

SOME ERYTHRONEURA OF THE OBLIQUA GROUP
FROM DECATUR, GEORGIA

(Homoptera, Cicadellidae)

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From the Fall of 1933 to the Spring of 1934 a collection of Homoptera, especially Erythroneura, was made by the senior author in the vicinity of Decatur, Georgia. In the process of identification there appeared a number of new forms. In this paper members of the Obliqua Group are treated.

Descriptions and figures of inner male genitalia of eight new species are included.

Unless otherwise indicated collections were made in or near Decatur, Georgia, by Dr. Mary Auten.

All specimens will be deposited in the Herbert Osborn Collection at the Ohio State University.

Erythroneura cavena n. sp.

(Fig. 1)

Background opaque white, eyes dark, vittae narrow, dark red. Vertex with irregular narrow inverted V, arms not touching eyes; pronotum with widely separated narrow stripes almost parallel, a little broader toward posterior margin; scutellum, basal angles and tip outlined in red; elytral vittae bright, narrow, distinct, three black elongate smudges before crossveins, apical cells distinctly fumose, veins pale. Below, abdomen dusky, legs yellow, translucent, thorax and head cream washed with pale yellow-orange. Length, 3 mm.

Genitalia: Style with long foot; heel narrow, sharply protruding; base slightly concave; anterior point short, blunt, projecting cephalad; posterior point short, narrow, sharp, one-fourth length of foot, meeting base at right angle curve; oedagus in lateral view long, simple, curved dorsad, swollen on dorsal margin in apical half, constricted before tip and divided into two slender, blunt lateral projections.

One male (holotype), xii-1-33.

Erythroneura scytha n. sp.

(Fig. 2)

Large species, background creamy white, vittae broad, pale orange. Vertex, heavy inverted V, arms bordering eyes and meeting on inner

base leaving a slender ovoid pale space on disc; pronotum with broad irregular vittae beginning below anterior margin and continuing across to posterior margin, divergent on outer side and almost parallel on inner; scutellum, basal angles and apex broadly orange; elytral vittae broad, three small roundish dark spots before apical veins, the outer black, apical cells faintly dusky, subhyaline. Below yellowish white. Length, 3.25 mm.

Genitalia: Style heavy with large foot; heel small, projecting slightly; base straight; anterior point about rectangular; posterior point a little longer than foot, heavy, tapering to rather blunt point and curved evenly in from base to apex which is almost in line with heel; oedagus from lateral view of medium size, shaft curved slightly dorsad, small dorso-caudad apical keel, rather rough triangular ventral projection on basal half, the point about a fourth of distance from base and as broad as shaft at its middle.

One male (holotype), v-8-33.

***Erythroneura contrasta* n. sp.**

(Fig. 3)

Background of vertex and pronotum yellowish white, vittae of head, pronotum and scutellum orange, of elytra scarlet. Vertex with even-sided inverted V, arms very slightly broadened toward eyes; vittae continued across pronotum, inner margins parallel, outer diverging, at posterior margin equal in width to basal angles of scutellum; scutellum, basal angles yellow orange, tip orange; elytra, inner vittae sharply defined, bright and even, costal margin washed with translucent orange yellow, three dusky spots, the outer large, before crossveins; apical cells fumose. Below creamy, washed with orange on face, some outer spines on hind tibiae dark. Length, 3 mm.

Genitalia: Style slender with rather large, heavy foot; heel large, projecting; base somewhat convexly curved; anterior point projecting cephalad, short and sharp; posterior point heavy, as long as base, its outer margin in straight line with that of anterior point, pointed at apex, widening rapidly on outer half, then parallel-sided to base; oedagus in lateral view long, stout at base, curved dorsad, a pair of lateral leaf-like expansions at apex; outer fourth narrowing gradually to apex; pair of slender, blunt-tipped processes arises just ventrad to shaft and follows it closely for three-fourths of its length.

One male (holotype), two females (allotype and paratype), on *Japonica*, iv-6-34.

