

PINTALIA STÅL WITH SPECIAL REFERENCE TO MEXICO
(Homoptera, Cixiidae)

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Specific placement in this genus is very difficult because the older descriptions were based on color and marking which is somewhat confusing in this group. Stål¹ described nine species from Brazil, Lethierry² one from Venezuela, Uhler³ two from the West Indies and Fabricius⁴ one, Fowler⁵ four from Mexico and one from Guatemala, Van Duzee⁶ one from the United States, Muir⁷ twenty-seven species and one variety from Brazil, British Guiana, and Ecuador, Osborn⁸ four from Puerto Rico, and Metcalf⁹ two from Panama. Muir has stated that *consobrina* and *ustulata* Stål are not typical tentatively leaving forty-nine species with *discrepans* provisionally included in *Pintalia*. Undoubtedly intensive collecting will more than double the number of known species. Unless stated otherwise all types are in the author's collection.

PINTALIA DORSOVITTATA VAN DUZEE (figs. 1, 1a)

If I interpret this species correctly it has been confused with *delicata* Fowler. In a series of twenty specimens from Florida, South Carolina, Tennessee, and Virginia the elytra are not always unicolorous with the distinct dorsal stripe. The intensity of color has a wide range and most of the specimens have a more or less mottled elytra. *Aspersa* Dozier¹⁰ from Mississippi either belongs to this species or is new.

PINTALIA DELICATA FOWLER (figs. 2, 2a)

Delicata is widely distributed throughout Mexico and it is

¹ 1862. Bidr. Rio Janelro-trakt. Hemip., 2:4-5.

² 1890. Ann. Soc. Ent. France, (6)10:148.

³ 1895. Proc. Zool. Soc. London, pp. 64, and 1901. Proc. Ent. Soc. Washington, 4:511.

⁴ 1803. Systema Rhyng., p. 54.

⁵ 1904. Biologia Centrali-Americana, 1:86-88.

⁶ 1908. Proc. Acad. Nat. Sci. Philadelphia, p. 491.

⁷ 1934. Trans. Royal Ent. Soc. London, 82:421-441.

⁸ 1935. New York Acad. Sci., (2)14:198-202.

⁹ 1938. Bull. Mus. Comp. Zool., Harvard College, 82:290-293.

¹⁰ 1926. Mississippi Agric. Exp. Sta. Tech. Bull., 14:68-69.

possible that it occurs in the United States. Specimens are present from the States of Chiapas, Guerrero, Jalisco, Michoacan, Morelos, Oaxaca, Quintana Roo, Sinola, Sinora, and Vera Cruz in Mexico, and from Guatemala. The male genitalia will serve to separate this from any known species. The anal segment is long and slightly asymmetrical caudad. The lateral margins of the pygofers are acutely produced dorsad; the medio-ventral process is long and rounded apically. The aedeagus does not have many processes. Fowler's description of the styles is perfect.

Pintalia lineata Caldwell, new species (figs. 3, 3a)

Length, 5.8-6 mm. Vertex, pronotum, and mesonotum with mid-dorsal yellow stripe that is carried onto the elytra to the apex of the clavus. Elytra transparent, browned basad and caudad with smoky areas in between; terminations of veins light.

Anal segment of male with short apex. Lateral margins of pygofers with small projection dorsad; medio-ventral process large, rounded apically. Styles widely separated in basal half, meeting at mid-length then strongly divergent.

Holotype male, VERGEL, CHIAPAS, MEXICO, June 3, 1935;
paratype, MAPASTEPEC, CHIAPAS, MEXICO, December 7, 1932 (Dampf).

Pintalia marginata Caldwell, new species (figs. 4, 4a)

Length, male 8 mm., female 9 mm. Elytra transparent, maculate with fuscous; maculae tending to be concentrated around wing margins; apical margin fumate. Veins punctate. Hind wings evenly smoked.

Lateral margins of male pygofers with blunt projection caudad; medio-ventral process acute, triangular. Styles widely separated basad forming a diamond-shaped space; apical three-fourths divergent.

