FOUR NEW SPECIES OF LEAFHOPPERS AND NOTES ON TWO OTHERS (HOMOPTERA, CICADELLIDAE)

R. H. BEAMER, Lawrence, Kansas*

Lonatura rotunda n. sp

Resmbling Lonatura salsura Ball, but with elytra of short winged form with apices round instead of truncate, color markings usually pronounced, aedeagus of male longer, with bifurcation of tip much narrower. Length: short winged form, 3.50-4 mm; long winged form, 4.50-4.75 mm.

Vertex rounded, not quite so sharp as in L. salsura. Elytra in short winged form having last three segments of abdomen exposed; apices rounded; hind wings mere pads; wings longer than abdomen in long winged form, both well developed.

Color. Ground color buff to whitish hyaline, marked with fuscous. Vertex with two black spots on front margin, mesal one more or less triangular; back of these a transverse dash enlarged at either end and a pair of converging dashes basally. Pronotum usually with four distinct longitudinal stripes, often quite dark in long winged forms. Scutellum usually with apex and basal angles darker. Elytra subhyaline, veins white with usually some darker areas, especially on clavus.

Genitalia. Last ventral segment of female about twice as long as preceding, lateral margin excavated for about half its length exposing underlying membrane, posterior margin slightly produced at middle. Male valve short, rounded. plates wider than valve at base. rapidly narrowed to sharp apices; aedeagus in lateral view broad, bent dorsally on outer third with slight indentation of margin at that point; apex in ventral view with narrow mesal slit about two-thirds as long as greatest width of shaft.

Holotype male, allotype female, 15 male and 18 female paratypes, Swan River, Manitoba, August 2, 1937, R. H. Beamer; 4 female and 8 male paratypes. Cowan, Manitoba, August 7, 1937, R. H. Beamer. (All short winged); 3 female and 3 male long winged forms, same

^{*} Contribution from the Department of Entomology; University of Kansas.

data as latter; 1 long winged female, Birch River, Manitoba, August 3, 1937, R. H. Beamer.

Twiningia tricolor n. sp.

Resembling T. bicolor (Ball) but dorsum crossbanded with three colors, white, fuscous, and orange. Length; female 4 mm.; male 5 mm.

Vertex deeply excavated, margins very sharp. Elytra longer than abdomen, apices rounded, with two claval veins, outer indistinct, two cross-nervures and appendix.

Color. White with following crossbands: mottled fuscous occupying pronotum, scutellum and bases of elytra, golden yellow from about middle of clavus almost to cross veins and fuscous from cross veins to apices. White basal color shows as narrow band on both sides of yellow band. Apical cells usually with a light areole in base. Venter golden yellow except fuscous cross band of pronotum which occupies a portion of face and all of sternum, including legs to tibiae.

Genitalia. Last ventral segment of female about three times as long as preceding; posterior margin roundingly produced, sharply excavated one-half its length either side of long ribbon-like process which in turn has a sharp V-shaped notch in apex one-third its length. Male valve longer than preceding, angular; plates about as wide at base as valve, outer margin arcuately narrowed to very sharp apices, extending beyond pygofers. Pygofer almost rectangular in shape, with rather blunt tooth on outer ventral corner; aedeagus in ventral view narrow, but with a broad appearance due to a process on each side that is wider than aedeagal shaft, curves with and extends one-fourth its length beyond its apex; in lateral view widest at base, curving dorsally, to form semicircle, margins converging to very slender, sharp apices.

Holotype male, allotype female, 4 male and 12 female paratypes, Anza, California, July 29, 1938, R. H. Beamer; 4 male and 8 female paratypes, Idyllwild, California same date and collector. These specimens were swept from **Arctostaphylos pungens** H. B. K.

Brazosa sexpunctata n. sp.

Resembling amazonensis (Osb.) but pronotum not minutely punctate, elytral veins distinct, not marked

with fuscous, but two transverse spots on vertex, none on scutellum. Length: male, 5 mm.; female, 6 mm.

Vertex very slightly wider at middle than next eyes, slightly more than three times as wide as long, convex, strongly rounding from base to front. Elytra with one crossnervure, longer than abdomen with rounded apices.

Color tawny with usually a small pair of black spots on the front, another on the vertex and a third pair on the pronotum. One specimen in the five has an indication of a pair of median, longitudinal, orange red stripes, united at apex, separating and crossing vertex, pronotum and scutellum and another broader stripe back of each eye. Elytra semihyaline, veins more tawny.

Genitalia. Last ventral segment of female more than twice as long as preceding, posterior margin truncate with very small median notch. Male valve very small, sharply angular; plates much wider at base than valve, long, outer margin converging to long, sharp apices, inner margins slightly diverging on outer third.

