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Kansas Entomological Society Vol. 28 April, 1955 Number 2

A REVISION OF THE GENUS MEGAMELUS IN AMERICA NORTH OF MEXICO (Homoptera, Fulgoridae, Delphacinae)

R. H. Beamer

(Concluded)

Megamelus metzaria Crawford Megamelus metzaria Crawford, 1914, U.S. Natl. Mus. 46:611.

Macropterous form. Resembling *Megamelus lobatus* Beamer but processes at apex of aedeagus from the same base, aedeagal brace with apex more acute and processes between inner lobes of ninth segment distinctly enlarged at apex. Length § 4.8 mm., § 5 mm.

Structure: Basal segment of antennae distinctly shorter than second; crown distinctly less than twice as long as apical width, carinae distinct but not sharp; elytra much longer than body, semihyaline with a brown spot before apex of clavus.

Color: General color stramineous, scutellum and portions of abdominal segments much darker.

Genitalia: Genital capsule in ventral view with outer lobes of ninth segment large, almost half as long as capsule; inner lobes about one-third as long as outer, widest at base, apices rounded about half as wide, a large knob-shaped process at base between them; styles widest at base, slightly narrowed to truncate apices with outer and inner corners sharp; aedeagal brace spatulate, long, weakly colored on each side of apex, making structure appear quite narrow; aedeagus long and narrow, curved ventrally at apex which is divided into two slender processes; anal segment without processes.

Types: Holotype &, Banner, Wyoming, in collection of Pomona College. The type, not too well preserved, was studied and found to be identical with the specimen figured here except in the shape of the apex of the styles. The left style was absent entirely and the right was atypical for the whole genus in that the apex narrowed to a sharp point on the outer margin (fig. 16b). It is possible it was due to parasitism or some other cause. If at some future date specimens collected at Banner, Wyoming, should definitely prove Megamelus metzaria to be a different species, then the one figured here as metzaria can be given a new name. Many specimens studied, Douglas County, Kansas; 2 & & Cheboygan, Michigan.

Brachypterous form. Like the macropterous form except with nonflight wings.

Types: Holomorphotype &, allomorphotype &, and 5 & and 3 & paramorphotypes: Meade County, Kansas, September 13, 1944, R. H. Beamer; other paramorphotypes: Lawrence, Kansas, August 23, 1944, R. H. Beamer; 2 & Douglas County, Kansas, November 6, 1944, R. H. Beamer; 1 & Douglas County, Kansas, October 2, 1945, R. H. Beamer; 1 & Meade

Volume 28, No. 1, January 1, 1955

Megamelus inflatus Metcalf Megamelus inflatus Metcalf, 1923, Jour. Elisha Mitchell Sci. Soc. 38:203.

No specimens of this species are at hand for study. The following is the original description. "This species may be recognized by its almost uniform pale yellow color with the pygofer of the male strongly inflated, genital

hooks united into a single obtuse process.

"Vertex rather broad, strongly produced; from narrowed between the eyes, broadened apically, the median frontal carinae forming a distinct callosity at the apex of the head; antennae long; first segment almost as long as the second, pronotum elongate, with a distinct impressed point either side of the median carina; intermediate carinae strongly divergent, reaching the posterior border; mesonotum about as long as the pronotum; calcars small; less than half as long as the basal segment of the tarsus; male pygofer strongly inflated; genital plates flat, incurved at the apex with a small median tooth between; genital styles short, about half as long as the genital plates, obtuse at the apex; genital hooks united on the median line then produced into an elongate obtuse process; anal segment short, anal processes not produced.

"Color: General color pale yellow, the frons, antennae and eyes and the

lateral margins of the abdomen a little darker.

"Length, apex of head to apex of abdomen, 2.10 mm.

"Holotype & Mill Neck, New York, June 19, N. Banks. In the collection of the Museum of Comparative Zoology. Paratype 8, Mill Neck, New York, June 19, N. Banks.

"This distinct little species has evidently been confused in the past with

Megamelus notulus but the male genitalia are entirely distinct."

The accompanying drawing was made with the permission of Dr. Metcalf from an illustration in his paper "The Redescription of Twenty-One Species of Areopidae Described in 1923," Jour. of the Elisha Mitchell Sci. Soc., 65: 48-60, 1949.

