

A NEW GENUS EUPTERELLA AND FIVE NEW SPECIES OF LEAFHOPPERS RELATED TO CICADELLA

(HOMOPTERA—CICADELLIDAE)

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In the study of the leafhopper fauna of Mexico a number of specimens were found in pine forest at altitudes varying from 5000 feet to 10,000 feet which are similar in appearance and structure. These apparently belong to an undescribed genus and five species have been distinguished in the material at hand.

Genus *Eupterella* n. gen.

Related to *Cicadella*. The vertex is produced and bluntly or sharply angled. The head is distinctly narrower than the pronotum. The elytra with the second apical cell triangular and stalked. The third and fourth apical cells formed by a vein which arises on the medius behind the cross nervures but before it forks to form the second apical and which extends to the posterior margin of the elytron. Hind wing with four veins forming three open apical cells. The radius and medius are connected with a cross vein but remain separated. The male aedeagus is composed of a basal transverse portion which is bent abruptly back upon itself and produced into an erect whip-like terminal portion.

Genotype: *Eupterella mexicana* n. sp.

Eupteryx huachucae Lawson is apparently congeneric with this material.

Eupterella mexicana n. sp.

In general appearance resembling a species of *Cicadella* but with distinct genitalia. Length 3.5-3.8 mm.

Vertex produced, bluntly angled, median length three-fourths as great as the basal width between the eyes. Head including eyes much narrower than pronotum and about half as long as pronotum.

Color: Vertex creamy with a pair of elongate, diagonal, black spots extending from apex toward eyes just above margin. The portion next the eye is broadened. Pronotum creamy with six dark spots. There is a pair on the anterior margin, one on each side just posterior to the outer portion of the vertex at its base. There is a pair on the outer portion of the disc, more widely separated than the anterior pair. Also a spot on the outer margin of pronotum, each side, just posterior to the outer margin of the eye. Scutellum creamy, the basal angles orange to reddish. Elytra pale, flecked and mottled with reddish pigment. There is an elongated reddish spot on the costal margin just before the anterior apical nervure. Veins on apical portion pale, margined with brown. Face pale in female, infuscated in male with a large black spot just beneath the eye and a transverse black spot next each eye on face.

Genitalia: Female seventh sternite long, the posterior margin slightly concavely sloping to a broad produced lobe-like apex which is keeled at middle. Male plates broad and elongate, convexly rounded, abruptly narrowed near apex with narrow, blunt, upturned apices. Styles narrow, elongate; apical portion is foot-like in appearance with the sharpened toe-like portion directed outwardly. The aedeagus in lateral view is transverse at base. It is then bent back upon itself downward, then upward to form a long, slender apical whip. This portion is decidedly broadened after being curved back and as it crosses aedeagus shaft.

Holotype male collected at Carapan, Mich., Mexico, October 2, 1941. Allotype female from Laguna de Zempoala, Mor., October 21, 1945; male and female paratypes from Carapan, same date, Laguna de Zempoala, same date, Tres Cumbres, D. F., October 21, 1941, Desierto de los Leones, D. F., July 11, 1927, and August 1, 1932, and the state border between Mexico and Mich., K-139, September 28, 1945. The 1941 material was collected by Caldwell, Good, Plummer and DeLong, and the 1945 material by Plummer, DeLong, Hershberger and Elliott.

***Eupterella frigida* n. sp.**

Resembling *mexicana* in general form and appearance but with head blunter and with distinct male genital structures. Length 3.5–3.8 mm.

Vertex produced, bluntly angled, median length about half the basal width between the eyes, longer at middle than next the eyes, less than half as long as pronotum.

Color: Quite variable. Vertex usually some shade of yellow with a pair of black, transverse, diagonal spots just above apex and extending toward eyes. Pronotum yellow to reddish brown. When sufficiently pale, with a pair of black spots on anterior portion, one just posterior to inner margin of each eye, and a pair on posterior portion of disc which are more widely separated. A third pair of spots are on the outer margins of the pronotum, one just posterior to the outer margin of each eye. Scutellum pale to brownish. Elytra variously marked, usually mottled. Posterior portion usually dark or smoky, especially the margins of the veins. Face in female usually pale with a dark transverse spot above each antenna and between eyes. In male the face is usually dark brown to black, often reaching spots above and leaving a white band just beneath vertex margin.