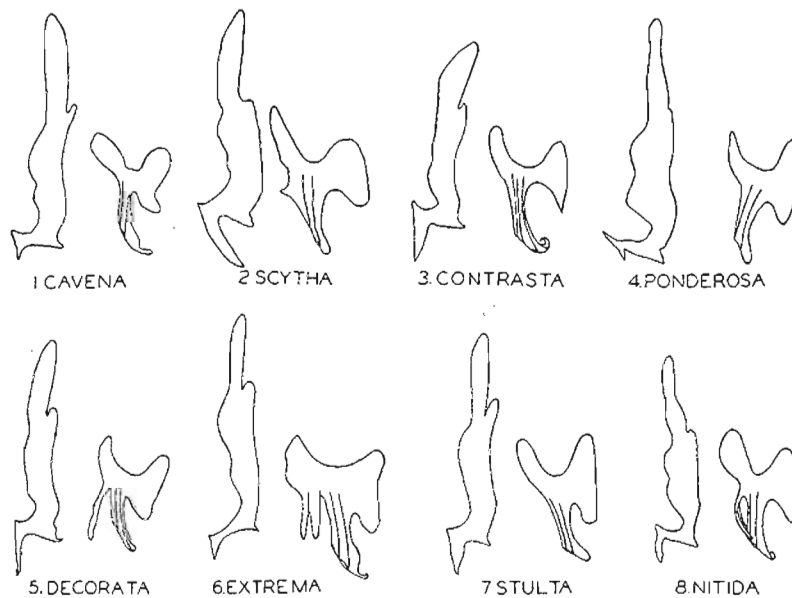
***Erythroneura ponderosa* n. sp.**

(Fig. 4)

Pale species, creamy white background and yellow orange vittae. Vertex with inverted V elongate, arms enlarged toward but not touching eyes; pronotal vittae narrow, distinct, reaching both margins, diverging slightly on outer side toward posterior margin; elytral vittae of medium size and distinct, apices hyaline. Below pale creamy white. Length, 3 mm.

Genitalia: Large heavy style with long foot; heel very large, sharp, projecting; base long, slightly convex at middle; anterior point long, sharp, directed latero-cephalad; posterior point a third length of anterior, sharp, meeting base at about 45° angle; oedagus from lateral view short and stout, with long ovoid keel at apex directed caudad; lacking processes.

One male (holotype), v-3-34.



Figs. 1-8. Ventral view of style and side view of oedagus in new species of *Erythroneura*.

***Erythroneura decorata* n. sp.**

(Fig. 5)

Slender species with anterior background creamy, white on elytra, vittae orange, scarlet on elytra. Vertex with inverted V enlarged at eyes; pronotum, vittae narrow, distinct, diverging gently toward posterior margin; scutellum, basal angles yellow, darker on margin, apex orange; elytra, broad distinct bright vittae, two small round dusky spots before crossveins, the outer darker; apical cells dusky semi-hyaline. Below pale cream. Length, 3 mm.

Genitalia: Style of medium size with rather narrow foot; heel large, sharp, distinctly projecting; base almost straight; anterior point rectangular; posterior point narrow, straight, as long as base with sharp tip turned out slightly; oedagus from lateral view rather slender, curved

considerably dorsad, with small dorsal keel at apex; pair of narrow, slightly sinuate, blunt processes arises ventrad to base of shaft and extends forward about three-fourths length of shaft.

One male (holotype), on *Japonica*, iv-6-34; two females (allotype and paratype), same data.

***Erythroneura extrema* n. sp.**

(Fig. 6)

A pale stout species with white background, whitish semi-hyaline on elytra, growing more hyaline toward apex, vittae pale orange throughout. Vertex with short, stout inverted V, arms widened to touch eyes, continued across pronotum as parallel-sided, slightly divergent vittae; scutellum, basal angles pale yellowish orange, apex pale orange; elytra with rather broad vittae, that of the clavus deeper orange, the costa translucent yellow orange; apex subhyaline; below creamy white, face pale orange. Length, 3 mm.

Genitalia: Style of medium size with long slender foot; heel small, projecting slightly; base long, curved concavely; anterior point rectangular; posterior point about a third length of foot, sharp, meeting base at considerably more than right angle; oedagus large with broad, straight shaft; ventral margin sinuous, posterior margin inflated on apical half, apex divided into two slender, latero-cephalad directed, blunt projections; pair of widely divergent, thick, blunt processes arises more than its width ventrad to base of shaft and extends a little more than half its length.

Male (holotype), v-3-34; two male paratypes, one same data, one on Holly, ix-24-33; two females (allotype and paratype), v-3-34.

***Erythroneura stulta* n. sp.**

(Fig. 7)

Stout bodied species with lemon-yellow vittae. Background creamy white anteriorly, whitish semi-hyaline on elytra. Vertex short, heavy inverted V, laterally widened toward base, not touching eyes, pale median triangular area much reduced; pronotum, vittae very broad, irregular, not quite attaining anterior margin, a little broader on posterior margin; scutellum, basal angles and tip lemon yellow; elytra, vittae broad, indistinct, costa broadly washed with lemon yellow to crossveins, three dusky blotches before crossveins, apical cells smoky hyaline. Below cream. Length, 3 mm.

