mesal-apical lobe slender, blackened. Aedeagus broad, apex an obtuse cap, the genital openings lateral in position.

Holotype, male, 5.4 miles west of Tenancingo, Mexico (No. 7), Mexico, 7,200 feet, July 5, 1961 (G. W. Byers); in Snow Entomological Museum, University of Kansas.

Despite the very *Dicranomyia*-like general appearance of this fly I am placing it in the subgenus *Neolimonia* on the basis of hypopygial structure, particularly the ventral dististyle. There are numerous representatives of the subgenus in the Neotropical region, a few others in the southern United States, and a single species, *Limonia* (*Neolimonia*) *dumetorum* (Meigen) in Europe. The present fly is quite distinct in the hypopygial structure, especially the dorsal dististyle.

*Austrolimnophila* (*Austrolimnophila*) **byersiana**, new species

General coloration of thorax yellow, pleura clearer yellow; antennae relatively short; halteres very long, brownish black; legs with femora and tibiae brown, tarsi chiefly light yellow; wings brownish yellow, restrictedly patterned with pale brown;  $R_{1+2}$  long, only a little shorter than  $R_{2+3}$ , petiole of cell  $M_1$  nearly twice  $m$ ; abdominal tergites light brown, sternites yellowed, ninth segment chiefly brownish black; male hypopygium with two slender tergal lobes, basistyle on lower face bearing a very large flattened yellow lobe.

*Male*. Length about 10.5 mm; wing 11.2 mm; antenna about 2.2 mm.

Rostrum light yellow, palpi brownish black. Antennae of male relatively short, dark brown, intermediate segments much shorter than their longest verticils. Front and posterior part of head obscure yellow, the remainder of vertex dark brown; anterior vertex narrow, subequal to diameter of the scape.

Pronotal scutum brownish yellow, scutellum clearer yellow. Mesonotal praescutum with three confluent yellow stripes, anterior interspaces with sparse short black setae, humeral and lateral areas clearer yellow; scutal lobes weakly darkened, median area yellowed; scutellum and mediotergite brownish yellow, parascutella, pleurotergite and pleura clear light yellow. Halteres brownish black, very long and slender (exceeding 3 mm). Legs with coxae and trochanters clear light yellow; femora light brown, darker at tips, bases restrictedly more yellowed; tibiae brown; tarsi chiefly light yellow, clearer outwardly. Wings weakly brownish yellow, stigmal region and a linear streak in center of cell  $R$  weakly more darkened; veins brown. Abundant

macrotrichia on longitudinal veins basad to beyond the arculus, sparse to lacking near origin of  $Cu_1$ . Venation:  $Sc_2$  long, ending some distance beyond fork of  $R_{2+3+4}$ ;  $R_{1+2}$  long, only a little shorter than  $R_{2+3}$ ; petiole of cell  $M_1$  nearly twice  $m$ ;  $m-cu$  at near one-third  $M_{3+4}$ .

Abdominal tergites light brown, sternites yellow; ninth segment, including the basistyles, brownish black, remainder of hypopygium yellowed. Male hypopygium with tergite transverse, sides oblique, posterior border with a central U-shaped emargination that is subtended on either side by a slender rod bearing a few short apical setae. Basistyle with a very large flattened yellow lobe on lower face, this about as long as the style itself, with numerous relatively short pale setae over virtually the entire surface. Dististyles smaller than the lobe of basistyle, unequal, outer style a foot-shaped blade, its apical margin with few but very long pale setae, basal enlargement with more numerous bristles, some very long; inner style smaller, nearly glabrous, narrowed gradually to the obtuse apex. Phallosome with aedeagus very small, subtended by short flattened bladelike gonapophyses.

Holotype, male, 4 miles west of Huauchinango, Puebla (No. 3), Mexico, 6,200 feet, June 16, 1961 (G. W. Byers); in Snow Entomological Museum, University of Kansas.

I take great pleasure in dedicating this distinct fly to Dr. George W. Byers, outstanding student of the Mecoptera and Tipulidae. The only other Neotropical species that has a major lobe on the basistyle of the male hypopygium is the otherwise distinct *Austrolimnophila* (*Austrolimnophila*) *sternolobata* Alexander, described from Cochabamba, Bolivia, readily told from the present fly by the patterned wings and by details of hypopygium, including the dististyles and phallosome.

