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**NINE NEW SPECIES OF CICADELLIDAE (HOMOPTERA) FROM
THE UNITED STATES AND CANADA.**

By J. G. SANDERS AND D. M. DELONG.

Dorycephalus knulli, n. sp.

Plate 11, Figs. 8, 8a.

In size and general appearance resembling *D. vanduzeei* but with head and pygofers proportionately longer, wing venation different, one instead of three carinae on vertex and face less tumid. Length ♀ 16 mm., ♂ 15 mm. Width (greatest across eyes) 1.5 mm.

Vertex very long and flat, four times length of pronotum with a conspicuous median carina from which the vertex gradually slopes to margin. Pronotum strongly and broadly notched posteriorly. Elytra in females very short, twice as long as pronotum, reaching only to middle of third abdominal segment. In male more than four times as long as pronotum.

Color: Dull grass green to greenish brown, with irregular mottling and small dots, fuscous.

Genitalia: Female last ventral segment almost twice as long as wide, posterior margin slightly sinuately produced. Pygofers three and one-half times as long as segment, tapering to slender foliaceous tips. Male valve very small, transverse, broadly and bluntly angled. Plates a little longer than last ventral segment, broad at base strongly concavely narrowed at half their length and produced into very narrow tips. Pygofers ten times as long as plates, longer than combined segments of abdomen.

Described from three female, three male and two nymphal specimens all taken at Cleveland, Florida, April 25, 26, 27, 1921, by Mr. Josef N. Knull and the junior author. The first specimen was collected by Mr. Knull, who has secured many other interesting records and to whom we dedicate this species.

Euscelis divaricatus, n. sp.

Plate 11, Fig. 7.

In size and coloration resembling *parallelus*, but with distinct genitalia. Length, 5.5 mm.

Vertex almost parallel margined, broad, scarcely produced, almost three times as broad as long. Pronotum twice as long as vertex and twice as wide as long. Elytra long and narrow, greatly exceeding abdomen in male.

Color: Very similar to *parallelus*, greenish yellow. Vertex with broad black band between eyes just back of margin. Elytra brownish yellow, tips smoky,

veins pale. Face pale; sutures, a pair of spots above antennae, a heavy undulating line below ocelli and remnants of eight pairs of arcs, black.

Genitalia: Male valve broad, bluntly triangular. Plates broad at base, outer margins convexly rounded. Inner margins approximate one-third their length then abruptly concavely rounded to form divergent hooked apices.

Described from a single male specimen collected along a lagoon margin on Presque Isle, Erie Co., Pennsylvania, July 10, 1920, by the junior author.

Phlepsius marmor, n. sp.

Plate 11, Figs. 3, 3a, 3b.

Closely related to the *superbus*, *excultus* group from which it differs in coloration and genital structures. Length 5.5-6 mm.

Vertex narrower than pronotum, roundly produced, two and one-half times as wide as long. Scutellum comparatively large. Elytra short and broad.

Color: Dirty white, vertex with fuscous mottling near the apex and a pair of darker spots at base near eyes. Pronotum with anterior margin heavily marked with black or dark fuscous, posterior portion unmarked. Basal angles and a pair of spots on anterior disc of scutellum dark fuscous. Elytra pale with veins and several scattered patches of pigment coloration giving the elytra a mottled or marbled appearance and showing a conspicuous trilobate pale area along the suture. Face almost black above; below with traces of numerous dark arcs. Beneath pale.

Genitalia: Female last ventral segment one-half longer than preceding, lateral angles rounded off, posterior margin with a large "V" shaped notch at center reaching half way to base, either side of which is a pair of prominent blunt teeth. Male valve small only half as wide as plates at base, triangular. Plates rather short, broadly triangular, tips blunt and rounded.

Described from a series of ten specimens collected from "*Juniperus horizontalis*" at Onah, Manitoba, July 24, 1919, by Mr. Norman Criddle.

Phlepsius hemicolor, n. sp.

Plate 11, Figs. 2, 2a, 2b, 2c.

In general appearance and coloration resembling *fulvidorsum* and *particolor*, but ranging between these in size, and with distinct genital characters. Length, 6-6.5 mm.

Vertex forming a distinct margin with front, not strongly produced as in *fulvidorsum*, bluntly angled, two and one-half times as wide as long. Pronotum more than twice as broad as long and twice as long as vertex. Scutellum comparatively large. Elytra rather short and broad.

Color: Vertex, pronotum and scutellum buff, more or less mottled with fuscous. Vertex with four rather distinct spots just back of apex, disc of pronotum and two spots on each outer margin of scutellum fuscous. Elytra milky-white rather evenly and heavily inscribed with brownish pigment lines. Face heavily irrorate with brown, shading to almost black just beneath margin.

Genitalia: Female last ventral segment two and one-half times as long as preceding, posterior margin broadly shallowly excavated either side between prom-

inent rounded lateral angles and a black margined lobe on either side of a rather broad, shallow median notch. Male valve longer than preceding segment, broad, triangular. Plates one and one-half times longer than valve, gradually narrowed and convexly rounded at tips to form inwardly pointed apices.

