

## NOTES ON NEW AND INTERESTING DELPHACIDS

BY H. L. DOZIER

DELAWARE AGRICULTURAL EXPERIMENT STATION

The following notes and descriptions have been kept in manuscript for several years and they are now published with the view that they will be of interest and help to some of the present workers in the group.

**Achorotile foveata** Spooner. In examining a series of eight brachypterous females taken by Prof. H. Osborn in Yellowstone Park, Wyo., I find that they agree in every particular with the description. The number of pustules on each side of the abdominal segments is not constant, however, and I believe this species to be identical with the European *albosignata* of Dahlbaum.

**Laccocera zonata** Van D. A series of eighteen brachypterous females taken by Prof. Osborn at Kallspell, Mont., are typical.

**Laccocera obesa** Van D. Twenty-six brachypterous females taken at Kallspell, Mont., by Prof. Osborn. One macropterous female taken by C. N. Aineslie at Springer, N. Mex.

**Lepticus oculatus** Crawf. A series of fourteen nymphs of several instars were taken sweeping young bulrushes and sedges in swampy field near Sandusky, Ohio, Oct. 6, 1921, by the writer. These agree perfectly with the description by Crawford, which was based on a single immature male from Managua, Nicaragua, but have the vertex a little more constricted near apex than is shown by his figure. Three specimens in last instar were taken by Prof. Osborn at Delphos, Kansas, together with numbers of *Pentagramma vittatifrons*. These last instar nymphs taken together with numbers of *Pentagramma vittatifrons* agree perfectly with the description and confirms my suspicion that *Lepticus oculatus* of Crawford is an immature *Pentagramma*.

**Bakerella maculata** Crawf.

1914 Proc. U. S. Natl. Mus., xlv, p. 601, one fig.

Male genitalia quite distinctive. A small species hard to place unless the male is available.

Head as broad as thorax; vertex nearly square, strongly carinated; frons only a little longer than broad, sides strongly rounded, median carina forked slightly above the ocelli, strongly divergent, lateral carinae terminating well within laterals of clypeus; antennae stout, very short, first segment less than one-third as long as the second. Pronotum moderately long, not quite as long as vertex, tricarinate, the lateral carinae curved out, not reaching the hind margin. Scutellum almost twice as long as pronotum, tricarinate. Elytra typical, long; in brachypterous form, short, and well rounded apically. Legs very short, hind tibiae scarcely longer than femora; calcar only slightly longer than breadth at base, margin not dentate.

General color yellowish-brown to dark brown, usually the latter, carinae slightly paler. Frons with a number of whitish spots. Abdomen usually dark fuscous or yellowish marked with fuscous. Legs fuscous, tibiae banded with pale.

Male pygofer and apertures resembling *Liburniella ornata*, latter elliptical, broadest sub-basally; anal tube projecting rather prominently, small with two elongate, very slender processes on ventral margin; genital styles fairly short, pincer-like, scarcely divergent, roundedly acute at apex; anal style distinctly whitish.

Female ovipositor and sheath very dark fuscous, the anal tube prominently white.

Length of body 2.4 mm.

Crawford described this genus and species from a macropterous pair from Acapulco, Mexico, and gave a good figure of the male genitalia. I am describing the brachypterous form from a series of two females and two males, collected by the writer Aug. 6, 1921, sweeping grass and sedges near edge of a bayou at Pascagoula, Miss., and a pair taken sweeping in a marsh near Sandusky, Ohio, Oct. 6, 1921.

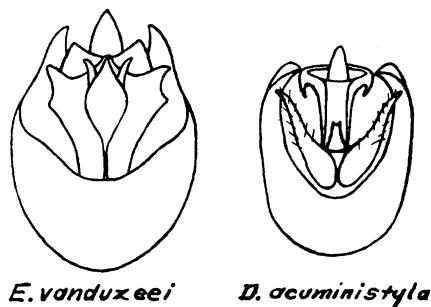


FIG. 1. Male genitalia of *Euidella vanduzeei* and *Delphacodes acuministyla*.

***Euidella vanduzeei* Muir and Giffard.**

1924 Bul. 15, Ent. Ser., Haw. Sugar Exp. Sta.

Closest allied by genitalia to *Euidella magnistylus* Crawf. and *weedi* but quite distinct.

Macropterous form—Head narrower than pronotum. Vertex nearly square, carinae distinct; frons rather long, tricarinate, narrow at apex widening below the eyes. First segment of antennae a little shorter than the second, the latter somewhat tuberculate. Pronotum about as long as the vertex, tricarinate, lateral carinae strongly curved outwards and not attaining the hind margin. Scutellum nearly twice length of pronotum, tricarinate. Elytra long, nearly hyaline, veins becoming fuscous apically beyond the cross-veins.

General color pale to soiled testaceous-yellow, except the partially infuscated antennae, abdomen and genitalia, and the fuscous eyes.

