

THE GENUS MESAMIA IN MEXICO
(Homoptera: Cicadellidae)

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The Genus *Mesamia* was erected by Ball in 1907² as a subgenus of *Eutettix* to include a group of species with flattened vertex, the margin of which is acutely angled with the front.

The elytra contain a second cross nervure and a constricted second antecapical cell. There are many supernumerary veinlets along the clavus and costa.

Mesamia nigradorsum Ball was designated as the genotype. Fifteen species placed in this genus have been described from the United States and one species, *orizaba* Ball, was previously described from Mexico. The Mexican species was described from a pair of specimens, the female of which was designated as the holotype. Collections made by the authors and their co-workers during the past few years have furnished an abundance of material which reveals the fact that these two specimens belong to different but closely related species. Dr. Oman of the U. S. National Museum has examined these two series of specimens and verified this conclusion. As a result of this decision, the allotype male of *Mesamia orizaba* is described at this time and the species to which the allotype of *orizaba*, as described by Ball, belongs is the species described here as *bifurcata*. In addition six other new species and one variety are described at this time.

Mesamia orizaba Ball

Mesamia orizaba Ball, Bull. Brooklyn Ent. Soc. 26: 92, 1931.

Resembling *prescottia* in form and general appearance but smaller and with more obtusely angled vertex. Length, 5 mm.

Vertex produced, with rounded apex, about one-third wider between eyes at base than median length.

Color: Vertex pale brownish, margin ivory white with a narrow marginal black line just above and another just below, a narrow ivory wedge-shaped spot extending back from margin to disc and interrupting the black line at middle. Pronotum dark brown. Scutellum orange brown with a pair of ivory dashes near middle of base and a pair of ivory spots on lateral margins. Elytra pale brownish, subhyaline; nervures dark brown; apical margin and spots in apical cells brown with three pairs of ivory spots along commissure. Face light brown with pale arcs.

Genitalia: Female last ventral segment with posterior margin roundedly produced to middle, slightly indented either side of median spatulate process which is short but produced beyond the margin of segment. Spatulate process slightly indented at middle. Male plates

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²Dav. Acad. Nat. Sci. 12: 31, 1907.

long, gradually tapered from a broad base to acutely pointed apices. Styles broad at base, gradually tapered to pointed apices. The apical half of style is quite slender. The aedeagus in lateral view is conversely rounded on dorsal margin near base, just beyond which is a pair of lateral spines directed dorsally. The apical half of aedeagus is divided forming a pair of long slender parallel processes. The pygofer bears a single spine on the caudal ventral margin.

The *holotype* female was collected at Orizaba, Vera., Mexico. *Allotype* male as here described collected at Tuxpan, Mich., October 5, 1941, by Good, Caldwell, Plummer and DeLong.

Specimens are also at hand from Zacapu, Mich., October 4, 1941; Buena Vista, Gro., October 23, 1941 (K. 340; elev. 3400); Cuernavaca, Mor., September 8, 1939 (elev. 7000); Puebla, Puc., October 18, 1941 (elev. 8500); Chilpancingo, Gro., October 25, 1941 (elev. 4700); Iguala, Gro., October 25, 1941 (elev. 3600); and Tepoztlan, Mor., September 11, 1941 (elev. 6000) by Caldwell, Good, Plummer and DeLong. Also *paratype* male from Tlalpam, D. F., September 16, 1923, collected by Dr. A. Dampf. Compared with type male and female specimens have been placed in the U. S. National Museum.

Paratypes also from Zitacuara, Mich., (6800 ft.), September 28, 1945, by Plummer, Elliott, Hershberger, DeLong; Zimipan, Hidg., K. 222 (6800 ft.), October 31, 1945, by DeLong, Hershberger, Elliott.

Mesamia bifurcata n. sp.

Resembling *orizaba* in general form and appearance but with a bifurcate spine on the pygofer of male. Length 5-6 mm.

Vertex produced and bluntly angled, about one-fourth wider between eyes at base than median length.