#### *Shannonomyia parvicellula*, new species

General coloration of mesonotum dark cinnamon brown; antennae short, proximal flagellar segments small, terminal segment long; wings brownish yellow, with a restricted brown pattern, cell  $R_3$  very small, only about one-half vein  $R_{3+4}$ , cell  $M_2$  open by atrophy of  $m$ ,  $m-cu$  nearly its own length beyond the fork of  $M$ ; male hypopygium with outer dististyle short and stout.

*Male.* Length about 5.5 mm; wing 5 mm; antenna about 0.75 mm.

Rostrum dark brown, palpi black. Antennae with the long scape yellow, remainder dark brown; proximal flagellar segments oval, crowded, outer ones more elongate, with long verticils; terminal segment long, more than one-half longer than penultimate, at tip with three or four long setae. Head of unique type discolored, appearing dark brown.

Pronotum dark brown. Mesonotum almost uniformly dark cinnamon brown, scutum and scutellum darker. Pleura dark brown, paler behind. Halteres with stem whitened, apex of knob darker. Legs with

coxae brownish yellow, basal half of fore pair darker, trochanters yellowed; remainder of legs dark brown, femoral bases yellowed. Wings brownish yellow, prearcular and costal fields clearer yellow; a restricted brown pattern, including small spots at arculus, origin of  $R_s$ ,  $Sc_2$ , cord, fork of  $M_{3+4}$  and as marginal spots on  $R_3$ ,  $R_4$  and less evidently on the other veins, virtually lacking on  $R_{4+5}$ ; stigma nearly circular, brown; veins light brown, darker in the infuscated areas. Abundant macrotrichia on outer section of vein  $R_5$ , more restricted on outer third of  $M_{1+2}$  and  $M_3$ ; no trichia on veins before cord and posterior to  $R$ . Venation:  $Sc$  relatively long,  $Sc_1$  ending shortly beyond mid-length of  $R_s$ ,  $Sc_2$  slightly removed;  $R_s$  long, angulated at origin; cell  $R_3$  very small, its petiole ( $R_{3+4}$ ) unusually long, about twice the cell; cell  $M_2$  open by atrophy of  $m$ ;  $m-cu$  nearly its own length beyond the fork of  $M$ .

Abdomen dark brown, proximal sternites more yellowed. Male hypopygium with outer dististyle relatively short and stout, bidentate at tip, axial spine only slightly curved. Gonapophysis small, pale, outer third narrowed into a straight spine. Aedeagus small, unmodified.

Holotype, male, El Yunque, Luquillo National Forest, Puerto Rico, in Sierra Palm association, 2,600 feet, June 6, 1945 (H. D. Pratt).

The nearest ally is *Shannonomyia triangularis* Alexander, likewise from Puerto Rico, which has the wing pattern and venation quite different. Various other species in Jamaica have cell  $M_2$  of the wings open as in the present fly, differing in the larger cell  $R_3$  with  $R_{3+4}$  much shorter or lacking and with a different wing pattern. The three species concerned are *S. myersiana* Alexander, *S. nacreata* (Alexander) and *S. nudipennis* Alexander, some of which differ further in the very long antennae of the male and in the presence of macrotrichia in the outer wing cells.

*Hexatoma (Eriocera) luteicolor*, new species

Thorax almost uniformly light yellow, especially pleura; wings subhyaline, with pale brown pattern that includes the prearcular field and costal border, a seam over the cord, wing tip and an area at origin of  $R_s$  that does not reach vein  $M$  behind, cell *1st*  $M_2$  rectangular; abdomen light brown, pleural membrane dark brown to brownish black.

*Male*. Length about 8 mm; wing 7.8 mm; antenna about 2.0 mm.

Rostrum brownish yellow, palpi dark brown. Antennae of male with scape and pedicel obscure yellow, remainder pale brown, 7-segmented; terminal segment a little shorter than penultimate. Head brownish gray; anterior vertex broad, low vertical tubercle with a central blackened line, with smaller lateral spots behind antennal fossae.