Female ovipositor sheath cylindrical, pale, ovipositor itself darker.

Male pygofer moderately large, fuscous, ventral margin of aperture sinuately rounded; genital styles dark fuscous and very prominent, long and rather thick, hirsute, divergent, converging beyond the middle, thence to bifurcate inner tip, the exterior margin with more or less sharp projections beyond the middle; the entire styles resembling the antlers of a moose; ventral margin of anal tube with a median triangular notch, a tooth on each side; anal style medium-sized.

Brachypterous form: similar to the macropterous form but having the elytra very short, cut off truncate with edges well-rounded, veins unicolorous.

Length of body 2.50–3 mm.; length to tip of macropterous elytra 3.50 mm.

Descriptions made from two macropterous males and two females and a brachypterous series of seventeen females and nine males collected by the writer at Pascagoula, Miss., Aug. 8, 1921, and a brachypterous female from Biloxi, Miss., July 30, 1921, sweeping grass and sedges in wet area. A male collected by Prof. J. S. Hine at Cameron, La., Aug. 14, 1903, is identical.

The writer has carried this species in manuscript for several years, awaiting the opportunity to settle the identity of *weedi* to which it is very close. The species has since been described by Muir and Giffard under the name *Euidella vanduzeei* from Florida material.

***Delphacodes (Liburnia) acuministyla* new species.**

A very small species, closest allied in structure of male genitalia with *consimilis* and *pellucida*.

Brachypterous form. Head slightly narrower than prothorax. Vertex subrectangular, a little longer than wide, rather weakly carinated and slightly produced beyond the eyes. Frons elongate, narrowed between the

eyes, enlarging below the eyes, tricarinate, the median carina forked a little below the apex of head. Antennæ long, the second segment twice as long as the first. Pronotum comparatively long and broad, about length of the vertex, tricarinate, the lateral carinæ curved out behind the eyes and not reaching the hind margin. Elytra short, well-rounded on outer side; apex truncate and rounded. Legs long and slender; calcar typical, margin very finely dentate.

General color pale testaceous; eyes dark; dorsum of abdomen orange yellow, with a dark area at base and the last three or four segments whitish; just before this there is a black transverse band, variable in width and distinctness. These show through the translucent elytra, giving the latter the appearance of being banded. Elytra translucent, yellowish-testaceous with the tips piceous. Male pygofer dark piceous. Legs pale, immaculate.

Male pygofer small and rather short, ventral margin rather deeply and roundly emarginate, produced dorsally caudad on each side of anal tube; genital styles long and acuminate, rather stout at base, widely divergent, flexed out, sparsely hirsute, and acute at tip; anal tube with two very long, slender, needle-like ventral processes; anal style small, white.

Length of body, 0.8–1.5 mm.

Described from a series of four males swept at edge of salt marsh bayou, Feb. 18, and ten males sweeping grass in pine woods, Feb. 21, 1922, all brachypterous, Ocean Springs, Miss., by Prof. H. Osborn.

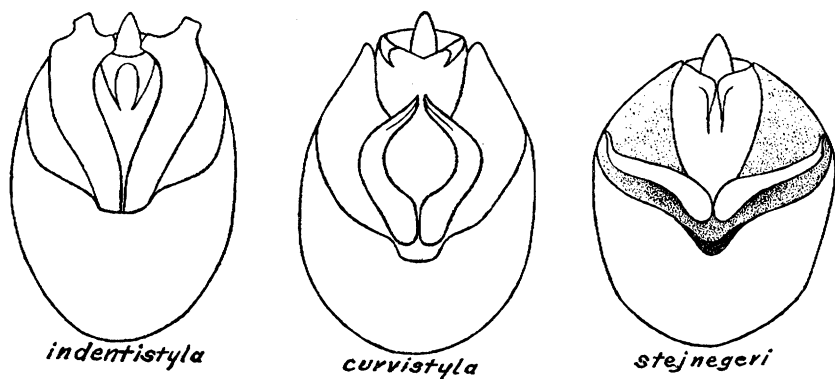


FIG. 2. Male genitalia of *Delphacodes indentistyla*, *curvistyla* and *stejneri*

***Delphacodes curvistyla* new species.**

General color soiled testaceous or dirty yellowish-brown.

Macropterous form. Head narrower than pronotum, the carinæ of vertex very distinct. Frons long, tricarinate, narrower at apex of vertex but

widening below the eyes. Last antennal joint slightly shorter than the basal one, tuberculate. Pronotum about as long as the vertex, tricarinate, the lateral carinæ strongly curved outwards and not attaining the hind margin. Scutellum over twice as long as the pronotum, tricarinate. Elytra long, hyaline, the veins distinctly fuscous.

Male pygofer fuscous, ventral margin of aperture sinuately rounded; genital styles dark fuscous, very prominent, rather thick, divergent and distinctly and characteristically recurved; anal style medium sized.

Length to tip of wings, 3.10 mm.