Genitalia: Female seventh sternite with short lateral angles, posterior margin sloping to a well-produced, bluntly angled apex. Male plates and styles as in *mexicana*. The aedeagus in lateral view has a more expanded aedeagus shaft with shorter and more approximate dorsal spine-like processes. Also, the portion crossing the shaft after curving is narrow, not expanded as in *mexicana*. In ventro-caudal view the apical portion is broadened then tapered to a pointed apex.

Holotype male collected at Rio Frio, D.F., Mexico, October 18, 1941. Allotype female and paratype females were collected at the same locality October 7, 1941. Paratype females also collected October 18, 1941. All of these were taken by DeLong, Good, Plummer and Caldwell and female paratypes taken at the same locality October 10, 1945, by DeLong, Hershberger and Elliott.

***Eupterella acuminata* n. sp.**

Resembling *mexicana* in general form but smaller in size with a more produced head and with distinct genitalia. Length 3 mm.

Vertex rather pointed, angularly produced, median length about two-thirds the basal width between the eyes, a little blunter in the male.

Color: Pale yellow marked with black, brown and red. Vertex usually tinted with bright red on basal two-thirds. Apex with a black line, sometimes quite broad, extending toward eye on either side. Pronotum pale tinged with red and yellow, with two separated black spots just back of margin. Scutellum yellowish, the basal angles brown or black. Elytra pale with broad and reddish markings. Anterior portion mottled with brown, corium and posterior half of clavus with reddish or brownish dots. The posterior costal area reddish and smoky, veins pale. Face pale unmarked in both sexes.

Genitalia: Female seventh sternite with long lateral margins from which the posterior margin is strongly concavely produced to form a median lobe which is about as long and half as wide as basal portion and is rounded at apex. Male plates and styles similar to *mexicana*. The aedeagus is expanded on the shaft and the apical whip-like portion is slender as viewed both from the lateral and ventral views.