Holotype male, and one *paratype* from TIERRA BLANCA, VERA CRUZ, MEXICO, August 20, 1932, *allotype* female, HUATUSCO, VERA CRUZ, MEXICO, September, 1932 (Dampf).

Pintalia stigmata Caldwell, new species (figs. 5, 5a)

Length, 6.8 mm. Head, body and legs yellow-brown. Elytra hyaline, grayish, slightly fumed apically; stigmal spot brown; cross-veins smoky. Frons almost twice as long as broad, scarcely narrowed between the eyes. Hind tibiae with one prominent spine

at mid-length and two smaller spines more basad. Veins of elytra finely but distinctly granulate.

Anal segment of male long, slender, extreme apex with square, shallow notch. Lateral margins of pygofers with large projection basad; medio-ventral process small, acute. Styles slender, lunate, approximate apically, very pubescent.

Holotype male, from BARTICA, BRITISH GUIANA, June 12, 1901 (H. S. Parish), is in the H. Osborn collection at Columbus, Ohio.

Pintalia fumata Caldwell, new species (figs. 6, 6a)

Length, 8.5 mm. Head and thorax amber with lateral compartments of mesonotum darker. Elytra whitish, hyaline; fuscous spot present either side of brown stigma and at apex of clavus; basal and claval areas lightly fumate; indistinct fuscous maculae present basad; extreme apex of elytra fuscous. Hind tibiae quadrispinose.

Anal segment of male asymmetrical at apex; right side not produced as much as left. Lateral margins of pygofers greatly produced caudad. Styles broadest just before base, finely serrate basad on inner margins.

Holotype, male, "COSTA RICO, SUIZATUR'LEBA, (P. Schild)" is in the H. Osborn collection at Columbus, Ohio.

Pintalia punctata Caldwell, new species (figs. 7, 7a)

Length, 6.7-8 mm. Head and thorax ferruginous. Elytra transparent, dusty; costal margin dark from stigmal spot to apex; entire apex broadly smoky; granulations on veins broadly fuscous; entire surface very evenly maculate. Entire insect slender.

Anal segment of male extremely asymmetrical with apex broadly bilobed on right side. Lateral margins of pygofers with two processes caudad; medio-ventral process very acute. Styles slightly enlarged apically, straight in ventral aspect.

Holotype male, and *allotype*, female, from ZOOGOCHI, OAXACA, MEXICO, June 21, 1935, two male paratypes and one female *paratype* from CHILTEPEC, OAXACA, MEXICO, December 10, 1937, (Dampf). This species should truly be named *maculata* but the name has already been used by both Fowler and Osborn. For *maculata* Osborn I propose the name *osborni*.

Pintalia pseudomaculata Caldwell, new species (figs. 8, 8a)

Length, 7.5 mm. Head and thorax dark brown. Elytra marking similar to *punctata* except that the stigmal spot is brown and

the maculae along the veins tend to run together. The elytra are much broader, especially apically.

Anal segment of male elongate, extremely asymmetrical apically with the right side forming a broad pendulant lobe. Lateral margins of pygofers with two large projections caudad; medio-ventral process broad, triangular. Styles gradually enlarged apically, divergent in caudal half.

Holotype male, from TAMAZUNCHALE, SAN LUIS POTOSI, MEXICO, November 15, 1938, (Caldwell).

Pintalia chromata Caldwell, new species (figs. 10, 10a)

Length, 7-7.5 mm. Head and pronotum yellow. Mesonotum darker yellow. Elytra clear, yellowish, especially apically. Veins sparingly punctate with black; a black spot present at union of claval veins and at apex of clavus. Anal segment of male asymmetrical at apex with a short and an elongate lobe on right side. Lateral margins of pygofers with two hooked projections caudad; medio-ventral projection acute. Styles gradually enlarged apically.

Holotype male, *allotype* female, and *paratypes* from FORTIN, VERA CRUZ, MEXICO, October 9, 1941 (De Long, Good, Caldwell and Plummer).

