

NEW SPECIES OF *ERYTHRONEURA*
(HOMOPTERA: CICADELLIDAE)^{1,2}

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ABSTRACT

Ten new species of *Erythroneura* of the *Eratoneura* subgenus are described: *combesi*, *teshi*, *guiceci*, *alveyi*, *atkinsoni*, *byetsi*, *bainteri*, *micheneri*, *beeri*, and *curtoides*.

The subgenus *Eratoneura* (*maculata* group) of *Erythroneura* of eastern North America contains about 300 species, mostly identified by differences in the male genitalia. Host records are of greatest value during the summer months, after the leafhoppers migrate from the spring hosts and before they move to fall hosts in September and October, before entering hibernation quarters.

All specimens mentioned in this paper were collected by the author, unless otherwise stated. Holotypes will be deposited in the collections of the Illinois Natural History Survey.

Erythroneura combesi, new species

(Plate I, 1A-D)

Length 3mm, forewings spotted, apical black spot larger than average, crown and pronotum with markings well separated.

Aedeagal shaft in lateral view long and slender, apically roughened, dorsal flange narrow; in posteroventral view narrow, roughened on apical half, fairly broad lateral flanges on basal half. Pygofer hook slightly shorter than pygofer in lateral view, with spine on dorsal margin of apex, apex broadened and toothed; in dorsal view slightly sinuate, almost parallel margined to pointed apex. Foot of style similar to *Erythroneura manus*, with very short points.

Holotype male: Noxubee Refuge, Noxubee County, Miss., 11 July 1962, Glenn Wiygul, on *Quercus lyrata* Walter.

Differs from *Erythroneura manus* Beamer in the broader pygofer hook base, much longer aedeagal shaft and larger lateral flanges. The host plant is likely *Q. lyrata*, overcup oak.

Erythroneura teshi, new species

(Plate I, 2A-E)

Length 2.9mm; forewings with large spots, apical black spot very small and lacking a costal dark spot.

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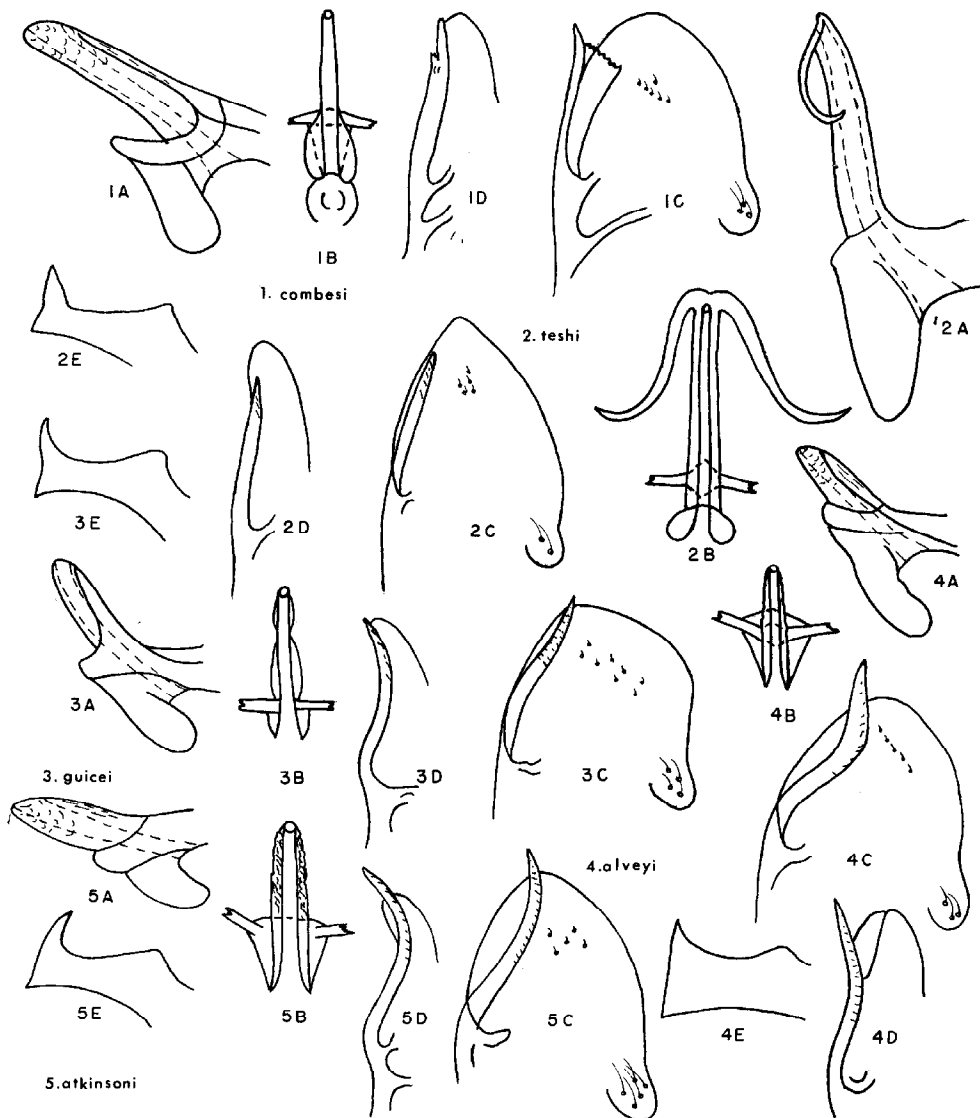