Described from a macropterous male collected by the writer at Ocean Springs, Miss., Aug. 3, 1921, sweeping swampy area, and a macropterous male taken by Prof. Hines at Cameron, La., July 11, 1905.

***Delphacodes indentistyla* new species.**

A medium sized species difficult to distinguish from a number of species such as the above described *curvistyla*, *weedi*, etc., except by the male genitalia.

Head narrower than the pronotum, the vertex longer than wide and not prominently carinated. Frons long, widened below the eyes, narrowing towards apex. Last joint of antenna shorter and more robust than the basal one, somewhat tuberculate. Pronotum about as long as the vertex, tricarinate, lateral carinæ not quite reaching the hind margin. Scutellum twice as long as the pronotum, tricarinate. Macropterous wings long, venation darker.

Male pygofer with the ventral aperture sinuately rounded; genital styles prominent, long and broad with indentions at apices as in figure.

Length to tip of macropterous wing, 3.00 mm.

Described from one female and three males taken by the writer sweeping low grass along road through deep, dark swamp near Merrill, Miss., Aug. 9, 1921.

***Delphacodes stejnegeri* (Ash.)**

1898 Fur Seals and Fur Seal Isles of the No. Pacific Ocean, Pt. IV.

Very closely allied in structure of male genitalia to *pellucida* Fabr. but is stouter and pale yellowish testaceous in color.

Head broad but narrower than the prothorax. Vertex nearly square, produced a little beyond the eyes, carinate, distinctly foveate. Frons twice as long as wide, broad at base, narrowed at anterior margin of the eyes and then gradually broadened to posterior margin of the same, then slightly narrowed to clypeus; tricarinate, the median carina forked just below apex of the head. Antennæ comparatively short, the second segment tuberculate, twice as long as the first segment; seta long and fuscous. Pronotum nearly as long as the vertex, posterior margin rather deeply and angularly

emarginate, tricarinate, lateral carinæ curved out behind the eyes and not reaching the hind margin. Mesonotum about twice as long as the pronotum, tricarinate. Brachypterous elytra very short, truncate with apices well rounded, with delicate punctures along the nervures. Abdomen large and stout. Calcar typical, tectiform.

In the macropterous form the elytra are also very short, reaching to or just extending beyond the tip of abdomen.

General color of female pale yellowish testaceous, abdominal segments margined with fuscous and ovipositor fuscous. In the male the scutellum, frons and clypeus, except the pale carinæ, are fuscous and almost the entire underside including the genital segment, is black. Legs pale, faintly lineated with brown.

Female segment subcylindrical, roundingly emarginate at base, ovipositor not reaching to tip of ovipositor sheath.

Male genital segment terminal; ventral margin of pygofer deeply notched; genital styles long, stout at base and narrowed to an acuminate tip; flexed outward, lying closely against the ventral margin of pygofer; anal tube with two needle-like ventral processes.

Length of body, 2.50–3 mm.

Redescribed from four brachypterous females, *Anchorago*, June 6, 1917, six females and eight males taken June 20–Aug. 10 at Katmai, and a rather large female from Kashirk Bay, Aug. 2. All were taken by Prof. J. S. Hine in Alaska during the summer of 1917.

**Megamelanus terminalis** Metcalf. This species is found in the *Spartina patens* association. The writer swept a single specimen at edge of inland bayou near Mobile, Alabama, in August, 1923, and has examined a single male taken by Prof. Herbert Osborn sweeping in salt marsh at Ocean Springs, Miss. It was originally described from material collected at Cape Charles, Va., and Caroline Beach, No. Car., and the distribution of this and the two following species probably follows the distribution of their food plant, *Spartina patens*, around the entire Atlantic and Gulf Coasts.

**Megamelanus lautus** Metcalf. The writer collected a male of this species at Ocean Springs, Miss., Aug. 3, 1921, sweeping *Spartina patens*, and Prof. Osborn took a male at the same locality Feb. 11, 1922. Originally described from material collected on the Texas Coast.

**Megamelanus dorsalis** Metcalf. Two males were collected by the writer at Ocean Springs, Miss., Aug. 6, 1921, a male from same marsh habitat at Pascagoula, Miss., August 6, 1921, and Prof. Osborn took a male at the former locality Feb. 11, 1922. A male specimen of this species, collected by Prof. J. S. Hine at Cameron, La., June 30, 1905, in the Ohio State University collection has also been examined.

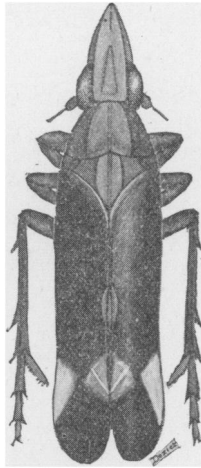


FIG. 3. Adult *Megamelanus lautus* Metcalf, greatly enlarged.

The three above mentioned species all seem to be extremely rare as so few were taken although extensive and hard sweeping was done.