Genitalia: Foot small, heavy; heel small, projecting slightly; base short, straight; anterior point subrectangular; posterior point straight, broad, meeting base at right angle, tapering to point; oedagus in lateral view with unadorned shaft of medium size curved gently dorsad with a large ovoid dorsal keel at apex.

One male (holotype), one female (allotype), v-12-34.

***Erythroneura nitida* n. sp.**

(Fig. 8)

Background cream of elytra whitish semi-hyaline; color markings of vertex lemon-yellow, of pronotum and scutellum orange yellow, of elytra orange. Vertex, inverted V with arms enlarged toward eyes, not reaching margin, eyes dark gray; pronotum, irregular slightly divergent vittae reaching posterior but not anterior margin; scutellum, basal angles pellucid orange yellow, tip orange; elytra, claval and corial vittae distinct, of medium width, outer costal stripe pale, indefinite, three elongate smoky blotches before pale crossveins, a little darker than semi-hyaline apical cells. Below cream, beak orange. Length, 2.75 mm.

Genitalia: Style with long foot; heel large, projecting; base straight; anterior point subrectangular; posterior point about half length of foot, rather blunt, curved in a little, slightly wider at middle than base; oedagus in lateral view short and slender, curved dorsad, pronounced apical keel projecting dorso-caudad to opening of tube; pair of processes arises twice its width ventrad to shaft, curves ventrad, then back to shaft, touching it just above mouth of tube.

One male (holotype), McCurdy's Pond, iv-16-34.

PROTOPLASM, by WILLIAM SEIFRIZ. pp. i-x, 1-584, 179 figs. McGraw-Hill Book Company, Inc., New York and London. 1936. Price, \$6.00.

"Protoplasm" is a very readable book. Three different evenings have been scheduled for the writing of this short notice and each in turn has been lost in a delightful browse through its pages. "The presentation is as non-technical as is consistent with accuracy and completeness. Mathematical formulas, curves, and tables have not been omitted—it would be difficult to do so in a number of instances where the subject defies a wholly non-technical presentation—but they have been resorted to as infrequently as possible."

The greater part of the material presented is on colloidal systems, hence physical chemistry in its simplest forms. Some of the twenty-seven chapter headings are as follows: The Living Substance, The Cell, Tissue Culture, The Colloidal State, Emulsions, Hydrophilic Sols and Gels, Surface-Tension, Adsorption, Osmosis, Imbibition, Viscosity, Elasticity, Structure of Protoplasm, Permeability, Acidity, Electrophysiology, Electrokinetics, Radiant Energy, Role of Water, Salts, Carbohydrates, Fats, Proteins, Regulatory Substances, Origin of Living Matter.

We like the bibliography (pages 539-563) as it gives titles of articles and is organized under subject heads, a section for each chapter. The volume closes with twenty pages of index. Thus the volume, as with most McGraw-Hill books, is well organized.

Doctor Seifriz is Professor of Plant Physiology at the University of Pennsylvania, whose research interests have centered around cell function and structure. The work has no special botanical leanings as it is obviously written as a review of the subject for the average biologist. Again quoting the Preface: "A list of references is appended, in case the reader should care to delve more deeply into the subject of this or that chapter." We give it a notice here because of the growing interest among entomologists in general biological problems, and particularly for the group of entomologists, increasing rapidly in numbers, who are studying the effects of insecticides on living insects. It is an interesting book.—C. H. K.

OMISSIONS AND ERRORS

NOTICE TO AUTHORS.—Beginning with Volume 28 (1935), the Annals of the Entomological Society of America will accept Corrections (*Omissions* and *Errors*) of articles which have appeared in its pages. These will be collected and printed at the end of the annual volume (December issue). They will be indicated in the annual table of contents and in the index.

Corrections will be limited to critical omissions and serious errors. Manuscript for such should be in the hands of the Editors by the twentieth of November to be included in that year's volume.

THE EDITORS.

The species name *nitida* was used by Beamer and published in the Journal of the Kansas Entomological Society, July 1935, viii, No. 3, p. 103. We wish to change *Erythroneura nitida*, as published in the ANNALS for March, 1936, to *Erythroneura spearca*.

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Gillette and Palmer: Aphidae. See this volume, p. 747, for errors and omissions in the three parts of "Aphidae of Colorado."

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