Thorax almost uniformly light yellow, praescutum with a scarcely

differentiated fulvous central stripe and paler laterals; pleura uniformly clear light yellow, dorsopleural membrane orange. Halteres brownish black. Legs with all coxae and trochanters light yellow, remainder dark brown, femoral bases narrowly yellowed. Wings subhyaline, with a pale brown pattern that includes the prearcular field and costal border, seams over cord, stigmal region, wing tip, and an area at origin of *Rs* that does not reach vein *M* behind; posterior basal cells not darkened; veins dark brown. Longitudinal veins beyond the general level of origin of *Rs* with conspicuous black trichia, on *1st A* continued basad virtually to the arculus, *2nd A* with a few on basal half and isolated trichia before tip, the condition evidently variable. Venation: vein *R*<sub>2</sub> about one-fourth to one-fifth *R*<sub>1+2</sub>; cell *1st M*<sub>2</sub> rectangular, with *m-cu* at or beyond its base to about one-third length of cell.

Abdomen, including hypopygium, light brown, the pleural membrane dark brown to brownish black.

Holotype, male, Maricao State Forest, Puerto Rico, July-August 1960 (J. Maldonado Capriles). Paratopotype, male.

The most similar regional species is *Hexatoma (Eriocera) trifasciata* (von Röder) which has the yellowed thorax conspicuously pruinose, the darkened wing pattern much more evident, and with a distinctive abdominal pattern.

*Hexatoma (Eriocera) melanonota*, new species

Thoracic dorsum extensively polished black, including praescutum and scutal lobes, posterior sclerites of notum and the pleura heavily pruinose; antennae 7-segmented in both sexes; halteres and legs chiefly brownish black; wings whitened, with a conspicuous brown pattern that includes cells *C* and *Sc*, a complete band at cord, wing tip and a large area at origin of *Rs*, Anal cells unpatterned, cell *1st M*<sub>2</sub> small, subquadrate to short-rectangular, with *m-cu* at or beyond mid-length; abdomen black, posterior borders of segments light gray.

*Male*. Length about 8 mm; wing 8 mm; antenna about 1.8 mm.

*Female*. Length about 10–10.5 mm; wing 7.5–8 mm.

Rostrum and palpi black. Antennae 7-segmented in both sexes; scape and pedicel dark brown, flagellum brownish black; first flagellar segment of male stouter and somewhat shorter than the combined second and third segments, terminal two segments subequal. Head black, heavily pruinose to appear gray.

Mesonotal praescutum and scutal lobes polished black, central region of scutum and scutellum black, weakly pruinose; postnotum gray, mediotergite more blackened on posterior third. Pleura light gray pruinose, dorsopleural membrane brownish black. Halteres with stem dark brown, knob blackened. Legs with coxae light gray pruinose; trochanters brownish yellow; remainder of legs brownish black, femoral bases narrowly yellowed. Wings whitened, with a conspicuous brown pattern that includes cells *C* and *Sc*, a complete band at cord that



includes stigma, and the relatively narrow wing tip; a large area at origin of *Rs* that reaches vein *M*; a paler brown wash in centers of cells *M* and *Cu*; extreme bases of cells *R* and *M* darkened; Anal cells unpatterned; veins brown. Venation:  $R_{1+2}$  relatively short, from subequal to  $R_{2+3}$  to twice this length; cell *1st M*<sub>2</sub> small, subquadrate to short-rectangular, with *m-cu* at or beyond midlength.

Abdomen black, basal tergite and broad posterior borders of succeeding segments light gray; hypopygium black. Ovipositor with cerci long and slender, the outer ends gently upcurved.

Holotype, male, El Yunque, Luquillo National Forest, Puerto Rico, in Sierra Palm association, 2,600 feet, May 26, 1945 (H. D. Pratt). Allotopotype, female, May 25, 1945. Paratopotype, female, altitude unknown, June 10, 1945 (Julio Garcia-Diaz).

Other generally similar regional species include *Hexatoma* (*Eriocera*) *luteicolor*, new species, and *H. (E.) trifasciata* (von Röder), both with the thoracic notum generally yellow and with the wing pattern slightly different. Von Röder describes the antennae of the type of his species as being eight-segmented, which may be incorrect.

*Teucholabis (Euparatropesa) angustifascia*, new species

Allied to *heteropoda*; prothorax yellow; wings whitened, with three brown bands, the one at cord narrow, posteriorly ending at vein *Cu*; male hypopygium with setae of outer dististyle unusually long, beak of inner style unequally bidentate, the lower point larger.

*Male*. Length about 7 mm; wing 6.2 mm; antenna about 2.2 mm.

Head, including rostrum, dark reddish brown, palpi black. Antennae brown; flagellar segments oval, subequal to their verticils.