Pintalia geometra Caldwell, new species (figs. 9, 9a)

Length, 7.5-8.5 mm. Face black. Vertex and center of pronotum brown. Center of mesonotum brown, lateral compartments black. Elytra fuscous, hyaline, with the following markings clear to white: a spot basad reaching into claval area but not to sutural margin, sutural margin yellowish punctate with white, a triangle with base touching union of claval veins and apex of clavus and the apex reaching to the radius, the stigmal spot and surrounding area, the submarginal area sometimes broken, and the extreme apex sometimes clear.

Anal segment of male short asymmetrical, right side broadly pendulant. Pygofers with short caudal projection; medio-ventral process short, rounded. Styles slender.

Holotype male, and two *paratypes* from VERGEL, CHIAPAS, MEXICO, June 3, 1935, and female *allotype* from ESMERALDA, CHIAPAS, MEXICO, August 18, 1930 (Dampf).

Pintalia contra Caldwell, new species (figs. 11, 11a)

Length, 6 mm. Head and thorax dull orange. Elytra fuscous with light area in humeral angle, a large spot present in costal

cell, and a broad stripe across the entire surface cephalad to stigmal spot. Underwing solid fuscous. Hind tibiae with one strong spine.

Anal segment of male with right side of apex cut away. Lateral margins of pygofer with small caudal projection; medio-ventral process large, triangular. Styles strongly divergent in apical half.

Holotype male, and *paratype* male, from COROICO, BOLIVIA, are in the H. Osborn collection at Columbus, Ohio. Paratype in writer's collection.

PINTALIA ASPERSA FOWLER

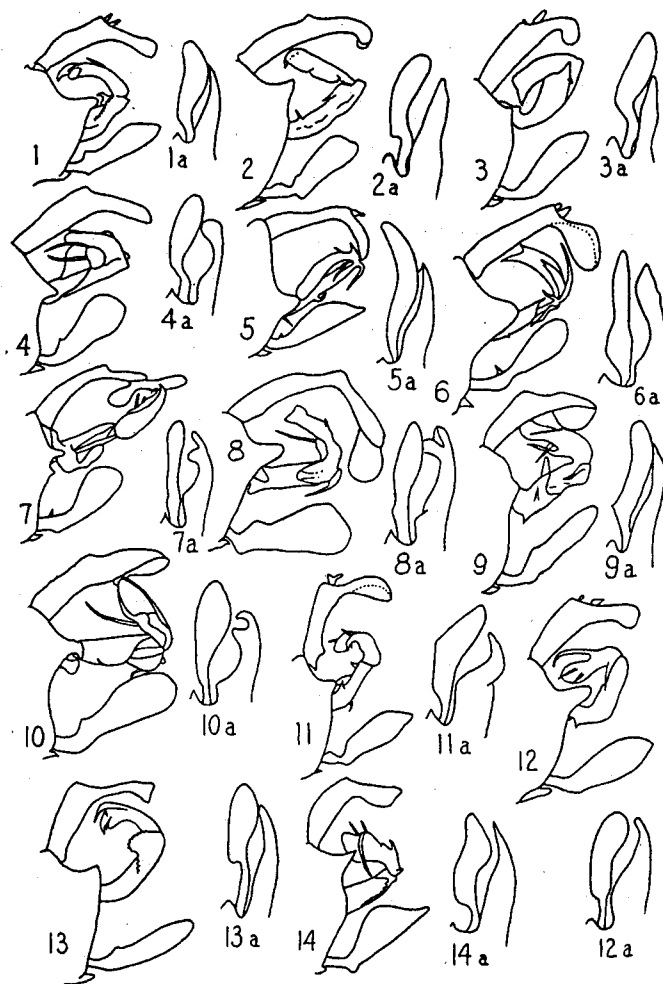
(Figs. 12, 12a)

This is a short and compact species with the lateral carinae of the frons wide and flattened. This latter character is similar to *discrepans* Muir which Muir only provisionally places in this genus. Likewise Fowler believed that *aspersa* may not belong in *Pintalia*. However, from the species and specimens before me this character appears to be gradational with several species exhibiting carinae with varying degrees of flatness making it impossible to draw any definite line between the two groups. Most of the specimens with flattened carinae have the radius usually four-branched but this is not consistent. Most of the specimens before me are darker than the illustrations in the *Biologia* (pl. 9, fig. 24) with the mid-dorsal stripe less pronounced. The size ranges between 5 and 6.4 mm. with several females as well as males only 5 mm. The most spines visible on the hind tibiae are four with three being more common. The lateral margins of the male pygofer have a rather long, acute projection caudad and well dorsad; medio-ventral process is very small. Specimens from Oaxaca, San Luis Potosi, and Vera Cruz in Mexico, and two from Guatemala.