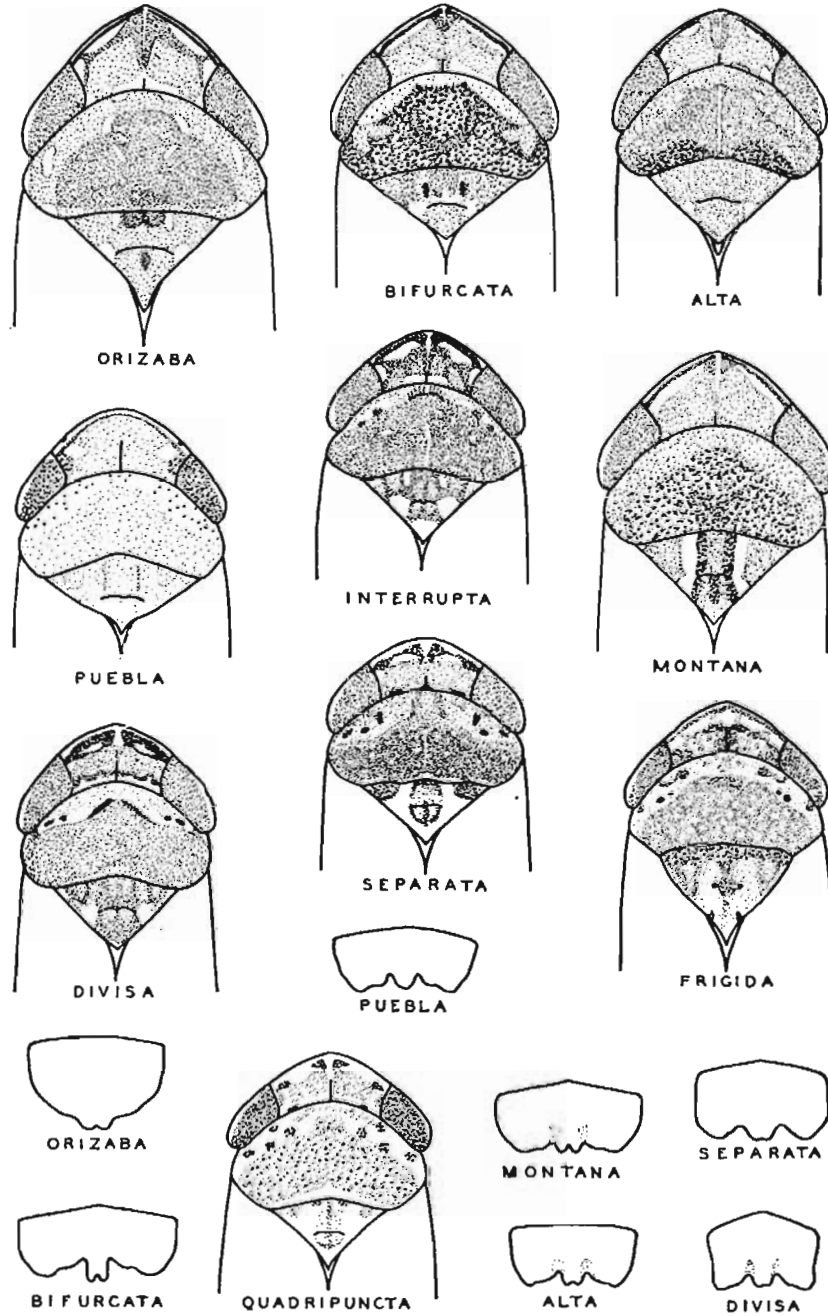
Color: Pale brownish marked with dark brown and black. Vertex with a dark brown line just above margin which is slightly broken at the middle by a median white mark. Pronotum with anterior portion light brown, the disc and posterior portion dark brown. Scutellum reddish brown. Elytra pale brownish subhyaline, nervures dark brown, costal veinlets heavily embrowned. Face rather dark brown with pale arcs, a dark brown marginal line just beneath white vertex margin.

Genitalia: Female last ventral segment with posterior margin angularly excavated either side of a narrow, rather short, median spatulate process which is slightly notched at apex. Male valve short and rounded; plates rather long, broad at base rather rapidly narrowed to acutely angled apices. Styles elongate and rather gradually narrowed to pointed apices. Aedeagus in lateral view erect, the apical half divided forming two long, rather slender processes which are directed anteriorly and dorsally. The apical spine on the pygofer is bifid.