Prothorax yellow. Mesonotum polished black, dorsopleural membrane yellowed. Pleura with a narrow transverse silvery band from mid-coxa almost to the wing-root, metapleura with smaller similar spot. Halteres with stem black, knob light yellow. Legs with fore and middle coxae and trochanters yellow, posterior pair polished black; fore femora black, the basal fifth yellow, tibiae brownish yellow, base broadly, the tip narrowly more brownish black, tarsi black; middle legs yellow, terminal tarsal segment black; posterior femora yellow, base narrowly, tip broadly black, including about the outer fifth, tibiae yellow, tip narrowly dark brown, tarsi black, proximal two-thirds of basitarsi slightly dilated. Wings whitened, patterned with brown, including three separate bands, the first at arculus, extending from costa to vein *1st A*, more expanded in costal field; band at cord narrow, extending from costa to *Cu*, narrowest behind; outer band including the apex, more broadly darkened in radial field, including all of cell *R*<sub>3</sub> and outer halves of *R*<sub>4</sub> and *R*<sub>5</sub>, with paler suffusions in centers of cell *2nd M*<sub>2</sub> and *M*<sub>3</sub>; veins brown, darker in the patterned areas, yellowed in part of the prearcular field. Venation: Cell *R*<sub>3</sub> large, veins *R*<sub>3+4</sub> and *R*<sub>4</sub> subequal; *m-cu* shortly before fork of *M*.

Abdomen with first segment black, second and third chiefly yellow, outer segments black. Sternal pocket on segment five oval, central part with four longitudinally parallel darkened lines; pocket of segment 6 with numerous relatively long setae. Male hypopygium with outer dististyle with numerous unusually long setae, chiefly on outer face; inner style with apex of beak unequally bidentate, the lower point larger.

Holotype, male, Quincemil, Cuzco, Peru, October 15-20, 1962 (L. E. Peña).

The closest relative of the present fly is *Teucholabis (Euparatro-pesa) heteropoda* Alexander which differs in the diagnostic characters listed.

*Teucholabis (Teucholabis) homilacantha*, new species

Belongs to the *melanocephala* group, allied to *amblyphallos*; size very large (wing of male 9.5 mm); femora yellow, conspicuously banded with black; wings broad, light yellow, with three pale brown bands, apical one narrow; male hypopygium with spine of basistyle provided with conspicuous spinules; outer dististyle long, tip acute, with a smaller subterminal knob; apex of aedeagus obtuse, microscopically roughened.

*Male*. Length about 13 mm; wing 9.5 mm; antenna about 2.0 mm.

Rostrum relatively long, about one-half remainder of head, narrowly yellow both above and beneath, sides black, palpi black. Antennae with scape yellow, remainder brownish black to black; flagellar segments oval, outer ones more elongate. Front orange, remainder black, posterior orbits narrowly orange, widened beneath.

Cervical region brownish black. Pronotum orange, weakly infuscated above. Mesonotal praescutum polished, sides chestnut brown, humeral region yellow; median area black, the posterior half weakly divided to form two stripes that end before suture; lateral black areas crossing suture to include scutal lobes, the broad central region of posterior praescutum, scutum, scutellum and anterior half of mediotergite deep yellow, posterior part of postnotum darkened. Pleura black, very heavily gray pruinose on mesopleura, pteropleurite and metapleura; pteropleurite and sternopleurite with conspicuous white setae. Halteres whitened, base of knob weakly darkened. Legs with coxae and trochanters yellow, fore coxae weakly darkened; fore femora yellow, the broad tips and a narrow ring near midlength blackened, middle femora black with two yellow rings, outer one about one-half the black tip, posterior femora with nearly the basal half yellowed, tibiae yellow, bases and tips narrowly black, basitarsi yellow with a slightly enlarged blackened area, second segment yellow, the tip and remainder of tarsi brownish black. Wings broad, light yellow, with three pale brown bands, the outer apical area very narrow, central band chiefly beyond cord, basal darkening ending at vein *2nd A*,

stigma darker; veins yellow, slightly darkened in the patterned areas, dark brown over the cord. Venation:  $Sc_1$  ending about opposite two-thirds  $Rs$ ,  $Sc_2$  far removed, opposite one-fourth  $Rs$ ;  $R_2$  about one-half longer than  $R_{2+3+4}$ ; cell 2nd  $A$  broad.

