

NEW PSYLLIDAE FROM PUERTO RICO WITH NOTES ON OTHERS (HOMOPTERA)

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The Herbert Osborn Collection and the efforts of my friend Luis F. Martorell have furnished the following data.

Carsidara concolor Crawford

A series of four females; three from Aguirre, 1-18-29, and one from Rio Piedras, February 1929, Herbert Osborn collector.

Heteropsylla puertoricoensis n. sp.

Length of tip of forewing male 1.6 mm., female 1.7 mm.; forewing male 1.3 mm., female 1.4 mm.

Head and thorax yellow, abdomen greenish in female.

Vertex over half as long as broad, concave caudad. Genae slightly swollen. Antennae about one and one-half times as long as width of head.

Proctiger of male short, stout, scarcely longer than forceps; forceps deeply bifurcate, outer fork invert "L" shaped with horizontal part of "L" projecting cephalad and twice as stout as basal portion, inner fork of similar shape but less curved and more slender.

Dorsal valve of female genital segment about as long as rest of abdomen in dried specimens, rather styliform in caudal half; ventral valve half as long as dorsal, stout, blunt.

Male holotype, female allotype, five male and two female paratypes from Rio Piedras, 7-19-16, R. T. Cotton collector. Host: *Samanea saman*. Types are in the University of Puerto Rico Collection at Rio Piedras.

Ceropsylla martorelli n. sp.

Length to tip of forewing male 2.3 mm., female 2.6 mm.; forewing male 1.9 mm., female 2.3 mm.

General color of male red to light orange, female light to dark brown.

Head as broad as thorax, scarcely deflexed. Eyes very prominent. Genal cones three-fourths as long as vertex, contiguous throughout;

apices acute. Antennae one and one-fourth times as long as width of head.

Thorax scarcely arched, rather short, flat. Forewing with short cubital petiole; cubital cell twice size of medial. Metacoxae with posterior spurs; hind tibia with no basal spur, with apical spur ratio of 2-1.

Male genital segment with a basal projection on either side about as long as forceps. Forceps slightly tapered apically, with a very small spur caudad near apex.

Dorsal valve of female genital segment with basal two-thirds bulbose, apical third short, styliform; circum-anal ring appearing triangular with apex of triangle projecting caudad.

Male holotype, female allotype, five male, and nine female paratypes from Cayey, 5-31-41, collected by L. F. and M. C. Martorell, and one male paratype and several imperfect specimens from Aguas Buenas, June 1940, collected by L. F. Martorell.

The writer takes great pleasure in naming this distinctive species in honor of Mr. Luis F. Martorell.

Fifth stage: Length 1.2 mm., width 1. mm. Broadly oval, head and abdomen slightly narrower than wing pads. Form more like *Trioza* than *Ceropsylla*.

Antennae short, apparently trisegmented with terminal segment black. Derm with no conspicuous plates. Entire margin closely beset with a continuous series of setae resembling those found in other *Ceropsylla*. Circum-anal ring set in from abdominal apex, extremely long, narrow, consisting of a single ring of slit-like pores.

Biologic: This psyllid attacks a lauraceous tree, *Ocotea leucoxydon* (Sw.) Mez., commonly called "black laurel" which is also reported from St. Thomas, Tortola, Cuba, Jamaica, Hispaniola, and from Guadeloupe to Grenada. The tree itself may be identified by the rough appearance of the leaves. The gall is an open pit type with the immature psyllid fully exposed on the under side of the leaf. The adult psyllids are only found during the rainy season when the tree puts out new shoots. Apparently the eggs are laid on the tender foliage and the immatures develop with the leaves.

Arytaina cayeyensis n. sp.

Length to tip of forewing, male 2.7 mm., female 3.2 mm.; forewing male 2.3 mm., female 2.5 mm.

General color straw yellow over all with indications of broad white stripes on the thorax; five terminal antennal segments black.

Head rather declivious, finely pubescent, as broad as thorax. Vertex twice as broad as long, somewhat rounding downward in front. Posterior ocelli strongly elevated. Genal cones half as long as vertex, divergent, broadly rounded. Antennae almost two and one half times as long as width of head.

Thorax not especially arched; pleurites of pronotum appearing subequal in length. Forewing twice as long as broad, broadly rounded apically; membrane yellowish; pterostigma very short, broad; costa with conspicuous fringe of setae. Hind tibiae with basal spur and 4-5 apical spines.

Forceps of male deeply bifurcate; outer branch broadest just before apex which is short, broadly rounded, located caudad; inner branch longer than outer, slender, evenly narrowed to acute, inner projecting apex.

Female genital segment as long as rest of abdomen. Dorsal valve, in lateral aspect, suddenly and greatly lowered from anal opening to styliform apex, caudal half serrate on dorsal surface. Ventral valve much shorter than dorsal, blunt apically.

Male holotype, female allotype, four female and four male paratypes from Cayey, 1-28-29, on *Inga*, collected by Herbert Osborn.

The vertex, forewings, and genitalia of this species are not typical of *Arytaina* and may place it in *Euceropsylla* Boselli¹ with which the writer is not familiar.