Plate I: 1) *Erythroneura combesi*; 2) *E. teshi*; 3) *E. guiceii*; 4) *E. alveyi*; 5) *E. atkinsoni*. A, aedeagus, lateral view; B, aedeagus, postero-ventral view; C, pygofer and pygofer hook, lateral view; D, pygofer hook, dorsal view; E, foot of style, lateral view. The pygofers and pygofer hooks are drawn at half the magnification of the aedeagus and styles.

Aedeagal shaft long and slender in lateral view with a pair of apical processes almost half length of shaft, in ventral view almost parallel margined with apical processes sinuate and quite long; dorsal process very small in both views. Pygofer hook somewhat shorter than pygofer, almost straight in both views, sculptured on outer third. Foot of style with projecting anterior point and fairly broad posterior point about one-third length of foot.

Holotype male and 27 male paratypes: Allerton Park, Monticello, Piatt

County, Ill., 26 Sept. 1960, H. B. Cunningham, on *Ulmus rubra* Muhlenberg. Additional male paratypes as follows: 1, State College, Oktibeha County, Miss., 28 Jan. 1962; 1, Yellville, Marion County, Ark., 23 Aug. 1962; and 1, Siloam Springs, Brown Co., Ill., 29 April 1960, Ross and Cunningham.

Differs from *Erythroneura maculata* (Gillette) in the very long processes at apex of aedeagal shaft, longer pygofer hook and shorter posterior point on foot of style. Although the long series was collected on elm, the species more closely resembles some living on *Rhus*.

Erythroneura guiceii, new species

(Plate I, 3A-E)

Length 3.1mm; forewings with large spots, apical black spot larger than average.

Aedeagal shaft in lateral view small and parallel margined, in posteroventral view with lateral flanges on basal half; dorsal process short, barely width of lateral flanges in posteroventral view. Pygofer hook about length of pygofer, sculptured on outer half, in lateral view sinuate and evenly narrowed from base to apex; in dorsal view almost parallel margined and evenly curved. Foot of style short with short anterior point, posterior point about one-third length of foot.

Holotype male and 10 male paratypes; Amboy, Lee County, Ill., 27 Sept. 1956, Stannard and Ross on *Quercus macrocarpa* Michaux. Additional male paratypes as follows: 12, Carpentersville, Kane County, Ill., 26 Sept. 1956, Stannard and Ross on *Q. macrocarpa*; 1, Casey, Clark County, Ill., 24 Sept. 1953, Ross and Evers on *Q. bicolor* Willdenow; 2, Oak Forest, Cook County, Ill., Sept. 1950, H. H. Ross on *Q. macrocarpa*; 1, Freeport, Stephenson County, Ill., 7 Sept. 1951, Mills and Ross on *Q. macrocarpa*; and 1, Enfield, White County, 13 April 1960, Ross and Cunningham.

Differs from *Erythroneura haysensis* Hepner, another bur oak species in having much shorter posterior points, a larger aedeagal shaft and a shorter pygofer hook.

Erythroneura alveyi, new species

(Plate I, 4A-E)

Length 3mm; forewings with large spots, apical black spot average size.

Aedeagal shaft in lateral view with distinct dorsal flange, apically roughened, in posteroventral view with lateral flanges along most of shaft; dorsal process very short, but broad in posteroventral view. Pygofer hook longer than pygofer, stalked, strongly sinuate in lateral view, less so in dorsal view. Foot of style broad with short posterior point.

Holotype male: Starkville, Oktibeha County, Miss., 10 Aug. 1962, on *Quercus stellata* Wangenheim.

Differs from *Erythroneura daltonorum* Hepner in having a broader foot of style and with stalked, sinuate pygofer hook.

