THE GENUS STENOCRANUS IN AMERICA NORTH OF MEXICO
(Homoptera-Fulgoridae-Delphacinae)

R. H. BEAMER*

The genus Stenocranus Fieber, as listed for this region by Z. P. Metcalf (General Cat. of Hemip., Fasc. IV, Fulgoroidea, Pt. 3, Araeopidae), contains the following species: arundineus Metcalf, dorsalis Fitch, felti Van D., lautos Van D., luteivitta Walker, similis Crawford and unipunctatus Prov. All of the above, as well as five new species, are included in this paper except luteivitta Walker which, judging from descriptions and drawings of the type in the British Museum by W. E. China, does not belong in Stenocranus. All photographs were made at one magnification.

The author wishes to express his appreciation for the assistance given by the following people and institutions: Doctor Z. P. Metcalf of Raleigh, North Carolina, for the identification of his species S. arundineus; Doctor E. C. Van Dyke of the California Academy of Science for the exchange of para-types of S. felti Van D.; Doctor K. F. Chamberlain of the New York State Museum for the dissection and comparison of Fitch's type of S. dorsalis with specimens sent him; Doctor W. E. China of the British Museum for drawings and comments on the type of luteivitta Walker; Doctor L. D. Tuthill of Iowa State College for the privilege of studying a male cotype of S. lautos Van. D.; Doctor John L. Caldwell of the United States Bureau of Entomology and Plant Quarantine for comparing dissected specimens with the type of S. similis Craw., and Messrs. Rainville and Comeau of the Museum of the Province of Quebec, Quebec, Canada, for the comparison of specimens with S. unipunctatus Prov.

Genus Stenocranus Fieber

Stenocranus Fieber, Verh. zool.-bot. Ges. Wien, XVI, p. 519 (1866), type minutus (Fabr.).

Rather slender insects of moderate size; head plus eyes narrower than pronotum; antennae terete, first segment about as long as wide; front long and narrow, slightly narrowed at base, with a small median carina divided on vertex near anterior margin of eyes; vertex longer than wide, carinae definite; lateral carinae of pronotum slightly curved in at base, reaching hind margin; spur on base of hind tibia triangular, rather thick with black spines along one margin.

* Contribution from the Department of Entomology, University of Kansas, Lawrence, Kansas.
Key to the Species of Stenocranus

1. \( M_1 \) and \( M_2 \) usually stemming from \( R \) in the front wing ............................................... 10
   \( M_1 \) and \( M_2 \) usually not stems from \( R \) in the front wing .................................................. 2
2. Anteriolateral fovea of vertex light in color .............................................................. 3
   Anteriolateral fovea of vertex black in color .................................................................. 4
3. Elytra practically without dark markings .................................................. arundineus Metcalf
   Elytra with some dark markings .............................................................................. felti Van Duzee
4. Black spot on mesal margin of elytra near outer third ... similis Crawford
   Without black spot on mesal margin of elytra .......................................................... 5
5. \( M_2 \) branched in front wing ........................................................... ramosus n. sp,
   \( M_2 \) not branched in front wing ............................................................................... 6
6. \( M_2 \) almost straight, scarcely curved to costal margin .................................................. 7
   \( M_2 \) strongly curved to costal margin ......................................................................... 9
7. Venter of genital segment almost black .................................. dorsalis Fitch
   Venter of genital segment very light brown or white .................................................... 8
8. Venter of genital segment usually light brown; usually without an
   orange band on outer margin of eye; process of aedeagus angularly
   bifid ............................................................................................................................ pallidus n. sp.
   Venter of genital segment white; with an orange band on outer margin
   of eye; process of aedeagus smoothly bifid ............................................................. delicatus n. sp.
9. Subcosta usually with a black spot; aedeagal process
   not bifid ..................................................................................................................... laatus Van Duzee
   Subcosta usually without a black spot; aedeagal process
   bifid ............................................................................................................................ unipunctatus Prov.
10. Usually 5 mm. or more in length ................................................................. 11
    Usually distinctly less than 5 mm. in length .................................................................. 12
11. Subcosta usually with a black spot; process of aedeagus not forked at
    apex ......................................................................................................................... laatus Van Duzee
    Subcosta usually without a black spot; process of aedeagus forked at
    apex .......................................................................................................................... unipunctatus Prov.
12. Vertex definitely narrowed apically, extending about one-third its
    length beyond eye ................................................................................................. acutus n. sp.
    Vertex not so definitely narrowed, not extending one-third its length
    beyond the eye ........................................................................................................... brunneus n. sp.