Arytaina unga n. sp.

Length to tip of forewing of female 2. mm.; forewing 1.7 mm.

General color dull orange with light stripes on dorsum of thorax and on center of vertex. Antennae annulate with black, two terminal segments black.

Vertex one and one half times as broad as long, foveae very deep. Genal cones half as long as vertex, short, obtuse. Antennae one and one half times as long as width of head.

Prothoracic dorsum strongly descending. Forewing little over twice as long as broad; pterostigma very short, broad.

Female genital segment as long as rest of abdomen. Dorsal valve, in lateral aspect, with dorsum straight except for depression just caudad anal opening; apex acute, abruptly turned up. Ventral valve shorter than dorsal, apex acute.

¹ Boselli, F. B. Studi Sugli Psyllidi: Lab. Zool. Gen. Agr., Portici, *Bull. V*, 24: 70, 1929.

One female collected by Herbert Osborn at Mayagüez, March 3, 1929.

*Psylla minuticon*a Crawford

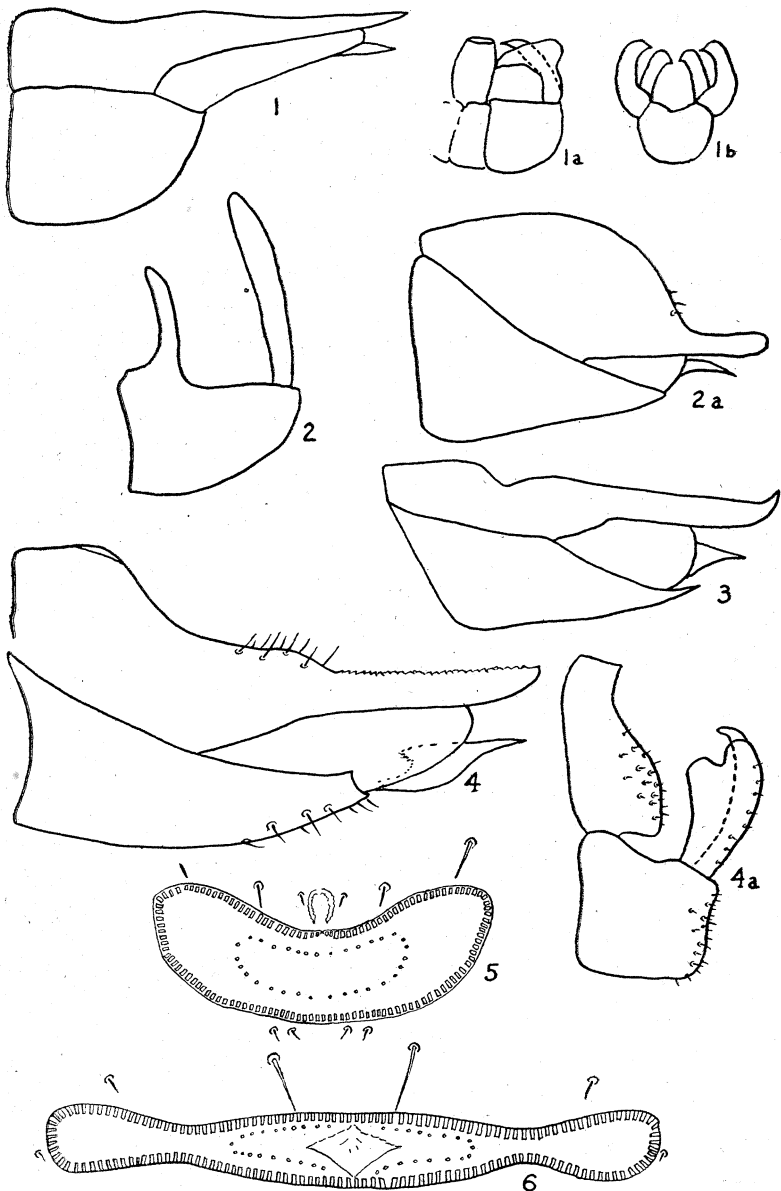
Fifth stage immature: Length 1.9 mm. Antennae almost as long as entire insect, nine segmented, last four segments imbricate.

Dorsum of entire insect beset with long capitate setae as follows: head with a scattered group of six to eight, fore wingpads with five to seven each, hind wingpads with two each, each abdominal segment with six to eight and the terminal plate bearing three rows of six to eight.

Circum-anal ring small, kidney shaped, located at abdominal apex, ventrad; composed of a single ring of slit-like pores.

EXPLANATION OF PLATE

1. *Heteropsylla puertoricoensis*, profile of female genitalia.
- 1a. Profile of male genitalia.
- 1b. Caudal view of male genitalia.
2. *Ceropsylla martorelli*, profile of male genitalia.
- 2a. Profile of female genitalia.
3. *Arytaina unga*, profile of female genitalia.
4. *Arytaina cayeyensis*, profile of female genitalia.
- 4a. Profile of male genitalia.
5. *Psylla minuticon*a Crawford, circum-anal ring of immature.
6. *Ceropsylla martorelli*, circum-anal ring of immature.



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