From Doctor Metcalf's illustration the bifid apex of the inner lobes on the ninth segment is the outstanding difference separating this species from

closely related ones.

Megamelus lobatus n.sp.

Brachypterous form: Resembling M. falcatus but largest process on apex of aedeagus not several times larger than smaller process. Length 3 3mm. 9

Structure: Second segment of antennae longer than basal; crown about 3.5mm. twice as long as apical width, carinae distinct but not sharp; elytra about as wide as long, apices truncate.

Color: General color stramineous with longitudinal stripe either side of

dorsum very dark brown, lobes of ninth segment yellow.

Genitalia: Genital capsule in ventral view with outer lobes of ninth seg. ment almost half as long as capsule, inner pair scarcely half as long as outer, more than twice as wide at base as at rounded incurved apices, a third pair of lobes one either side of aedeagal brace and almost as large; styles almost parallel-sided, narrowed on outer margin to rounded outed corner with beakshaped inner corner; aedeagal brace spatulate, barest indication of median

excavation, lateral margins more or less serrate; aedeagus long and slender, curved ventrally with a pair of processes at apex; anal segment without pro-

Types: Holotype &, allotype Q, 12 & & and 8 Q Q paratypes, Cedar Keys, Florida, March 3, 1947, L. D. and R. H. Beamer; other paratypes: 3 8 8 and 2 9 9, Slidell, Louisiana, March 3, 1947, R. H. Beamer; 3 8 8 Slidell, Louisiana, June 23, 1948, R. H. Beamer; 4 & & and 9 & Arkansas Pass, Texas, January 2, 1946, R. H. Beamer; 2 & & and 4 & P Durham, New Hampshire, August 12, 1946, R. H. Beamer; 5 & & and 7 9 9 Yankeetown, Florida, March 9, 1947, L. D. and R. H. Beamer; 3 & and 4 ♀ ♀ Mystic, Connecticut, August 8, 1946, R. H. Beamer; 8 & & and 11 9 9 Norwich, Connecticut, August 6, 1946, R. H. Beamer; 19 8 8 and 10 9 Piny Point, Maryland, August 26, 1946, R. H. Beamer; 5 & & and 5 9 9 same place and date, R. I. Sailer; 4 8 8 and 2 9 9 17 miles south of Homestead, Florida, March 14, 1947 R. H. Beamer; one pair, Sanford, Florida, March 11, 1947, R. H. Beamer.

Types and paratypes in Snow Entomological Museum. Paratypes in

United States National Museum.

Macropterous form. Like the brachypterous form but with flight wings. Length & 3.5 mm., Q 4 mm. Elytra milky colored except fuscous spot near apex of clavus.

Types: Holomorphotype &, allomorphotype Q, 2 & & and 1 Q paramorphotypes, Cocoanut Grove, Florida, August 9, 1930, J. O. Nottingham; other paramorphotypes: 4 9 9 same place and time as types, R. H. Beamer; 1 & 17 miles south of Homestead, Florida, March 14, 1947, R. H. Beamer; 1 9 Yankeetown, Florida, July 31, 1930, Paul W. Oman; 1 9 Plant City, Florida, July 14, 1939, R. H. Beamer; 2 & South Amboy, New Jersey, August 15; 1 & Palatka, Florida, December 24, 1950, R. H. Beamer; 1 & Fort Pierce, Florida, August 7, 1930, Paul W. Oman; 1 & Kingsland, Georgia, July 12, 1951, Price, Beamers, Wood; 1 & Snead, Florida, June 15, 1951, Price, Beamers, Wood; 3 & Sebring, Florida, June 20, 1951, Price, 1951, Price, Beamers, Wood; 4 & Ft. Myers, Florida, June 21, 1951, Price, Beamers, Wood; 1 &, Lake Placid, Florida, July 12, 1948, E. L. Todd; 1 & Royal Palm Park, Florida, July 21, 1948, R. H. Beamer; 3 & Sanford, Florida, C. O. Bare; 1 & Suwanee Springs, Florida, August 2, 1939, D. E. Hardy; 2 & & Biloxi, Mississippi, June 25, 1948, R. H. Beamer 1 & Buras, Louisiana, June 21, 1948, R. H. Beamer.