Described from one female specimen collected by the authors at St. Croix Falls, Wisconsin, August 15, 1916, and one female and five males from Brookings, S. D., collected Sept. 8, 1920, by H. C. Severin.

Phlepsius palustris, n. sp.

Plate 11, Figs. 1, 1*a*, 1*b*.

A large robust banded species with a very short flattened head. Length, 7-7.5 mm.

Vertex almost parallel margined, bluntly produced, more than four times as wide as long. Depressed behind margin, forming a very short foliaceous portion. Pronotum twice wider than long, more than three times as long as vertex. Scutellum large, elytra rather short and broad, compressed behind.

Color: Vertex and pronotum tawny, tinged with red; disc of pronotum brownish. Scutellum tawny, a white spot at apex and midway along either side bordered with fuscous. Elytra whitish crossed by three more or less distinct fuscous bands, one just back of scutellum, often incomplete, a broader one across middle of clavus and a third behind apex of clavus. Face tawny rather evenly irrorate with fuscous.

Genitalia: Female last ventral segment twice as long as preceding, side margins rounding to posterior margin which is slightly notched either side of produced central half. This portion is truncated and notched at middle forming two broad truncated teeth. Male valve broadly triangular; plates twice as long as valve, gradually narrowed to blunt pointed apices.

Described from four specimens swept from *Pinus palustris* in open pine woodland at LaBelle, Florida, April 18, 19 and 21, 1921, by the junior author.

Thamnotettix albovenosus, n. sp.

Plate 11, Figs. 6, 6*a*, 6*b*.

In size and general appearance resembling *fitchii*, vertex not marked with black. Elytra dull orange yellow, veins white. Length, 3.35 mm.

Vertex bluntly angled, one-fourth wider between eyes than length at middle, and one-fourth longer than pronotum. Side margins of pronotum almost obsolete. Elytra rather long and narrow.

Color: Tawny to orange yellow. Vertex with blotches on disc and a connected row of spots between black ocelli bright, fulvous orange. Pronotum with five whitish longitudinal vittae. Elytra orange yellow, veins conspicuously white. Face dusky to brownish with several pairs of pale arcs.

Genitalia: Female last ventral segment a little longer than preceding segment. Lateral margins very short, then abruptly sloping to posterior margin which is slightly trilobate. Underlying membrane conspicuous as a lateral lobe at either side of segment. Male valve rounded, almost transverse lying in concavity of

last ventral segment. Plates more than three times longer than valve, rather broad at base, narrowed and produced in long tapering apices.

Described from a large series of specimens collected at Paradise Key, Miami and LaBelle, Florida, during April, 1921, by the junior author. The species was taken from maiden cane, *Panicum hemitomum*.

Thamnotettix bisignatus, n. sp.

Plate 11, Figs. 9, 9a.

A rather small species with a black broken band across apex of vertex. Length 4 mm.

Vertex bluntly angled, a little broader between eyes than length at middle. Pronotum slightly longer than vertex, twice wider than long, lateral margins almost obsolete. Elytra exceed abdomen.

Color: Dull brownish, vertex with two black transverse blotches forming a broken band just above margin, the inner ends curved and extending over apex onto front. Elytra smoky subhyaline. Face darker, smoky.

Genitalia: Male valve narrow, bluntly triangular. Plates very narrow, gradually narrowed and produced into long pointed tips.

Described from a single male specimen collected at Cleveland, Florida, April 29, 1921, by the junior author.

Thamnotettix taxodii, n. sp.

Plate 11, Figs. 5, 5a, 5b.

In general appearance resembling *Th. waldana* but smaller with distinct genital characters and different coloration. Length, 4.5-5.5 mm.

Vertex bluntly angled, twice wider between eyes than length at middle. Pronotum strongly rounded anteriorly, twice as long as vertex and twice wider than long. Elytra appressed at tips.

Color: Vertex pale yellow unmarked. Pronotum, scutellum and elytra dull brownish green. Anterior margin of pronotum and entire costal margin of elytra pale yellow. Venation dark, only slightly visible. Face, venter and legs yellowish.

Genitalia: Female last ventral segment three times as long as preceding. Posterior margin slightly gradually produced to middle where it is faintly notched. Pygofer very long and slender. Male valve bluntly triangular almost twice as wide as long. Plates long, triangular, gradually narrowed to long pointed apices.