1. Stenocranus dorsalis (Fitch)

Resembling S. minutus (Fabr.) but much larger and with less dark on outer portions of elytra. Length 6.5-7.5 mm.

Front three times as long as greatest width, slightly narrowed on basal third, sharply tricarinate longitudinally, infuscated either side median ridge; vertex slightly less than twice as long as basal width, median carina both broad and wide, anteriolateral fovea black; elytra broad, almost twice as long as the body, \( M_1 \) and \( M_2 \) not stemming from \( R \).

General color stramineous with pale median dorsal line slightly darker on each side across pronotum; elytra semihyaline, veins light, small black spot on
crossveins near base of $M_3 + 4$, area between $M$ and subcosta usually slightly embrowned. Venter of male stramineous with genital segment black, of female, same color with pygofer pear-shaped and dark brown.

**Genitalia:** In lateral view anal segment very large with two ventrally projecting hooks with the left hook usually much smaller than the right; aedeagus long and narrow, widest at base, surrounded on basal two-thirds by a process which is enlarged at middle, rapidly narrowed on apical third, flattened and curved ventrally almost into a half circle at apex; styles S-shaped, tapered to apex.

This description was made from a homotype male, one of many from Fryeburg, Me. The dissection and comparison of the type of *S. dorsalis* Fitch with the above specimen was made by K. F. Chamberlain of the New York State Museum, Albany, N.Y.

2. *Stenocranus ramosus* n. sp

Resembling *S. dorsalis* Fitch but much smaller. $M_1$, $M_2$ and $M_3$ from same stem and with much more dark coloring in outer half of elytra. Length 5-6.5 mm.

Front slightly more than three times as long as greatest width, slightly narrowed on basal third, tricarinate with a black line either side of middle carina; vertex about twice as long as basal width, at apex median carina high and wide, practically no carina evident at this point; elytra with $M$ not stem ming from $R$ and $M_1$, $M_2$, and $M_3$ stemming together.

General color stramineous with a median longitudinal light stripe, and a narrow orange band on anterior edge of eye extending across face. Elytra semihyaline with dark spot on crossveins in region of base of $M_4$ and all of these apical veins more or less infuscated with the heaviest coloring in area of $M_4$ and subcosta.

Genitalia: Male genitalia in lateral view much as in *dorsalis* but left anal hook shorter and heavier, aedeagus more sinuate and style somewhat narrower basally and more definitely curved anteriorly with a sharp spine near middle on inner margin.


Types and paratypes in the Snow Entomological Collections; paratypes in the United States National Museum.

3. *Stenocranus pallidus* n. sp.

Resembling *S. dorsalis* but much smaller, male genital segment but slightly embrowned and the process about the aedeagus with an angular bifid apex. Length 4.75-5.75 mm.

Front slightly less than three times as long as greatest width, slightly narrowed on basal third, sharply tricarinate with black line either side median
carina; vertex about one-fifth longer than basal width, anteriolateral fovea black; elytra with sides almost parallel extending about half their length beyond the body, M₁ and M₂ not stemming from R, M₃₊₄ united, straight.

General color stramineous with pale median dorsal line; elytra semihyaline, veins and area of M₃₊₄ and subcosta somewhat embrowned; last ventral segment of male slightly embrowned; pygofer of female pyriform, light brown in color.

Genitalia: In lateral view anal segment large with two medium sized, ventrally projecting processes of about the same length; aedeagus long and narrow, almost straight, slightly tapering from base to twisting apex, with a broad-based process about two-thirds as long as shaft, sharply narrowed on outer third into an angular bifid apex; styles broad on basal half with rather heavy spines near middle, sharply contracted at middle to sharp sinuate apices.


4. Stenocranus delicatus n. sp.

Resembling S. pallidus but eyes margined with orange and process of aedeagus longer, with a smoothly curved Y-shaped apex. Length 5.5-6 mm.

Front slightly more than three times as long as greatest width, widest near middle, slightly narrowed either way from middle, moderately tricarinate longitudinally with black stripe either side of middle; vertex about one-third longer than basal width, anteriolateral fovea black; elytra with sides widest slightly beyond middle, extending about half their length beyond the body, M₁ and M₂ not stemming from R. M₃₊₄ united, almost straight.

General color stramineous with pale median dorsal line, bordered with orange across pronotum, around margin of eyes and across sides of face; elytra semihyaline, veins, area of M₃₊₄ and subcosta embrowned; last ventral segment of male very light; pygofer of female pyriform, light in color.

