

STUDIES OF THE GENUS EMPOASCA
(HOMOPTERA, CICADELLIDAE).

XII. New Species of Mexican Empoasca

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In the preceding papers of this series upon *Empoasca*, many species have been described from North, Central, and South America. Some forty described species of the genus *Empoasca* are now known to occur in Mexico, thirty of which have been described in previous *Empoasca* studies in this series. Six new species are being described at this time. The types are in the author's collection.

***Empoasca blendens* n. sp.**

A small blunt headed species resembling *aspersa* in general form but with unique coloration and markings. Length 3 mm.

Vertex: Bluntly angled, a little wider between eyes at base than median length.

Color: Vertex pale with orange markings which form a pale wedge shaped spot at apex with a round pale spot on the margin at either side. The basal portion is pale with an elongated orange mark on either side at base. Pronotum pale with a pair of broad longitudinal bands which are proximal on caudal half. They are bent outwardly and are more strongly separated on the anterior portion. Scutellum dark brown to black, with three longitudinal white marks on posterior half. Elytra pale with tips smoky. Most of the elytra are covered with yellowish blotches. A darker pigmented transverse band crosses at about the middle. This is composed of a dark reddish brown band on the clavus and bright reddish spots on the corium. The costal margin is usually yellow. Face pale with orange arcs.

Genitalia: Female seventh sternite broadly roundedly produced. This is a common species in several areas of Mexico but the male has not been obtained. It is described because of its unique coloration and appearance.

Holotype female and paratype females from Mexico City D.F., Sept. 1, 1939 collected by D. M. DeLong; and from the same locality Sept. 20, 1923 by Dr. Dampf. Female Paratypes from Tehuacan, Pue, Oct. 17, 1941 and from Puebla, Pue, Oct. 18, 1941 by DeLong, Good, Caldwell, and Plummer. Female paratypes from Desierto de Los Leones D.F., Dec. 4, 1927 by Dr. Dampf.

***Empoasca jalapa* n. sp.**

A broad headed species resembling *cylpeala* in general appearance but with distinct male genitalia. Length 4 mm.

Vertex: Short and broadly rounded in front, appearing almost parallel margined, almost twice as wide between the eyes at base as median length.

Color: Pale to dark brown without definite markings. The elytra usually appearing darker, smoky.

Genitalia: Male styles, slender, elongate, tapering on apical half and pointed at apex. Lateral processes long, slender, and tapered to pointed apices. Aedeagus simple in form with a blunt apex. The pygofer spine is short and broad with a sharp pointed apex which is directed anteriorly.

Holotype male collected at Puebla, Pue (K-78) Oct. 18, 1941 by DeLong, Good, Plummer, and Caldwell. Male paratypes from Cuernavaca, Mor., Sept. 8, 1939 (Plummer and DeLong) and Sept. 25, 1945 (Plummer, DeLong, Hershberger, and Elliott); Mexico City D.F. Sept. 26, 1945 and Oct. 22, 1945 (DeLong, Hershberger, and Elliott); Jalapa Rd Vera, K-241, Oct. 13, 1945 (Shaw, DeLong, Hershberger, and Elliott); San Jacinto D.F. June 7, 1933 (M.F. 3040); and Bella Vista Mex. (M.B. 366) Sept. 17, 1933 by Dr. Dampf.

***Empoasca cruciata* n. sp.**

A broad headed species, white with a brown cruciate marking on middle of elytra, resembling a *Typhlocyba* in general appearance. Length 4 mm.

Vertex: Broad, rather blunt, slightly produced at apex and rounded. Vertex narrower than pronotum. Almost twice as wide between eyes at base as median length.

Color: White, ocelli darker. Pronotum white, the dark anterior portion of the scutellum showing through from above. Scutellum dark brown with a narrow median pale longitudinal line. Elytra more heavily marked in male than in female specimens. In each sex the elytra are white with a dark brown cruciate band crossing the apical half of the clavus. The posterior arm of the cross extends diagonally, caudally to the costal margin anterior to the apical cells. The anterior arm is shorter and extends onto the corium (in the female) just anterior to the claval vein. In the male it extends across the corium to the costal margin. Also in the male there are brown markings on the elytra along the margin of the scutellum and along the commissural line to form a spot on middle of clavus. Face white with a dark brown spot on clypeus. Female ovipositor dark brown.