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

Megamelus falcatus n.sp.

Brachypterous form. Resembling Megamelus palaetus (VanDuzee) but margins of elytra without white markings, crown much shorter and narrower and aedeagus with two apical processes one of which is broad and sickle-shaped. Length & 3 mm., 9 3.2 mm.

Structure: First segment of antennae about half as long as second. Crown not quite twice as long as apical width, carinae evident but not sharp. Elytra with apices truncate, corners rounded, slightly longer than greatest width.

Color: General color amber, darker spot near apex of clavus and about

lateral half of dorsum of abdomen often darker.

Genitalia: Genital capsule in caudoventral view with outer lobes of ninth segment semicircular in outline, inner lobes about as wide as long, separated by their own width with a short broad tooth midway between their bases, caudal lateral lobes long and narrow; styles widest at base, sides parallel to outer third where they narrow on inner margin to about one sixth basal width, turned in at right angles; aedeagal brace more or less rectangular, apex slightly narrower than base, slightly concave; aedeagus long and narrow with two asymmetrical processes at apex, one short and narrow, the other broad at base and twice as long; anal segment with a pair of very short, sharp caudoventral processes.

Types: Holotype &, allotype &, 3 & and 3 & paratypes, Danbury, New Hampshire, August 12, 1946, R. H. Beamer; other paratypes: 2 & & and 3 2 Q Canaan, New Hampshire, August 11, 1946, R. H. Beamer; 2 & & Storrs, Connecticut, August 2, 1946, R. H. Beamer; 1 & and 1 9 Lake Placid, New York, July 30, 1946, R. H. Beamer. Types in the Snow Entomo-

logical Museum.

Megamelus coronus n.sp.

MACROPTEROUS FORM. Resembles Megamelus metzaria Crawford but apex of aedeagal brace with three lobes, also peg between inner lobes on ninth segment, bifid and very large. Length & 2.5 mm.

Structure: First antennal segment a little more than half as long as second; crown more than twice as long as apical width, projecting in front of eyes

about one-fourth its length, carinate.

Color: General color amber, sides of pronotum and all of metanotum darker brown; elytra more or less milky with a fuscous spot on tip of clavus

and veins darker.

Genitalia: Genital capsule with lobes of ninth segment about half as long as capsule; inner lobes about half as long as outer, apices sharp on inner corner, rounded on outer, with a large bilobed process between their bases; styles enlarged on outer fifth, outer corner longest, more than twice length of inner; aedeagal brace with three lobes about the same size on apex; aedeagus long and slender with a recurved apex containing two processes of about same size.

Holotype male, Harris Co., Texas, July 28, 1928, J. G. Shaw, in the Snow

Entomological Museum.

(To be concluded)

NOTICE TO CONTRIBUTORS

For uniformity and for economy of space, authors are requested to give generic and specific descriptions in telegraphic style, i.e. with minimal use of articles and verbs. Synonymies, bibliographies, paragraphing and punctuation will be edited to conform with the style used generally in this issue unless the author, when submitting his manuscript, specifically asks that no such changes be made.

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County, Kansas, September 9, 1944, R. H. Beamer; 1 & Sterling, Kansas. August 4, 1944, R. H. Beamer; 1 & Montauk, Long Island, New York. August 17, 1946, L. D. Beamer; 2 & Douglas County, Kansas, August 8. 1945, R. H. Beamer; 1 & Wichita, Kansas, June 20, 1946, R. H. Beamer: 1 & Hutchinson, Kansas, June 18, 1949, R. H. Beamer; 1 & same place. July 28, 1950, L. D. Beamer; 1 & Durham, New Hampshire, August 12. 1946, R. H. Beamer.

Types in the Snow Entomological Museum.

Megamelus paleatus (VanDuzee)

Stenocranus paleatus VanDuzee, 1897, Bull. Buffalo Soc. Nat. Sci., p. 232.

MACROPTEROUS FORM. This is the largest species in Florida and perhaps the most common. Length & 5 mm., 9 5.5 mm.