Genitalia: In lateral view anal segment large with two large ventrally projecting processes of about equal size, slightly curving caudally; aedeagus long and narrow, widest at base, narrowed from base to tip with a radical curve near basal third; process almost as long as shaft of aedeagus partially enclosing aedeagal shaft on basal third, narrowed on outer third to about basal width of aedeagal shaft, divided smoothly Y-shaped at apex; styles gradually constricted at middle and sinuate on outer third.


Types in the Snow Entomological Collections; paratypes in United States National Museum and Illinois Natural History Survey, Urbana, Ill.

5. **Stenocranus unipunctatus** (Prov.)


Resembling *S. laetus* but usually without a small dark spot on subcosta and aedeagal process bifid. Length 4.5–5.5 mm.

Front about two and one-half times as long as greatest width, sides almost parallel on outer two-thirds, slightly narrowed basally, tricarinate longitudinally with broad, dark band either side median carina; vertex slightly less than one-third longer than basal width, anteriolateral fovea black; elytra broad, sides almost parallel, apex slightly narrowed, extending about one-third their length beyond abdomen, M₁ and M₂ quite variable in union with R. In some specimens one wing may have M stemming from R and in the other wing they may be separated. In any case, M₂ curves distinctly toward costa.

General color stramineous with white mid-dorsal line bordered on each side by more or less orange line which extends across inner margin of eye and across sides of face; elytra semihyaline, often with most of longitudinal veins darker and usually most of area beyond crossveins heavily infuscated except dark spot on subcosta usually absent; pygofer of female and genital capsule of male brown, body segments more or less infuscated with margins lighter.

Genitalia: In lateral view anal segment greatly enlarged with a pair of ventrally projecting processes, the right one definitely shorter than left; aedeagus very long and slender, widest at base, gradually narrowed to apex with an S curve on basal half; aedeagal process almost as long as aedeagus, widest at base, apparently enclosing aedeagal shaft on basal two-thirds, narrowed to bifid apex, one point recurved; styles broad at base, narrowed and sinuate on apical half, mesal shoulder quite rounded.

This species was placed in synonymy in 1912 under *S. dorsalis* Fitch by E. P. Van Duzee. Here it has remained until a comparison of accurately determined specimens of *S. dorsalis* Fitch with the Provancher type revealed it to be a distinct species.

Specimens of this species were compared with Provancher's type in the Museum of the Province of Quebec, Quebec, Canada, through the director, Mr. Paul Rainville, by Mr. Noel M. Comeau, zoologist of the Museum. I am deeply indebted to these gentlemen for their co-operation.

6. **Stenocranus brunneus** n. sp.

Resembles *S. unipunctatus* but much shorter, darker in color and process of aedeagus without a bifid apex. Length 3.5–4.5 mm.

Front three times as long as greatest width, widest near middle, very slightly narrowed toward apex, a little more so toward base, strongly tricarinate longitudinally, wide black stripe either side median carina; vertex at least twice as long as basal width, anteriolateral fovea black; elytra with
sides almost parallel, apices rounded, extending about one-third length beyond body; $M_1$ and $M_2$ usually stemming from $R$, curving to costa.

General color very dark with white median dorsal line; elytra more than half embrowned, those of the females more nearly hyaline than those of the males; veins dark except along costal margin including subcosta; body red to almost fuscous; pygofer of female and male genital segment very dark brown.

Genitalia: In lateral view anal segment very large, with two ventrally projecting processes, the right about half as long as the left; aedeagus very long and narrow, broadest at base, tapered from base to apex, abruptly curved on basal half; aedeagal process as long as aedeagus, almost three times as wide at middle as at base, narrowed sword-like on outer fourth; styles broad at base, mesal shoulders sharply rectangular, apices sinuate.

Holotype $\delta$, Douglas Co., Kans., June 24, 1930, P. B. Lawson, trap light; allotype $\varphi$, 8 $\delta$ and 16 $\varphi$ paratypes, Douglas Co., Kans., Oct. 18, 1944, R. H. Beamer; other paratypes: same place and collector, 5 $\delta$ $\delta$ and 7 $\varphi$ $\varphi$, Oct. 24, 1944; 1 $\delta$ and 5 $\varphi$ $\varphi$, Oct. 19, 1944; 2 pairs, July 13, 1944; 21 $\delta$ $\delta$ and 27 $\varphi$ $\varphi$, Oct. 15, 1945; 13 $\delta$ $\delta$ and 8 $\varphi$ $\varphi$, Oct. 3, 1945; 1 $\delta$, Aug. 30, 1945; 5 $\delta$ $\delta$ and 2 $\varphi$ $\varphi$, Shawneetown, Ill., June 24, 1936, DeLong and Ross; 4 $\delta$ $\delta$, Temple Hill, Ill., June 24, 1936, DeLong and Ross; 2 $\varphi$ $\varphi$, Herod, Ill., June 24, 1936, DeLong and Ross.