Genitalia: Female seventh sternite with posterior margin broadly roundedly produced. Male styles rather short with apices curved outwardly and pointed. The lateral processes are long, curved outwardly on apical fourth with the apices rather abruptly pointed. The aedeagus is rather straight, erect and slightly thickened at apex. The pygofer spine is rather broad extending caudally then curving ventrally with the pointed apex extending ventrally.

Holotype male, allotype female and male paratypes from Desierto de Los Leones D.F. Oct. 9, 1945 collected by DeLong, Hershberger, and Elliott. Male paratype from same locality (M.F. 1744) Aug. 24, 1930 collected by Dr. A. Dampf.

***Empoasca angustella* n. sp.**

An elongate, blunt headed species, resembling *obstipa* in general appearance but with distinct genitalia. Length 4 mm.

Vertex: Broad, slightly produced and rounded. About two-thirds as wide between eyes at base as median length.

Color: Pale yellowish to orange. Vertex and anterior portion of pronotum yellowish. There are three white spots on anterior margin of pronotum. The posterior portion of the pronotum and scutellum is orange. There is a broad median, longitudinal white stripe on scutellum, darker margined, which is visible under pronotum. Elytra subhyaline tinged with yellow.

Genitalia: Male styles slender and with tapered sharply pointed apices. The lateral processes are rather short and thickened at the base. The aedeagus is erect and the apical portion is Y-shaped with the caudal branch longer and narrowed. The pygofer spine is rather short, and broadened on caudo-ventral portion. The antero-ventral margin is sharp pointed.

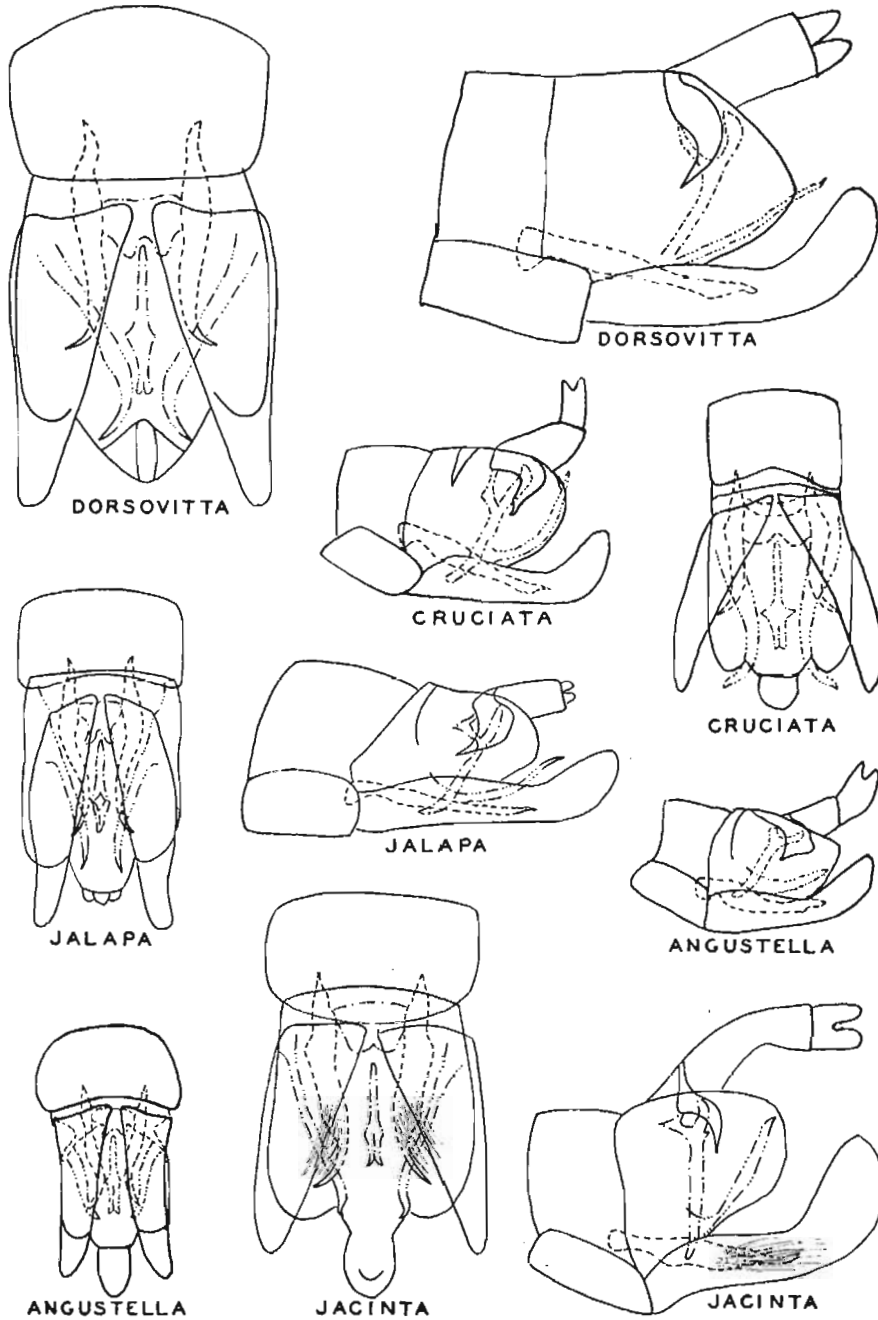
Holotype male collected at Laguna de Zempoala, Mor. Mexico, Oct. 21, 1945 collected by DeLong, Plummer, Hershberger, and Elliott.