Holotype male collected at Tasquillo, Hgo., October 29, 1941, K. 172 (elev. 5600 ft.) by E. E. Good and D. M. DeLong. *Allotype* female collected at Zimapan, Hgo. (17 miles N.), September 26, 1941, by Good

EXPLANATION OF PLATE I

Dorsal view of heads and ventral view of last ventral segment of female abdomen of species of *Mesamia* as labeled.



and DeLong. *Paratype* males and females collected at Zimapan, Hgo., Carapan, Mich., October 2, 1941 (K. 432; elev. 7500); Zacapu, Mich., October 4, 1941; Toluca, D. F., September 29, 1941 (K. 97; elev. 9700); Puebla, Pue., October 18, 1941 (K. 78; elev. 8500) and Mexico City, D. F., 18 kms. west on Toluca Rd., September 1, 1939 (elev. 8500 ft.) by DeLong, Plummer, Caldwell and Good. Male *paratypes* collected at Rio Frio, D. F. (K. 65), October 10, 1945, by DeLong, Hershberger and Elliott; female *paratypes* collected at Mil Cumbres, Mich., September 30, 1945, by Plummer, DeLong, Hershberger and Elliott. *Paratypes* at Tasquilla, Hidg. (K. 174; elev. 6000) October 30, 1945; Mexico City D. F., October 22, 1945, by DeLong, Hershberger, Elliott; also Rio Frio, D. F. (K. 65), October 10, 1945, by same collectors; Mexico, Mich. State Border (K. 139; 9200 ft.), September 28, 1945, Hidalgo, Mich., September 29, 1945, Morcia, Mich., September 30, 1945, Laguna de Zempoala, Mor., October 21, 1945, by Plummer, DeLong, Hershberger and Elliott; Cuernavaca, Mor., September 25, 1945, by Balock, DeLong, Hershberger and Elliott; Jalapa Rd. (K. 341), October 14, 1945, by Shaw, DeLong, Hershberger, Elliott; Tepoztlan, Mor., 1943, by Plummer.

The specimen labeled allotype male of *orizaba* in the Ball collection, U. S. Nat. Mus. is made a paratype of this species and is labeled "Orizaba, H. S. and F. D. G., Dec., 1887." A paratype female has also been placed in the U. S. Nat. Mus. collection.

Mesamia alta n. sp.

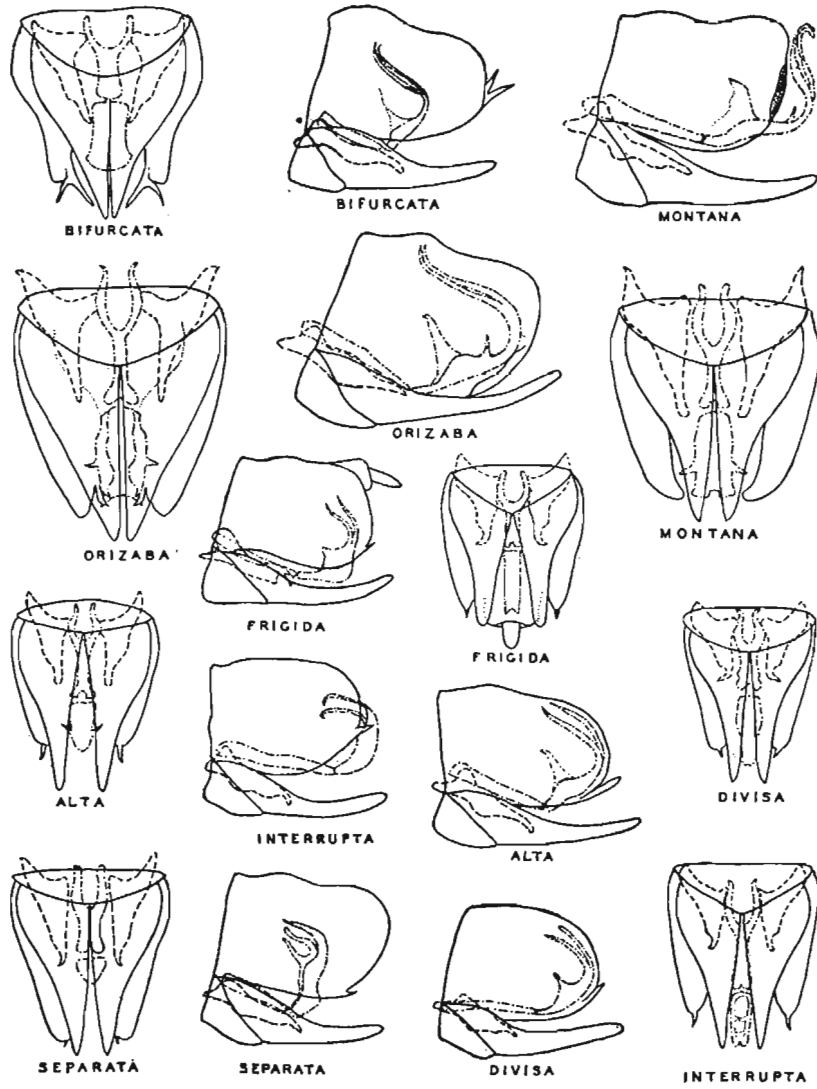
Resembling *diana* and *prescottia* in form and general appearance but with distinct male genitalia. Length 4.5 to 5 mm.