Holotype male, allotype female and 3 female paratypes, Brownsville, Texas, August 8, 1937, D. J. and J. N. Knull.

Deltocephalus Iuteoapicalis Beamer

Deltocephalus luteoapicalis Beamer, R. H. Jour. Kans. Ent. Soc., July, 1938, p. 81.

Male like the female but smaller and the elytra longer than the abdomen. Length: male, 2.5 mm.

Genitalia. Valve about one-third longer than preceding segment, angular; plates wider at base than valve, narrowed on outer margin to rather sharp, rounded apices; aedeagus in lateral view very wide at base, rapidly narrowing near middle to one-fourth basal width, bending dorsally at right angles at this point, narrowing on to apex where it is flattened slightly and bent basally. Pygofer more or less rectangular with a fairly large tooth on the outer dorsal corner; margins minutely serrate from tooth to ventral margin.

Allotype male, 13 parallotypes and 20 females, Peeler, Texas, June 22, 1938, R. H. Beamer.

Dicyphonia minuta Beamer

Dicyphonia minuta Beamer, R. H., Jour. Kans. Ent. Soc., p. 70, 1936.

Female resembling **D. plana**, but vertex distinctly wider than long and disc more highly arched on basal half. Length 5.5 mm.

Vertex distinctly wider than length between eyes, disc highly arched on basal half, margins evenly curved from eye to apex, almost foliaceous. Elytra short, exposing four abdominal segments; cut off near apex of clavus, apices slightly rounded; venation fairly distinct although somewhat obscured by vermiculate marks.

Color cinereous with fuscous marks about as in $\boldsymbol{D}\boldsymbol{\cdot}$ plana.

Genitalia. Ovipositor projecting; last ventral segment about three times as long as preceding, posterior margin truncate with small median tooth.

Allotype female, Laramie, Wyoming, July 13, 1937, R. H. Beamer. Parallotypes numerous specimens same time and place, R. H. Beamer, C. L. Johnston, and H. T. Peters.

It was only by getting down in the grass and brushing and parting it with our hands that we were able to find the females. These were collected at the type locality, about five miles north of the city of Laramie, Wyoming, on the west side of the road.

Erythroneura extima n. sp.

Resembling nitida Beamer, but abdomen light; anterior point of style much longer, posterior point much shorter and processes on shaft of aedeagus on sides about one-fourth distance from apex, very short.

Ground color white tinged with yellow on head, pronotum and scutellum. Vertex with inverted orange V, usually touching eyes, continued across pronotum as two diverging vittae; scutellum with basal angles yellow. Elytra with inner pair of oblique vittae, usually bright red, costal pair lemon yellow; sometimes a slight infuscation in region of cross-veins. Abdomen light.

Genitalia. Style with slender foot, base slightly excavated; anterior point long and heavy, longer than width of foot next points; posterior point short, not over one-third as long as anterior, both points directed obliquely to foot; heel usually small. Aedeagus in lateral view slightly curved dorsally, amost parallel-sided with a pair

of short, lateral processes about one-fourth distance from tip.

Holotype male, allotype female, two male and 5 female paratypes, Cedar River, Michigan, August 26, 1937, R. H. Beamer.

DISTRIBUTION OF THE VEGETABLE WEEVIL IN ARKANSAS

DWIGHT ISELY University of Arkansas, Fayetteville

The vegetable weevil (Listroderes obliquus Klug.) has been known as a pest of various truck crops in Arkansas since 1936, and now apears to be widely distributed over the state. It was first noted in the state because of local injury in Bradley county in southeastern Arkansas, early in May, 19361. A number of other records of local destructiveness were secured from nearby counties, Drew, Ashley, and Chicot, also in southeastern Arkansas. In 1937 the species was abundant enough to cause damage as far west as Hot Spring county in the central part of the state and as far north along the eastern border as Crittenden county within 60 miles of the Missouri line. Also a single specimen was collected June 14, 1937, at Fayetteville in Washington county in the northwestern part of the state. In 1938, between March 25 and May 31, four additional specimens were collected at a trap light by M. W. Sanderson at Fayetteville2. No injury by this pest has been observed in northwestern Arkansas. All reports of injury have been received by the Department of Entomology during the month of May.

Up to the present time most of the records of injury by the vegetable weevil have come from the southeastern part of the state, which is nearest to southern Mississippi where it was first observed in the United States in 1922 The infestation at Fayetteville is still in the stage where only isolated specimens are taken. Owing to the scattered distribution of records secured it may be expected that the species occurs rather generally over the state. It is probable that its spread over Arkansas is not as rapid as these records might suggest, but that the insect was established in the southeastern part of the state some years before it became abundant enough to cause injury.

¹ Specimens determined by L. L. Buchanan.

² Specimen determined by L. S. Henderson.