***Empoasca dorsovitta* n. sp.**

A small species resembling *cerata* in general form with a more pointed head and a dark colored stripe from apex of head to tip of wings. Length 3 mm.

Vertex: Produced and blunt at apex, almost two-thirds as long at middle as basal width between the eyes.

Color: Green, a broad black or dark brown stripe extends from apex of vertex to tips of wings. This is broadened from narrow stripe at apex to the width between the eyes at the base of vertex and covers the entire scutellum. There is a distinct notch in the band on either side at the anterior margins of the eyes. The stripe on the wings is brownish and covers most of the claval area. This merges with a smoky area covering the apices of the wings and extending anterior to the apex of the clavus. There is also a darker oblique band extending from the disc of the wing to the smoky area just anterior to the clavus. In female specimens the color is reduced on the wings to an elongate dark brown spot on each side of the scutellum on the base of the clavus and a dark elongate spot on the middle of each wing. The apex is smoky as in the male.



The figures are illustrations of the ventral and lateral views of the male genital structures.

Genitalia: Female seventh sternite broadly, roundedly produced, male styles elongate pointed at base and apex. The caudal portion is tapered to a slender pointed apex which is curved outwardly. The lateral pygofer processes are similar in shape to the styles with pointed apices which curve outwardly. In lateral view it is a simple straight process which gradually tapers to a pointed apex. The aedeagus is erect with an anterior process which arises a short distance from the apex, is rather long, tapered, sharp pointed and curving dorsally. The apical portion of the aedeagus is thickened and rounded. The apical caudal spine is rather long, thickened to near the end then narrowed on the inner margin by a concave excavation, and is sharply pointed.

Holotype male, allotype female and female paratypes collected at Laguna de Zempoala, Mor., Oct. 21, 1945 by Plummer, DeLong, Hershberger, and Elliott; female paratypes from Zitacuara, Mich., Sept. 28, 1945 by the same collectors and Oct. 29, 1941 by DeLong, Good, Caldwell, and Plummer; Carapan, Mich., Oct. 21, 1941 by the same collectors; male and female paratypes from Rio, Frio D.F. (K-67) Oct. 18, 1915 by DeLong, Hershberger, and Elliott, and a male paratype from Cruz Blanca, Vera (K-289), Oct. 13, 1945 by Shaw, DeLong, Hershberger, and Elliott.

***Empoasca jacinta* n. sp.**

Resembling *obtusa* in general appearance but with distinct male genital structures. Length 4.5 mm.

Vertex: Broadly rounded in front, almost transverse, about as long as middle as next the eyes, twice as wide between eyes at base as median length.

Color: Green tinged with yellow or orange, with paler areas but without definite markings. Elytra greenish subhyaline, often with a black spot on inner anterior margin of each eye.

Genitalia: Male styles rather broad, the apical third abruptly narrowed and tapered to a slender pointed apex. Lateral processes of the pygofers narrow, elongate, the apices slightly recurved and sharply pointed. The aedeagus is thickened and blunt at the apex. The dorsal pygofer spine is somewhat elongate, curved caudo-ventrally and sharp pointed at the apex.

Holotype male and male paratypes from San Jacinto D. F. (M.F. 3090) June 7, 1933 and Xochimilco D.F., Sept. 30, 1923 by Dr. A. Dampf.