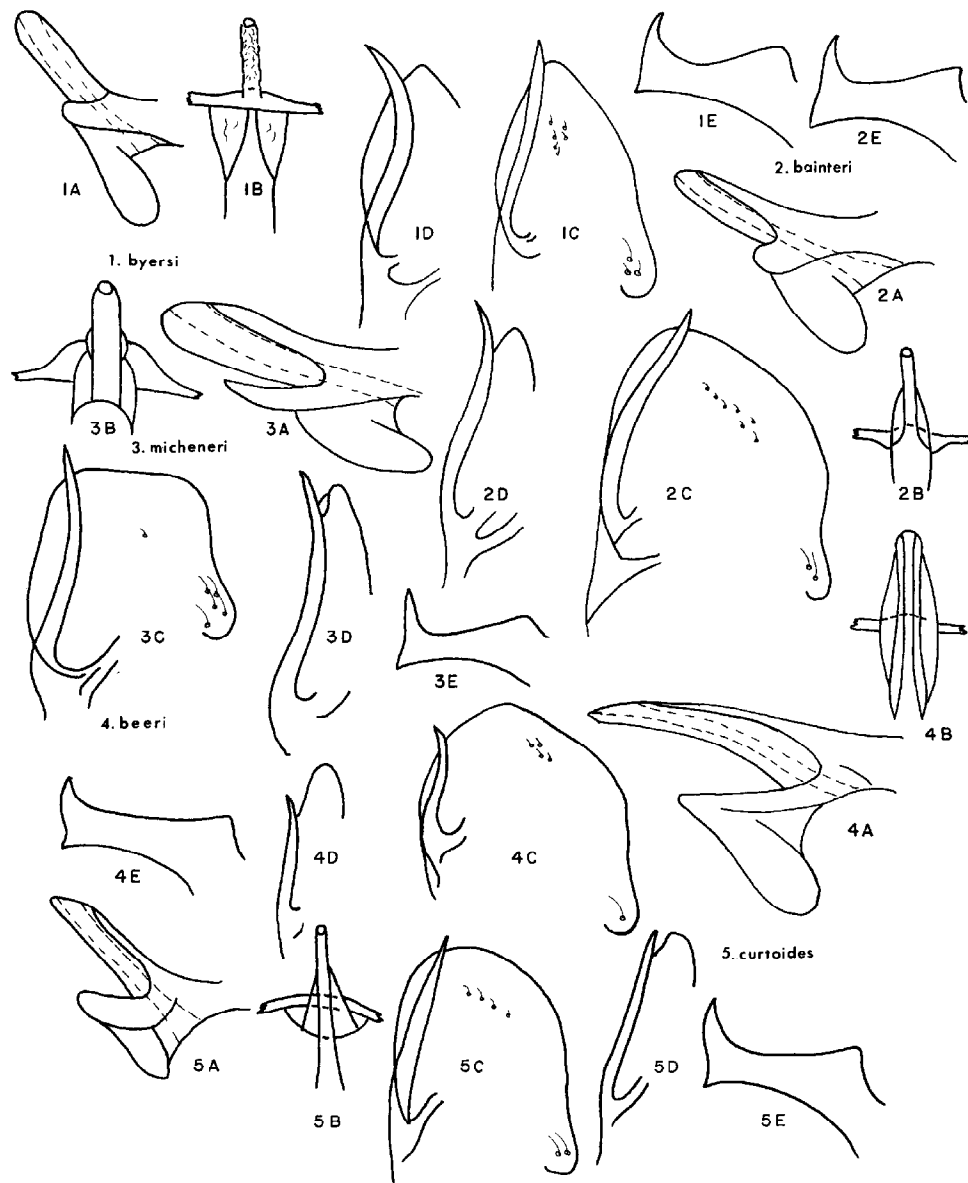


Plate II: 1) *Erythroneura byersi*; 2) *E. bainteri*; 3) *E. micheneri*; 4) *E. beeri*; 5) *E. curtoides*. A, aedeagus lateral view; B, aedeagus posteroventral view; C, pygofer and pygofer hook, lateral view; D, pygofer, dorsal view and E, foot of style. The pygofers and pygofer hooks are drawn at half the magnification of the others.

Erythroneura atkinsoni, new species
(Plate I, 5A-E)

Length 3mm. The forewings are missing so color pattern is unknown.

Aedeagal shaft in lateral view curved, parallel margined and apically roughened, in posteroventral view with rough lateral flanges along entire length of shaft; dorsal process very short, in posteroventral view broadened apically. Pygofer hook slightly longer than pygofer, sinuate in both views, more so in dorsal view, gradually narrowed from base to

apex in lateral view. Foot of style with posterior point curved and about one-third length of foot.

Holotype male; Starkville, Oktibbeha County, Miss., 10 Aug. 1962 on *Q. stellata*.

Differs from *Erythroneura freytagi* Hepner in having a much broader dorsal process on aedeagal shaft and a quite different foot of style.