Structure: Basal segment of antennae slightly shorter than second; crown almost three times as long as apical width, projecting almost one half its length in front of eyes, carinae sharp and high; elytra long, projecting almost one-third their length beyond abdomen.

Color: General color yellowish brown, mottled with darker, especially a spot before apex of clavus and veins of elytra much darker, also genital capsule, legs, and various ventral sclerites spotted with almost black.

Genitalia: Genital capsule in ventral view almost spherical; lateral lobes of the ninth segment large, half as long as entire capsule, widest on caudal end; inner lobes short and narrow, about one-fourth as long as outer, small raised tooth between them; styles with apices truncate enlarged on both outer and inner corners; aedeagal brace almost circular; aedeagus very short, tubular, scarcely more than half as long as genital capsule, with a short curved process arising on margin of apex; anal segment without processes.

Types: Holotype 9 from Florida in collection at Iowa State College. Ames, lowa.

Neoallotype & described here, Red Level, Florida, July 6, 1948, R. H. Beamer. In the Snow Entomological Museum.

Numerous specimens are at hand from many localities in Florida, Texas, and Louisiana. The Texas specimens were taken on Pontedera cordata in Bastrop State Park, in May, 1954.

BRACHYPTEROUS FORM. Resembling the macropterous form but lighter in color, elytra barely longer than wide, extending only to second abdominal segment.

Types: Holomorphotype &, allomorphotype Q, 11 & and 7 Q paramorphotypes: Palatka, Florida, March 10, 1947, R. H. Beamer. Types in the Snow Entomological Museum. Between 300 and 400 long-winged specimens examined, mostly from Florida. Specimens were compared with the type in Ames, Iowa, and declared identical by Jean Lafoon in 1952.

Megamelus hamatus n. sp.

Brachypterous form. Resembles Megamelus paleatus (VanDuzee) but aedeagus flat instead of cylindrical with apex narrowed into a sword-shaped process that projects from tip of shaft almost at right angles. Length & 3 mm., 9 3.5 mm.

Structure: Calcar about as long as first tarsal segment and twice as wide; first antennal segment definitely shorter than second; crown slightly more than twice as long as apical width, projecting in front of eye almost half its length; elytra reaching to second abdominal segment, apices broadly rounded.

Color: General color light brown, lateral fovea of crown dark, lateral angles of scutellum, two spots on apices of each elytra, pustules on dorsum of abdomen, spot beneath each eye and narrow crossband at apex of clypeus

Genitalia: Genital capsule in ventral view wider than long; outer lobes on ninth segment broad, more than half as long as capsule; inner lobes more than half as long and more than half as wide as outer; styles widest at base, narrowed to broadly rounded outer corner and a sharply curved inner corner; aedeagal brace broadly and shallowly excavated at apex; aedeagus short, flat, blade-like, apex narrowed to a sword-shaped, curved process projecting ventrally at right angles to shaft.

Types: Holotype &, allotype Q, 2& and 11 Q paratypes, Woodbridge, Virginia, August 28, 1946, R. H. Beamer; other paratypes: 1 8 and 2 9 9. same place and time, L. D. Beamer; 5 & & and 17 & Plummers Island, Maryland, August 3, 1913, W. L. McAtee; 1 Q August 15, 1 Q October 5, same year, place, and collector.

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

Megamelus distinctus Metcalf

Megamelus distinctus Metcalf, 1923, Jour. Elisha Mitchell Sci. Soc., 38:201.

Brachypterous form. Resembling M. lobatus but aedeagus not bifid at apex. Length & 3 mm., 9 3.12 mm.

Structure: Basal segment of antennae slightly shorter than second; crown more than twice as long as apical width, projecting about one-third its length in front of eyes; elytra about as wide as long, apices truncate.

Color: General ground color whitish to dark brown, quite variable; some specimens almost dark brown all over, others quite light throughout.

Genitalia: Genital capsule in ventrocaudal view with outer lobes of ninth segment about one-fourth as long as capsule, about halt as wide as long, rather sharp on caudal end; inner pair not quite half as long as outer, about twice as wide at base as on outer two-thirds, apices rounded; styles with avicephaliform apices; aedeagal brace with apex truncate to somewhat bilobed; acdeagus long, curved ventrally at base and again on outer third with a short stout spur on right side of shaft near end of basal curve; anal segment without processes.