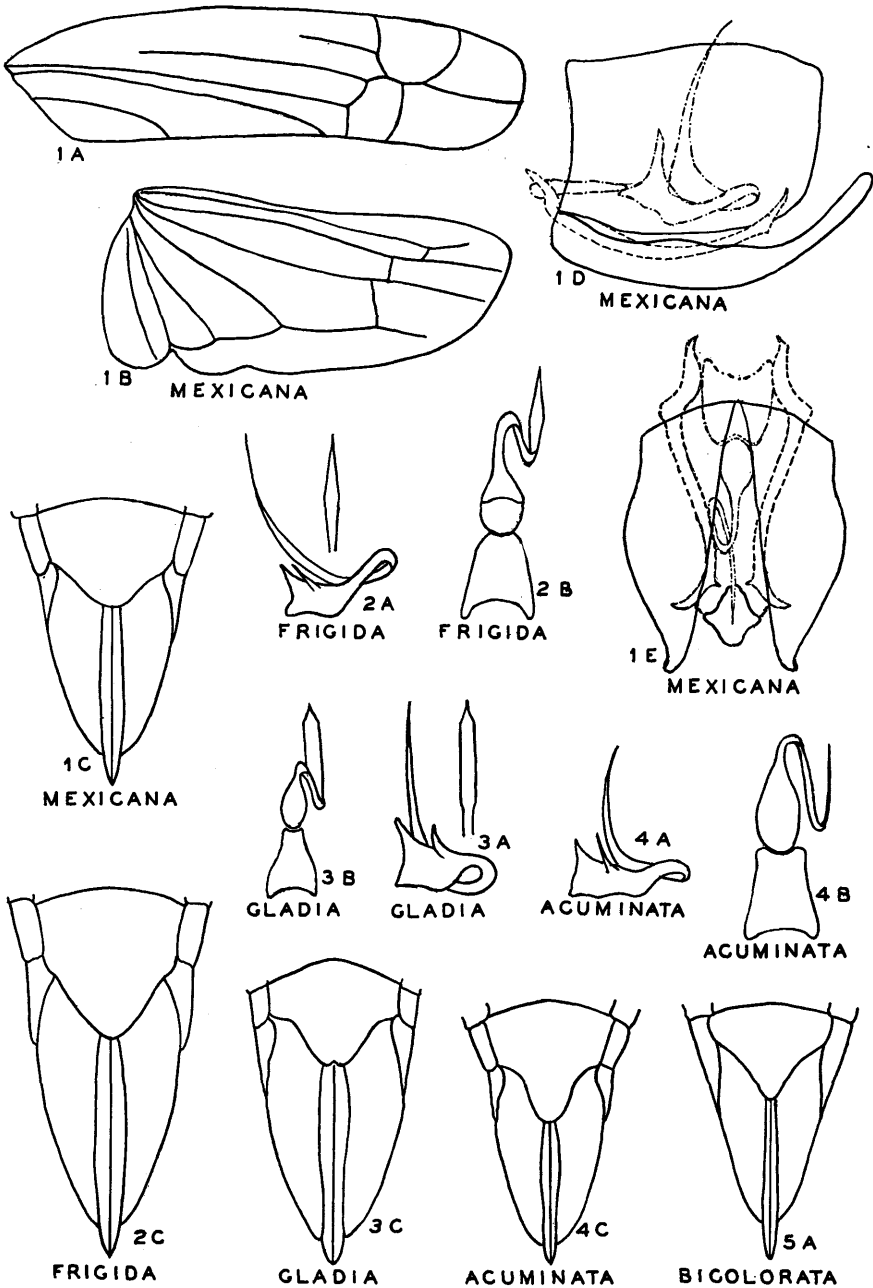
Holotype male, allotype female and paratype male collected at Orizaba, Veracruz, Mexico, October 17, 1941, by Plummer, Caldwell, Good and DeLong. A female paratype was taken at Tehuacan, Pue., on the same day by the same collectors and a male paratype at Saltillo, Coah., Mexico, September 23, 1941, by Good, Caldwell and DeLong.

***Eupterella gladia* n. sp.**

Resembling *frigida* in form and general appearance with blunt vertex and distinct male genitalia. Length 3.5–3.7 mm.

Vertex short, almost rounded in male, median length three-fourths as great as the basal width between the eyes in female and more than one-half as long in the male.

Color: Somewhat variable, female usually paler than male. The vertex in the male is yellow with the elongate spots at apex fused to form a transverse band. Pronotum with the four spots on anterior portion conspicuous. The two on the posterior portion of disc are fused



Illustrations of species of *Eupterella* as labeled:

1. *E. mexicana*—(1a.) forewing; (1b.) hind wing; (1c.) ventral view of apical portion of female abdomen; (1d.) lateral view and (1e.) ventral view of male genital structures.
2. *E. frigida*—(2a.) lateral view and (2b.) ventro-caudal view of male aedeagus; (2c.) ventral view of apical portion of female abdomen.
3. *E. gladia*—(3a.) lateral view and (3b.) ventro-caudal view of male aedeagus; (3c.) ventral view of apical portion of female abdomen.
4. *E. acuminata*—(4a.) lateral view and (4b.) ventral view of male aedeagus; (4c.) ventral view of apical portion of female abdomen.
5. *E. bicolorata*—(5a.) ventral view of female abdomen.

with a transverse dark brown band which extends almost across the posterior margin of the pronotum and is widened at middle. Scutellum with anterior half dark brown, posterior half pale. Elytra with a brown area in the basal claval area and a diagonal brownish area extending from costa to posterior half of clavus. Veins on posterior portion pale bordered with brown. Face in male pale brownish with the large spots below the eyes and the transverse spots between eyes on face conspicuous.