Types in the Snow Entomological Collections; paratypes in the Illinois Natural History Survey, Urbana, Ill.

7. Stenocranus acutus n. sp.

Resembling S. brunneus but much more slender, with sharper vertex extending one-third its length beyond the eye. Length 4-5 mm.

Front about three times as long as greatest width, sides almost parallel on apical two-thirds, slightly narrowing on basal third, moderately tricarinate longitudinally, with broad black stripe either side middle carina; vertex almost three times as long as basal width, anteriolateral fovea black; elytra very long and narrow, heavily embrowned beyond crossveins, including a spot on subcosta; $M_1$ and $M_2$ stemming from $R$, $M_2$ curving into costa.

General color very dark, with white median dorsal line; elytra more than half brown in both sexes, color following the veins even to a sizable spot on subcosta.

Genitalia: In lateral view anal segment large, with two ventrally projecting processes, the right shorter than the left; aedeagus long and narrow, widest at base, tapered to tip with about a right angle bend on basal third; aedeagal process long and narrow, almost as long as aedeagus, slightly widened on middle third and ending in a narrowed sword-shaped tip; styles rather long and narrow with sharp constriction on apical fourth, this portion curving dorsally in ventral view, mesal shoulder less than a right angle.

Holotype $\delta$, allotype $\varphi$, and one pair of paratypes, Okefenokee Swamp, Ga., July 25, 1939, R. H. Beamer; other paratypes: one pair, same place and date, D. Elmo Hardy; 1 $\delta$, Okefenokee Swamp, Ga., Billy's Island, July 27, 1939, R. H. Beamer; one pair, Tifton, Ga., Aug. 11, 1939, R. H. Beamer; 1 $\varphi$, St.

Types and paratypes in the Snow Entomological Collections; paratypes in the United States National Museum.

8. Stenocranus lautus Van Duzee

Resembling S. brunneus but larger, usually with fewer dark markings and male styles in lateral view much longer and more slender. Length 5-6 mm.

Front about two and a half times as long as greatest width, sides almost parallel on apical two-thirds, slightly narrowed on basal third, definitely tricarinate longitudinally, with a black stripe either side median carina; vertex about three times as long as basal width, anteriolateral fovea black; elytra usually widest almost at apex, very long, with sides almost parallel, projecting about half their length beyond abdomen, M₁ and M₂ usually stemming from R but sometimes they are both free; M₂ curving to costa.

General color brownish fuscous, with white median dorsal line, elytra often more than half brown, at least the veins dark, except costa and subcosta, the latter with a small black spot at tip.

Genitalia: In lateral view anal segment large, with two long ventrally projecting processes, the right one about half as long as the left; aedeagus very long and narrow, widest at base, tapering to tip, with right angle bend beyond basal third; aedeagal process straight, slightly shorter than aedeagal shaft, widest near base, with apex turned slightly laterally and flattened; styles very long and slender, sinuately curved and narrowed on outer half, in ventral view mesal shoulder broadly rounded.

Redescribed from the cotype male taken “by Doctor E. B. Southwick near New York City” and here designated lectotype. This specimen was studied through the courtesy of Iowa State College, Ames, Iowa, and is in their collection. Specimens of this species are at hand from the following states: Kansas, Illinois, North Carolina, Washington, D.C., Virginia, Maryland, and New Hampshire.

9. Stenocranus similis Crawford


Resembling S. dorsalis but smaller and with many dark markings on the dorsum. Length 4.5-6 mm.

Front slightly less than three times as long as broad, longitudinally tricarinate, with a dark stripe either side median carina; vertex about one-fifth longer than basal width, anteriolateral fovea black; elytra widest in region of crossveins with apex broadly rounded, about one-third longer than body, veins prominent; M₁ and M₂ not stemming from R, slightly curved toward costa.

General color quite dark, median longitudinal white line very narrow,
almost wanting; elytra mostly infuscated, with a darker spot on mesal margin at outer end of claval veins.

Genitalia: In lateral view anal segment very large, with a pair of ventrally projecting hooks; aedeagus very long and narrow, widest at base, narrowed to bent tip; aedeagal process about twice as wide on basal two-thirds as aedeagus at base, narrowed on outer third to less than fifth basal width and divided into three tips of unequal length; a second process just dorsal to the first, about two-thirds as long and about as wide as aedeagus; styles in lateral view almost straight to a dorsally bent apex, sides of outer half gradually narrowed; in ventral view sides of basal two-thirds almost parallel, outer third sharply constricted to slender curved apices.