Vertex produced and rounded, more than one-third wider between eyes at base than median length.

Color: Vertex pale brownish with a dark brown narrow marginal band just above margin which is interrupted at middle. Pronotum dark brown, paler along anterior margin. Scutellum dark reddish brown, a white spot at about the middle on each posterior margin joined with a narrow white longitudinal line which crosses scutellum. Elytra with anterior half subhyaline, the claval area dark brownish, veins brown. Face brownish with paler arcs; a narrow dark brown band just beneath margin.

Genitalia: Female last ventral segment with the posterior margin produced and bluntly rounded, sloping either side to, and notched either side of, a median tooth which is short, broad and slightly notched at apex. Male plates rather narrow, elongate, apices slender and bluntly pointed. Styles rather short, rapidly narrowed from a broad base to a narrow blunt apex. Aedeagus rather broad at base, narrowed at about one-third its length and divided forming a pair of long slender parallel apical processes which are curved anteriorly and dorsally. A pair of short lateral spines protrude at about one-third its length. The pygofer spine is on the ventral apical margin and is single.

Holotype male collected at Tuxpan, Mich., October 5, 1941 (K. 186; elev. 7600). *Allotype* female collected at Puebla, Pue., October 18, 1941, by Caldwell, Good, Plummer and DeLong. *Paratype* males collected at Iguala, Gro., September 11, 1939, by Plummer and DeLong.



Ventral and lateral views of male genital structures of species of *Mesamia* as labeled.

Mesamia montana n. sp.

Resembling *prescottia* in form and general appearance but with distinct male genitalia. Length 5.5 to 6 mm.

Vertex produced and blunt, scarcely angled, about one-third wider between eyes at base than median length.

Color: Vertex pale brownish yellow, margin yellow with a narrow dark brown line just above margin which is interrupted by a narrow elongate yellow spot at apex and a rather broad paler area bordering the brown margined line. Pronotum dark brown with paler markings on anterior portion. Scutellum reddish brown with a pale longitudinal line on either side at about one-third the width, extending across scutellum. Elytra pale brownish, subhyaline with dark brown nervures. Face with a narrow dark brown band just beneath margin and with pale arcs on a darker brownish background.

Genitalia: Female last ventral segment with posterior margin broadly, slightly excavated with a short, broad, median spatulate tooth, which is deeply notched at middle. Male plates long, rapidly narrowed to acutely pointed apices. Style broad at base, gradually narrowed to rather narrow blunt apices. Aedeagus in lateral view narrow and elongate, bearing a pair of lateral spines at about half its length. The apical half of aedeagus bifid forming a pair of long slender processes which are recurved. The caudal apical spine is about the middle of the pygofer and single.

Holotype male, *allotype* female and male and female *paratypes* collected at Urapan, Mich., from shrubs October 1, 1941, by Plummer, Good, Caldwell and DeLong. Male and female *paratypes* collected at Zitacuaro, Mich., from shrubs September 29, 1941 (K. 160; elev. 7500) by the same collectors.