Erythroneura byersi, new species

(Plate II, 1A-E)

Length 3 mm; wings spotted, apical black spot average size.

Aedeagal shaft in lateral view small, slightly bulbous, dorsal flange distinct, slightly roughened apically, in posteroventral view rough and with lateral flanges only at base; dorsal process very short, but broad in posteroventral view. Pygofer hook slightly longer than pygofer, slightly sinuate in lateral view, more strongly sinuate and stalked in dorsal view. Foot of style with posterior point about one-third length of foot.

Holotype male, Jefferson, Texas, 3 July 1962.

Differs from *freytagi* in having the rough aedeagal shaft, broad dorsal process in posteroventral view and different foot of style.

Erythroneura bainteri, new species

(Plate II, 2A-E)

Length 3 mm; wings with large connected spots, apical black spot larger than average.

Aedeagal shaft slightly curved, almost parallel margined, slightly roughened apically, in posteroventral view with lateral flanges on basal three-fourths of shaft, broadest basally; dorsal process very short, barely broader than lateral flanges in posteroventral view. Pygofer hook longer than pygofer, sculptured on apical third, slightly sinuate in both views. Foot of style short with distinct anterior point and slender posterior point almost half length of foot.

Holotype male, Enfield, Ill., 13 April 1960, Ross and Cunningham. Additional male paratypes—5 from Carpenterville, Ill., 26 Sept. 1956, Stannard and Ross on *Quercus macrocarpa*.

Differs from *haysensis* primarily in the shape of the foot of the style and with larger aedeagal shaft with more extensive lateral flanges.

Erythroneura micheneri, new species

(Plate II, 3A-E)

Length 3 mm; wings with red band across middle of clavus and adjoining corium, apical black spot average size.

Aedeagal shaft in lateral view bulbous, roughened and with a distinct dorsal flange, in posteroventral view rough and with very small lateral flanges near middle of shaft; dorsal process about half length of shaft, extending dorsally near shaft, in posteroventral view broad laterally and rounded apically. Pygofer hook slightly longer than truncate pygofer, sculptured on apical two-thirds, gently sinuate in both views. Foot of style slender and with straight, sharply pointed posterior point about half length of foot.

Holotype male, State College, Miss., 18 Feb. 1962. Additional male paratypes from Illinois as follows: 1, Millcreek, 8 Feb. 1957, Ross and Kramer; 1, Eddyville, Lusk Creek Canyon, 16 Sept. 1954, Mills and Ross on *Alnus rugosus*; 1, Rocky Branch Creek, Oliver, 22 April 1949, Ross and Stannard; 1, Giant City State Park, 14 Sept. 1954, Mills and Ross on *Acer saccharum*; 1, Mt. Vernon, 21 Sept. 1960; 1, Fox Ridge State Park, 29 June 1947, Ross and Stannard and 1, Foley's Woods, Paris, 22 April 1949, Ross and Stannard.

Differs from *univittata* in having a long dorsal process, truncate pygofer and longer posterior point on foot of style.

Erythroneura beeri, new species

(Plate II, 4A-E)

Length 3.3 mm; wings with broad markings, apical black spot smaller than average.

Aedeagal shaft in lateral view long and slender, narrowed apically, in posteroventral view with lateral flanges from base to apex; dorsal process about half length of shaft, barely wider than lateral flanges in posteroventral view. Pygofer hook shorter than pygofer, sinuate and sculptured on apical half in both views. Foot of style with posterior point about one-fourth length of foot.

Holotype male and 7 male paratypes, Enfield, Ill., 13 April 1960, Ross and Cunningham. Additional male paratypes as follows: 2, Gossete Ill., 13 April 1960, Ross and Cunningham and 1, Grantsburg, Ill., 31 Aug. 1951, Richards and Ross, *Quercus palustris*.

Differs from *ferrosa* in having a longer, more slender aedeagal shaft with more extensive lateral flanges, and with a much longer dorsal process.

Erythroneura curtoides, new species

(Plate II, 5A-E)

Length 2.8 mm; wings spotted, apical black spot smaller than average.

Aedeagal shaft in lateral view slender, parallel margined only slightly roughened apically, in posteroventral view with lateral flanges along most of shaft, broadest basally; dorsal process about two-fifths length of shaft, broadened apically in posteroventral view. Pygofer hook about length of pygofer, scarcely curved in lateral view, slightly sinuate in dorsal view. Foot of style slender with curved posterior point about one-third length of foot.

Holotype male, White Springs, Fla., 11 Dec. 1949, Stannard et al. and 1 male paratype, Santa Rosa Co., Fla., 11 Aug. 1955, F. W. Mead on *Quercus* sp.

Differs from *patriciae* in having almost straight shorter pygofer hooks and longer dorsal process on aedeagus.