Redescribed from specimens from Benton, Ky., which were compared with Crawford's type by Doctor J. S. Caldwell, United States Bureau of Entomology and Plant Quarantine.

10. Stenocranus arundineus Metcalf


Resembling *S. dorsalis* but without any black markings. Length 6-8 mm. Front about three and one-half times as long as greatest width, sides almost parallel, slightly narrowed near base, strongly, longitudinally tricarinate, without black stripe either side median carina; vertex but slightly longer than basal width, anteriolateral fovea light; elytra widest at or beyond the crossveins, apices broadly rounded, extending about half their length beyond the abdomen; M₁ and M₂ not stemming from R, M₂ extending straight to costa.

General color buff, with usual light median dorsal line bordered on pronotum with orange, vertex and front also tinged with orange, no dark on body or elytra except tiny spot at tip of beak.

Genitalia: In lateral view anal segment very large with two ventrally projecting processes on each side; aedeagus very long and narrow, broadest at base, gradually narrowed to apex; aedeagal process about three times as broad at base as base of aedeagus, tapered to sharp apex, about one-third shorter than aedeagus; styles broadest at base, slightly narrowed at basal third and again more radically so on outer third, curved slightly dorsally throughout.

Numerous specimens at hand, swept from Arundinaria in Georgia and North Carolina.

11. Stenocranus felti Van D.


Resembling *S. dorsalis* but much smaller, elytra flaring with apices rapidly, narrowing beyond crossveins and anteriolateral fovea of vertex not black. Length 4-5 mm.

Front slightly more than twice as long as widest portion which is near the middle, narrowed very slightly toward apex and a little more toward base, moderately tricarinate longitudinally, slightly embrowned between the carina but not black; vertex about one-third longer than basal width, anteriolateral fovea not or scarcely darkened; elytra broad for their width, almost parallel
EXPLANATION OF PLATES
The plates contain the lateral view of the anal segment, the aedeagus and its process of each species and the ventral view of the styles of each species.
sided, sharply narrowed beyond crossveins; $M_1$ and $M_2$ not stemming from $R$, curved to costa.

General color buff with a rather broad median white line, bordered on
pronotum with orange; elytra semihyaline with veins darker; legs linneate with fuscous.

Genitalia: In lateral view anal segment very large with a pair of short ventrally projecting, blunt, bifid processes; aedeagus long and slender, widest at base, narrowed to bent tip; aedeagal process with basal width five times that of aedeagus, about two-thirds as long as aedeagus, narrowed into a diagrammatic, avecephaliform apex; styles very broad at base, narrowed from both sides on outer third to very narrow, slightly curving apices; in ventral view widest at base, narrowed throughout to an avecephaliform outer half, with a long, slender, upcurved beak.

Redescribed from a pair of paratypes kindly exchanged by the California Academy of Science with the Snow Collections. Specimens at hand from Wisconsin, Minnesota, New Hampshire, and Manitoba, Canada.

ADDITIONAL HOST AND DISTRIBUTION RECORDS OF THE SWEETPOTATO LEAF BEETLE, TYPOPHORUS VIRIDICYANEUS (CROTCH), (COLEOPTERA, CHRYSOMELIDAE).¹

RALPH L. PARKER
Kansas Agricultural Experiment Station.
Manhattan, Kansas.

Recently the sweetpotato leaf beetle was found doing considerable damage to sweetpotato plants in the vicinity of Oxford, Sumner County, Kansas. Dr. H. B. Hungerford (1945)² published in the October issue of the Journal of the Kansas Entomological Society a short article in regard to the finding of this insect which caused considerable damage to sweetpotato tubers. He gave the distribution of this insect in Kansas and other states. He suggested that the additional information assembled by the author be published.

Hungerford (1945) gave the distribution in Kansas as follows: Douglas, Johnson, Neosho, and Sumner Counties. Additional localities are as follows:

Leavenworth County, Kansas, June 11, 1921, I. N. Chapman, 10 specimens, dock.
Marion, Marion County, Kansas, June 7, 1926, E. C. Smith (Student Collections), 2 specimens.
Frankfort, Marshall County, Kansas, June 15, 1926, W. Wullschleger (Student Collections), 4 specimens.
Onaga, Pottawatomie County, Kansas, no date given, F. F. Crevecoeur, 2 specimens.
Onaga, Pottawatomie County, Kansas, June 30, 1922, F. F. Crevecoeur, 1 specimen.
Onaga, Pottawatomie County, Kansas, June 25, 1929, F. F. Crevecoeur, 1 specimen.

¹ Contribution No. 545, Department of Entomology.
² Literature cited.