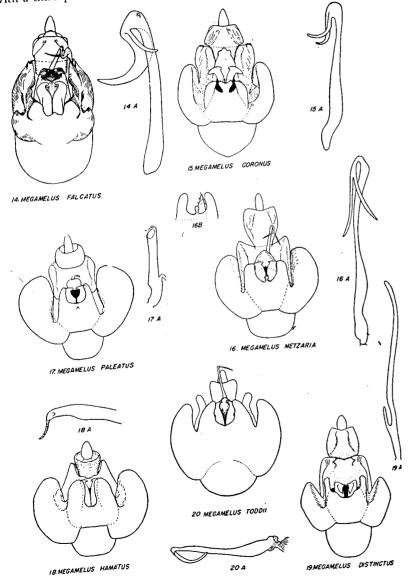
Types: Holotype &, in collection of Z. P. Metcalf. Specimens examined from Kansas, Illinois, Connecticut, New York, and Michigan.

Megamelus toddi n. sp.

MACROPTEROUS FORM. Resembling M. paleatus VanDuzee but smaller, darker brown and having the aedeagus tapered from tip to base instead of parallel-sided. Length 4 mm.

Color: General color brown. Elytra hyaline with fuscous spot on apices of clavi. Dorsum of thorax dark brown.

Genitalia: Genital capsule in ventral view with outer lobes of ninth segment rather short, slightly wider and of about same length as inner pair, with a third pair between these longer and narrower than either. Apices of



styles avicephaliform. Aedeagal brace indefinite, more or less spatulate. Aedeagus about half as long as capsule, tapered from base to apex, base several times wider than apex, fairly slender on outer two-thirds, about outer onethird recurved at less than a right angle. Anal segment without spurs or teeth.

Holotype &, allotype Q, 1 Q and 15 & paratypes: Hammond, Louisiana, June 22, 1948, E. L. Todd. Types in the Snow Entomological Museum.

Key to the Species of Megamelus

	Rey to the species of Megametus	
1.	Male anal segment with processes	2
	Male anal segment without processes	>
2.	Anal processes projecting anteriorly	3
	Anal processes projecting posteriorly	davisi
3.	Anices of aedeagal brace turned ventrad	4
	Apices of aedeagal brace not turned ventrad	lunatus
4.	Aedeagus with a large sword-like process near base	notulus
	Aedeagus without such a process near base	flavus
5.	Aedeagel brace deeply split or excavated at apex	6
-	Aedeagal brace not deeply split or excavated at apex	12
6.	Sides of excavation with processes	/
	Sides of excavation without processes	8
7.	With processes on inside of arms of excavation	aestus
	With processes on outside of arms of excavation u	ngulatus
8.	Sides of excavation almost touching	bifidus
	Sides of excavation not almost touching	9
9.	Sides of aedeagel brace sharply recurved on outer third, apex	
	sharp re	curvatus
	Sides of aedeagal brace not sharply recurved, apices not sharp.	10
10.	Aedeagus trifid at apex	11
	Aedeagus not trifid at apex	gracilis
11.	Sides of aedeagal brace flat, bifid at apex	trijiaus
	Sides of aedeagal brace curved dorsally at tip, not bind los	ngicornis
12.	Lobes at sides of styles bifid	. inflatus
	Lobes at sides of styles not bifid	13

PLATE III

14. Megamelus falcatus; ventral view of genital capsule of male; 14a, lateral view of aedeagus, enlarged.

15. Megamelus coronus, ventral view of genital capsule of male; 15a, lateral view of aedea-

gus, enlarged. 16. Megamelus metzaria, ventral view of genital capsule of male; 16a, lateral view of aedeagus, enlarged; 16b, tip of style of holotype.

Megamelus paleatus, ventral view of genital capsule of male; 17a, lateral view of aedeagus, enlarged.

Megamelus hamatus, ventral view of genital capsule of male; 18a, lateral view of aedeagus, enlarged.