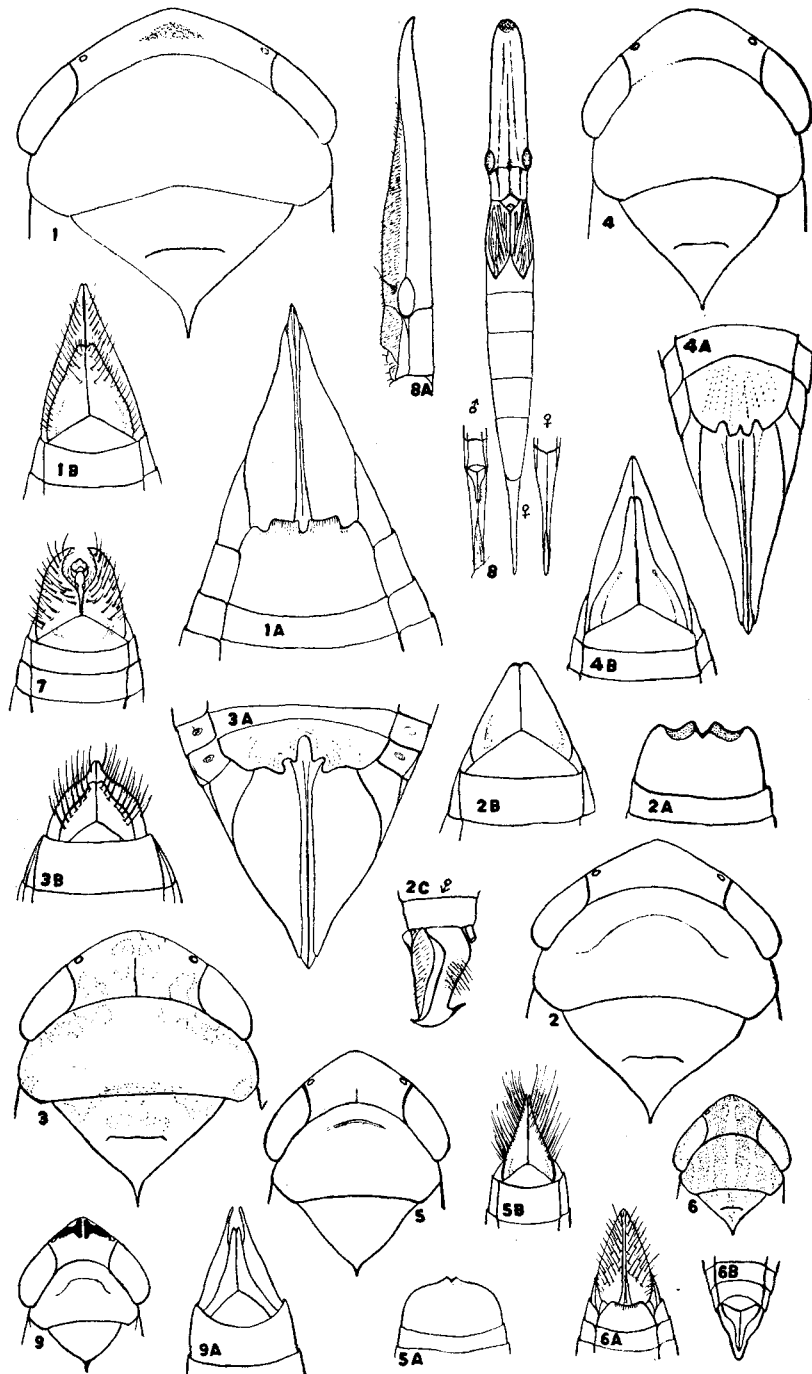
Described from one female and two males from Paradise Key, Florida, April 10, 1921, two males from La Belle, Florida, April 19 and 20, 1921, and one male from Cleveland, Florida, April 28, 1921, all taken from cypress by the junior author.

Chlorotettix dentatus, n. sp.

Plate 11, Figs. 4, 4a, 4b.

Size and general appearance of *unicolor*, but with head narrower and more produced, and genitalia distinct. Length 8 mm.

Vertex roundly produced, more than twice wider than long and almost



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one-half longer on middle than next eyes. Elytra long, greatly exceeding abdomen in both sexes.

Color: Varying in different specimens, pale straw to dull green, unmarked. Often with pale green mottling on vertex and pronotum.

Genitalia: Female last ventral segment with side margins rather short, rounding to posterior margin which is notched either side of a pair of rounded, slightly produced median teeth which occupy the middle-fourth, whole segment strongly convex ventrally, almost keeled, having the appearance from a ventral aspect of four teeth. Male valve rather short, bluntly angled. Plates broad at base, convexly rounding half their length, then rather abruptly constricted and produced as narrow parallel tips with blunt apices.

Described from four female and two male specimens collected July 3, 1919, near Washington, D. C., in a marshy meadow close to College Park, Md., by the senior author.

EXPLANATION OF PLATE.

- Fig. 1 *Phlepsius palustris* n. sp.; 1a-female genitalia; 1b-male genitalia.
 Fig. 2 *Phlepsius hemicolor* n. sp.; 2a-female; 2b and 2c-male.
 Fig. 3 *Phlepsius marmor* n. sp.; 3a-female; 3b-male.
 Fig. 4 *Chlorotettix dentatus* n. sp.; 4a-female; 4b-male.
 Fig. 5 *Thamnotettix taxodii* n. sp.; 5a-female; 5b-male.
 Fig. 6 *Thamnotettix albovenosus* n. sp.; 6a-female; 6b-male.
 Fig. 7 *Euscelis divaricatus* n. sp.; male genitalia.
 Fig. 8 *Dorycephalus knulli* n. sp.; adult female, female and male genital segments; 8a-head, side view.
 Fig. 9 *Thamnotettix bisignatus* n. sp.; 9a-male.