Pintalia neoaspersa Caldwell, new species (figs. 13, 13a)

Length, 6-6.5 mm. Color and marking identical to *aspersa*, the elytra with possibly more solid colors. Upper third of lateral carinae of frons similar to that species.

Lateral margins of male pygofer truncate, straight; medio-ventral process small, triangular. Styles sharply excavate on inner third of basal margins. Apex of anal segment slender. Aedeagus with coarsely serrated spur on right side of apical portion; perianthrium serrate around joint of aedeagus.



EXPLANATION OF FIGURES

Figs. 1, *Pintalia dorsovittata* Van D., lateral view of abdominal apex of male; 1a, same, ventral view of half of abdominal apex of male. Figs. 2, 2a, *P. delicata* Fowler, same views. Figs. 3, 3a, *P. lineata* Caldwell. Figs. 4, 4a, *P. marginata* Caldwell. Figs. 5, 5a, *P. stigmata* Caldwell. Figs. 6, 6a, *P. fumata* Caldwell. Figs. 7, 7a, *P. punctata* Caldwell. Figs. 8, 8a, *P. pseudomaculata* Caldwell. Figs. 9, 9a, *P. geometra* Caldwell. Figs. 10, 10a, *P. chromata* Caldwell. Figs. 11, 11a, *P. contra* Caldwell. Figs. 12, 12a, *P. adaspersa* Fowler. Figs. 13, 13a, *P. neoaspersa* Caldwell. Figs. 14, 14a, *P. acarinata* Caldwell.

Holotype male, and *paratype* male, ESMERALDA, CHIAPAS, MEXICO, November 18, 1930, male paratypes SANTA ISABEL, CHIAPAS, MEXICO, November 17, 1930, *allotype* female, and five female paratypes. SANTA ISABEL, CHIAPAS, November 17, 1930 (Dampf), and one male *paratype* JESUS CARRANZA, VERA CRUZ, MEXICO, Oct. 14, 1941 (De Long, Good, Caldwell & Plummer).

Pintalia acarinata Caldwell, new species (figs. 14, 14a)

Length, 6 mm. Head and thorax concolorous with lateral compartments of mesonotum darker. Elytra clear to clouded with brown; a definite white spot present at union of claval veins; another extending from apex of clavus almost to apex of elytra; area around stigma clear; a definite fuscous stripe originates at fork of medius and projects toward apex of costal margin, this stripe is sometimes broadened to include the entire apex of the elytra in which case the fuscous is broken by white areas. Apical terminations of veins thickened, white. Carinae of face similar to *aspersa*.

Male styles with inner margins deeply excavate in basal fourth, contiguous in next fourth, divergent in next fourth, and parallel in apical fourth. Anal segment relatively short.

Holotype male, and two paratypes from B. ESPERANZA, GUATEMALA, December 15, 1925 (Dampf).

This species and *neopersa* can be separated from *aspersa* by their much more slender appearance, greater length, and distinct male genitalia.

D. B. MACKIE PERPETUAL MEMORIAL LOAN FUND

The California Entomology Club is sponsoring the establishment of a D. B. Mackie Perpetual Memorial Loan Fund for the benefit of graduate students in Entomology at the University of California. The immediate goal is \$1,000.00 of which more than \$750.00 has already been subscribed. Mr. Mackie's entomological work is an especially suitable memorial for such a fund since he so greatly benefited California Agriculture through his pioneer work in vacuum fumigation, both with cyanide and methyl bromide. Contributions may be sent to H. H. Keifer, Secretary-Treasurer, California Entomology Club, State Office Building No. 1, Sacramento, California.

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* New names in bold face type, synonyms in italics.