Mesamia divisa n. sp.

Resembling *tarbella* in general form and appearance but with distinct male genitalia. Length 4.5 to 5 mm.

Vertex rather short, roundedly produced, more than one-third wider between eyes at base than median length.

Color: Vertex pale brown with a conspicuous black band just above margin of vertex which is interrupted at middle and broadened on either side of the pale median spot, and next each eye. A paler spot is just posterior to the band at about the middle on either side and in the concavity of the narrowed portion of the dark band. Pronotum with the anterior third pale brown, the posterior two-thirds darker brown; a row of two or three dark brown spots just posterior to each eye on anterior portion of pronotum. Scutellum pale brown. Elytra pale, subhyaline, veins dark brown. Face pale brownish with paler arcs on each side and an interrupted dark brown line just beneath margin of vertex.

Genitalia: Female last ventral segment produced on lateral angles, between which the posterior margin slopes anteriorly to middle where it is notched either side of a short, broad, median, sunken tooth. Male plates elongate, narrow, concavely rounded to bluntly pointed apices. Style narrow from broad base to apex which is concavely notched on outer margin just before the pointed, outwardly directed apical finger-

like process. The aedeagus is pointedly produced on the dorsal margin near the base. The apical half is divided into a pair of long slender, parallel processes which are directed dorsally and anteriorly. The pygofer spine is single and located on the ventral caudal margin.

Holotype male collected at Iguala, Gro., September 11, 1939. *Allotype* female from Orizaba, Vera., October 17, 1941 (K. 280) by Good, Plummer, Caldwell and DeLong. *Paratype* males and females from the same localities and from Tuxpan, Mich., October 5, 1941 (K. 186; elev. 7600); Tasquillo, Hgo., October 29, 1941 (K. 172; elev. 5600); and Chilpancingo, Gro., October 25, 1941 (elev. 4700) by Good and DeLong. *Paratypes* from Rio Tuxpan, Mich., September 29, 1945, by Plummer, DeLong, Hershberger, Elliott.

Mesamia interrupta n. sp.

Resembling *coloradensis* and *divisa* in form and general appearance but with distinct male genitalia. Length of male 4.5 mm.

Vertex roundedly produced, more than one-third wider between eyes at base than median length.

Color: Vertex pale brownish with a dark brown band just above margin broadened either side of a narrow median pale interruption. There is a pale elongate spot either side just posterior to and in the concavity of the black marginal band. Pronotum dark brown with small dark brown spots just posterior to each eye. Scutellum brown tinged with orange, a pale linear longitudinal spot extending across scutellum about one-third the distance from each side at base. Elytra pale subhyaline with brownish mottlings, veins dark brown. Face brownish with paler arcs. A narrow dark brown transverse line just beneath margin interrupted at middle.

Genitalia: Male plates elongate, rapidly narrowed to pointed apices. Style broad at base, short, rapidly narrowed to a bluntly pointed apex which is concavely indented on outer margin. Connective longer than aedeagus. The basal portion of the aedeagus is broad, the apical half is divided into two very slender processes which are not proximal. The pygofer spine is short, and protrudes caudally on the caudal margin of aedeagus.

Holotype male and *paratype* males collected at Mexico City, D. F., September 13, 1939, by D. M. DeLong (elev. 7500 ft.).

Mesamia separata n. sp.

Resembling *coloradensis* in general form and appearance but with distinct male genitalia. Length 4.5 mm.

Vertex rather short and broadly rounded, in the female appearing almost parallel margined. Almost twice as wide between eyes at base as median length.

Color: Vertex pale brown, paler anteriorly with four black elongated spots forming a broken band just above margin. There is a transverse black spot next each eye and a pair of proximal triangular spots at apex with the broadened bases of the spots narrowly separated. Pronotum dark brown, anterior portion paler with three dark brown spots just back of each eye. Scutellum pale with basal angles reddish brown. Elytra pale subhyaline with dark brown veins and dark brown mottling.

Face dull brown with paler arcs and a narrow dark brown transverse band just beneath margin of vertex.