19. Megamelus distinctus, ventral view of genital capsule of male; 19a, lateral view of acdeagus, enlarged. 20. Megamelus toddi, ventral view of genital capsule of male; 20a, lateral view of aedea-

gus, enlarged.

46	JOURNAL OF TANIONS 2000
	Apex of aedeagus bifid
13.	
	Apex of aedeagus bind 17 Apex of aedeagus not bifid 15 Bifid apex of shaft recurved 10batus
14.	
15	
15.	
16.	Apex of aedeagal brace tilloocd
	Apex of aedeagal brace more or less pointed
17.	
	a
18.	
	angles to shaftshappens short process near
	angles to shaft
10	
19.	Aedeagus not tapering from base to tip
	Aedeagus not tapering from bust as ap

ADDENDUM

In a previous article (One Old and Five New Species of Delphacine Fulgorids, Jour. Kansas Ent. Soc., 25: 111-115, 1952) the specific names of drawings 2 and 3 on page 113 were interchanged. The correct names are: 2. Sogata meridiana; and 3. Sogata dorsolineata.

RECORDS OF MACRONOCTUA ONUSTA GROTE, THE IRIS BORER, IN NEBRASKA (Noctuidae, Lepidoptera)

E. W. Hamilton Lincoln, Nebraska

On April 25, 1952, a caterpillar from Lincoln, Nebraska, was brought in to the University of Nebraska, Entomology Department, and tentatively identified as *Macronoctua onusta* Grote. The identification was corroborated by a specialist of the Division of Insect Identification, Bureau of Entomology & Plant Quarantine. A previous departmental record shows the iris borer was also reported in Washington County, April 17, 1924. In both instances the caterpillars were found on iris bulbs. A search of the literature has shown no previous record of *M. onusta* being reported west of the Mississippi River up to 1953.

TWO NEW DIPTERA FROM THE PACIFIC COAST STATES

MAURICE T. JAMES State College of Washington Pullman, Washington

The present paper gives descriptions of two new Diptera, both from the Pacific Coast states and belonging to groups which have been given a comprehensive review within approximately the past decade. Descriptions are presented at this time chiefly in order to validate the names for use in other publications.

Family STRATIOMYIDAE Stratiomys currani boharti, n. sp.

This subspecies differs from the typical form in that the abdominal sterna are distinctly black-banded basally and the femora, in the females as well as in the males, are black except for their apices and very narrow bases. The black basal bands of the venter may occupy half or more of the respective sternum, as commonly is the case on segments 1 and 4, or may be very narrow and sometimes interrupted, as on segment 2.

Holotype female, Sierraville, 12 miles southeast, Sierra Co., California, July 4, 1953 (R. M. Bohart); from the collection of the University of California, Davis, to be placed in the California Academy of Sciences. Allotype male, same data. Paratypes, 6 females, 16 males, same data; 2 females, 2 males, Truckee, Nevada Co., California, July 5, 1953 (R. M. Bohart); 3 females, 1 male, King's Beach, 6 miles northwest, Placer Co., California, July 5, 1953 (R. M. Bohart); 1 female, 1 male, 6 miles west of Lakeview, Oregon, 5100 tt., July 8, 1937 (Bolinger, Jewett).

This form appears to be a well-marked subspecies in the Sierras and the Cascades, but it intergrades broadly with the typical form (described from southwestern Colorado and common in Utah) over an area ranging from lower altitudes in California, through Wyoming, into Utah. For example, in two females from Bishop, California, and from Yellowstone National Park, Wyoming, the abdominal sterna are narrowly black basally and the subapical half of each femur is black. An occasional Utah female shows a tendency toward blackening on the femora. The blacker character of the Pacific Coast form does not seem to be an expression of the melanistic tendency shown by some other members of this subfamily when they occur in the moist, cool habitats of high mountains, since the typical paler Colorado form also comes from the high mountains. Because of this and the distinctive character of the two forms which appear to be the extremes of a cline, it should be of value to give them distinctive subspecific names.

Family OMPHRALIDAE

Omphrale whittakeri, n. sp.

Related to O. beameri Hardy and O. mirabilis (Adams). The male traces to O₁ mirabilis in Hardy's key (Jour. Kansas Ent. Soc. 17:42-43, 1944) but