Abdomen with abundant long white setae, orange, sternites narrowly darkened sublaterally, basal segment uniformly dark; base of hypopygium weakly infuscated, apices of basitarsi yellowed. Sternal pockets on segments 5 and 6 generally as in other members of the *melanocephala* group. Male hypopygium with spine of basistyle provided with abundant spicules; mesal flange with few triangular points. Outer dististyle long and slender, about one-half longer than spine of basistyle, narrowed gradually to acute tip, with a smaller subterminal knob; inner style with arms divaricate, the inner a blackened cultrate blade, its tip acute. Aedeagus with apex obtuse, very microscopically roughened, subterminal setae long but sparse.

Holotype, male, Esmeraldas, San Mateo, Ecuador, August 27, 1956 (Juan Foerster).

*Teucholabis (Teucholabis) homilacantha* is most like *T. (T.) amblyphallos* Alexander, differing in the large size, coloration of the legs, and in details of hypopygial structure, especially the spine of the basistyle, outer dististyle and aedeagus.

#### *Teucholabis (Teucholabis) megaphallus*, new species

Size large (wing of male 6.5 mm); general coloration of entire body polished black; knob of haltere light yellow; antennae and legs black; wings obscure yellow with three brown bands, the outer one being the broad apex; male hypopygium with spine of basistyle a small blade; outer dististyle elongate, the outer third narrowed into a strong spine; aedeagus very large, the outer third a broad pale blade that is slightly dilated outwardly, apex subtruncate, with a few microscopic points.

*Male.* Length about 6.5 mm; wing 6.5 mm.

Rostrum and palpi black, the former relatively short, about one-half the remainder of head. Antennae black throughout; flagellar segments short-oval, progressively decreasing in size outwardly, shorter than their verticils. Head polished black.

Thorax polished black, the scutum and scutellum with long black setae, those of the praescutum small and inconspicuous; dorsopleural region restrictedly obscure yellow. Halteres with stem black, knob light yellow. Legs with coxae black, trochanters brownish black; remainder of legs black, terminal segment of posterior tarsi with a pair of small hairy lobes. Wings with ground obscure yellow, with three brown bands, basal area extensive but diffuse and inconspicuous; second band at cord, darkest at stigma, very narrow at *m-cu*; outer band including the broad apex, involving virtually all cells beyond level of cell 1st  $M_2$ , the extreme bases of cells 2nd  $M_2$  and  $M_3$  vaguely

brightened; veins brown. Venation:  $Sc_1$  ending about opposite mid-length of  $R_s$ ;  $R_2$  just beyond fork of  $R_s$ .

Abdomen black throughout. Sternal pocket of fifth segment conspicuous, including a dense central area of small black points, the strong setae directed caudad, at anterior end of pocket with a narrow transverse band with five or six strong setae; sixth sternite with about eight long slender bristles on either side, directed chiefly inward across the broad midline. Male hypopygium with spine of basistyle a small blade, narrow at base, outer half dilated, terminating in a slender spine; mesal flange relatively small, the margin with four or five points. Outer dististyle elongate, near base with a powerful appressed black spine, broadest at near midlength where there are numerous long setae, outer third narrowed into a strong acute spine; inner style with a single apical spine, the outer margin microscopically serrulate, basal lobe a large oval blade without setae. Aedeagus very large, the outer third a broad pale blade, apex subtruncate, with a few microscopic points.

Holotype, male, Mount Redondo, Colombia, altitude 1400 meters, December 22, 1956 (Juan Foerster).

*Teucholabis (Teucholabis) megaphallus* is quite distinct from other large black species having banded wings in the hypopygial structure, especially the spine of the basistyle, dististyles, and the aedeagus.

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## A NEW SUBGENUS, *BELANDRENA*, OF THE GENUS *ANDRENA* (Hymenoptera: Apoidea)<sup>1</sup>

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### ABSTRACT

A new subgenus, *Belandrena*, is erected for *Andrena nemophilae*, n. sp. (type species), *A. sagittalea*, n. sp., and *A. sphaeralceae* Linsley from the southwestern United States. The subgeneric position, a key to species, diagnoses, descriptions, variation, notes on parasites, range, seasonal activity and plant host records are included. A strong preference for flowers belonging to Hydrophyllaceae and Malvaceae is indicated.

Three species of *Andrena* hitherto undescribed or included in the subgenus *Scaphandrena* form a natural group which merits subgeneric recognition. The subgenus *Belandrena* is proposed below to include these species from the southwestern United States. An early treatment

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