Genitalia: Female last ventral segment with prominent produced angles between which the posterior margin is broadly notched either side of a short broad median tooth which is produced to the apex of the lateral angles. Male plates concavely narrowed on apical half to form bluntly pointed apices. The styles are elongate and wedge-shaped, gradually narrowed to pointed apices which are curved slightly outwardly at the tip. The aedeagus is rather broad in lateral view and erect. The apical third is divided into three rather distinctly divided processes which are directed anteriorly.

Holotype male and *allotype* female collected at Orizaba, Vera., October 17, 1941 (K. 280) by Plummer, Good, Caldwell and DeLong. *Paratype* females collected at Tehuacan, Pue., October 17, 1941, by Caldwell, Plummer, Good and DeLong. Paratypes from Tasquilla, Hidg. (K. 174; 6000 ft.), October 30, 1945, by DeLong, Hershberger, Elliott. Male and female *paratypes* collected at K-187 on the Guadalahara Road, November 27, 1943, by W. E. Stone.

Mesamia separata var. **quadripuncta** n. var.

Resembling *separata* in general form and appearance but with different coloration. Length 4 mm.

Vertex broad, scarcely produced, broadly rounded, more than twice as wide between eyes at base as median length.

Color: Vertex pale with a small black triangular spot next each eye and a similar spot either side of middle just above margin. Disc infuscated. Pronotum pale with disc darker, a row of three dark spots just back of eye on anterior margin. Scutellum paler. Elytra whitish hyaline, veins dark brown, clavus rather heavily infuscated. Face brownish with pale arcs and a dark brown line just beneath margin.

Genitalia: Female last ventral segment similar to *separata* with the posterior margin notched either side of the short median spatulate process.

Holotype female collected at Iguala, Gro., Mexico, September 11, 1939, by Plummer and DeLong.

When more material is available this will probably prove to be a distinct species.

Mesamia puebla n. sp.

Resembling *orizaba* in general form but with vertex more blunt and rounded, without distinct color markings and with female segment narrowly notched. Length 5 mm.

Vertex blunt, rather broadly rounded almost half as long at middle as basal width between the eyes.

Color: Dark gray, vertex unmarked except a very faint brownish line just above margin. Pronotum darker on disc, a few dark markings on anterior margin just back of eyes. Scutellum dark gray; basal angles of scutellum tinted with orange. Elytra gray, subhyaline, veins pale brown without markings; some of cross veins are pale in color. Face pale brown, infuscated above, with a pale narrow brown line just

beneath vertex margin. Abdomen yellow. Female last ventral segment black.

Genitalia: Female last ventral segment with produced lateral angles, the posterior margin rather narrowly notched, either side of a rather broad, rounded median tooth.

Holotype female collected at Puebla, Pue., Mexico, October 18, 1941, by Caldwell, Plummer, Good and DeLong.

Although only a single female specimen represents this species it is so unique in color and form it seems proper to describe in it this group.

***Mesamia frigida* n. sp.**

Related to *divisa* by the characters of the male genitalia but with different appearance and coloration and with vertex more angularly produced. Length, male 5 mm.

Vertex bluntly angularly produced, about twice as wide between eyes at base as median length.

Color: Vertex appearing brownish, the anterior half dark brown blending into the marginal black line. Five light areas are produced, one at middle, one each side about half way between middle and eyes, just back of marginal line, and one next each eye. The posterior half pale brown, mottled. Pronotum dark brown mottled. A pale spot back of each eye containing three small dark brown spots. Scutellum dark with paler spots. Elytra appearing quite dark brownish, due to the heavy pigment lines and numerous supernumerary veinlets on the claval area especially. The corium and costal portions are paler with dark brownish veins. Face dark brown with pale arcs, a black transverse marginal line just beneath vertex margin.

Genitalia: Male plates rather long, remaining rather broad to tips which are blunt and rounded. Styles triangular, rather broad at base, tapered to finger-like apices. Aedeagus in lateral view right angled in shape, broadest at middle, with three long apical processes, the central one of which is largest. These curve anteriorly and are produced dorsally. The pygofer spine is short and at the base of the apical portion.

Described from a single male collected at Rio Frio (K. 65; 10,000 ft. elevation), October 10, 1945, by DeLong, Hershberger and Elliott.