Genitalia: Female seventh sternite rather long, the posterior margin rather definitely concavely excavated each side of a produced median lobe which is about half as wide as the basal width. Male plates and styles similar to those of *mexicana*. Aedeagus shaft broadened. The anterior dorsal spine-like process is conspicuous. The apical portion of the aedeagus whip structure is quite broadened to near its apex where it is rather abruptly narrowed to a pointed apex, appearing sword-like.

Male holotype from Mexico City, September 2, 1937, by Dampf. Allotype female from State Border of Mexico and Mich. collected September 28, 1945, by Plummer, DeLong, Hershberger and Elliott. Male paratypes from Rio Frio, D. F., October 10, 1945, by DeLong, Hershberger and Elliott and male paratypes from Santa Rosa, D. F., Mexico, July 24, 1932, by Dampf. A series of female paratypes referred to this species were taken at Mexico City September 2, 1937, by Dr. Dampf.

***Eupterella gladia* var. *limba* n. sp.**

Resembling *gladia* in general form and appearance but with different coloration. Length 3.5 mm.

Color: Vertex yellow, broadly bordered with black along margin from apex to base of eyes. Pronotum marked with dark brown or black so as to show only a yellowish area on the disc and a faint yellowish border on the posterior margin. Scutellum with the anterior half black, the posterior half yellow. Elytra rather heavily marked with brown. Light areas are on the anterior portion and the apical portion of clavus. Veins on anterior half of elytra inconspicuous. On the posterior half they are pale, dark margined. Face in both sexes black with a white transverse band just beneath margin of vertex. Antennae and legs bright yellow.

Genitalia: Female last ventral segment with long lateral margins, the posterior margin sloping and produced to form a median rounded lobe more than half as broad as basal portion of segment. Male genital structures similar to those of *gladia*.

Holotype male collected at Tres Cumbres, D. F., October 21, 1941, and female allotype from Carapan, Mich., October 2, 1941, by DeLong, Plummer, Good and Caldwell. Paratype male from Desierto de los Leones, D. F., November 5, 1933, by Plummer.

***Eupterella gladia* var. *bifasciata* n. sp.**

In general appearance resembling var. *limba* but with different colorations. Length 3 mm.

Vertex well produced, blunt at apex, median length about two-thirds the basal width between eyes.

Color: Vertex black except a transverse white spot at base. Pronotum black, a pair of proximal pale spots on disc and central half of posterior margin white bordered. Scutellum white with the basal and apical angles black. Basal half of elytra black except a small spot on inner margin of each clavus at apex of scutellum and an elongate spot on middle of each costa. Posterior half pale with veins broadly margined with brown. Apical cells smoky. Face white with a heavy black transverse band across face between eyes forming a white band between this and margin of vertex.

Genitalia: Female segment produced and blunt at apex as in *gladia*.

Holotype female from Tuxtla, Gutierrez, Mexico, June 4, 1926, collected by Dr. Dampf.

***Eupterella bicolorata* n. sp.**

Resembling *mexicana* in general form but with distinct coloration. Female only. Length 3 mm.

Vertex rather strongly produced and bluntly angled.

Color: Vertex white with a narrow black border extending along each side from apex to eyes. Pronotum white bordered with black along anterior margin and rather broadly along the lateral margins of the pronotum. Scutellum white, the basal angles with small black spots.

Elytra marked with the same sharp definition of color. The clavus entirely yellow except a small black spot on anterior basal angle. Remainder of elytra predominantly black. An elongate spot on central portion of costa and inner portions of anteapical cells pale. The veins on apical third are pale, widely bordered with brown. Apical portion smoky.

Genitalia: Female seventh sternite rather long, posterior margin strongly produced and sloping on each side to form a produced bluntly rounded median lobe.

This unique female is described because of its distinctive and contrasting color pattern in spite of the fact no male specimen is available.

Female holotype collected at Zitacauero, Mich., Mexico, September 29, 1941, (Km. 160) by DeLong, Good, Caldwell and Plummer.
