

INSECTA MUNDI

A Journal of World Insect Systematics

0188

Review of the species described in *Leptostilbus* Casey in North America
(Coleoptera: Phalacridae: *Xanthocomus* Guillebeau)

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Date of Issue: September 2, 2011

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Insecta Mundi 0188: 1-8

Published in 2011 by

Center for Systematic Entomology, Inc.
P. O. Box 141874
Gainesville, FL 32614-1874 U. S. A.
<http://www.centerforsystematicentomology.org/>

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Printed copies deposited in libraries (ISSN 0749-6737)

Electronic copies in PDF format (On-Line ISSN 1942-1354, CDROM ISSN 1942-1362)

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Review of the species described in *Leptostilbus* Casey in North America
(Coleoptera: Phalacridae: *Xanthocomus* Guillebeau)

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Abstract. The species of Phalacridae (Coleoptera) historically included in *Leptostilbus* Casey, 1916, are reviewed. *Leptostilbus rutilans* Casey, 1916, is here designated as the type species of *Leptostilbus*. The genus *Leptostilbus* is synonymized with *Xanthocomus* Guillebeau, 1893, **syn. nov.**, resulting in two **new combinations**, *Xanthocomus concinnus* (Casey, 1916) and *X. rutilans* (Casey, 1916). **Lectotypes** are here designated for these two species. *Acyломus elongatulus* (Casey, 1890), **comb. nov.**, formerly placed in *Leptostilbus*, is excluded from *Xanthocomus*. A key and illustrations are provided to aid in recognition of the two species of *Xanthocomus* in North America, and detailed distribution maps are given for both species.

Introduction

Among commonly collected North American beetles, members of the family Phalacridae are exceedingly poorly known. Although the genera are fairly well-established, most species, especially in the southern United States, are not identifiable with existing literature. This is in large part due to their small size and uniform, nondescript appearance. The taxonomic situation is even more dire in the non-Holarctic realms, and the world generic concepts are currently under study (Gimmel, in prep.). For accurate species-level identification, dissection and examination of male genitalia is usually necessary. This paper is the first in a series of treatments of the North American species of Phalacridae.

Most phalacrids feed on fungi as adults and larvae, but members of a few genera feed inside flower heads of composites as larvae and on pollen as adults (Steiner 1984). Gut smears of *Xanthocomus* adults have revealed fungal spores and hyphae, and specimens have been swept and beaten from tall grasses in wet meadows. They probably feed on molds growing on surfaces of dehiscent plant parts. They are often attracted to UV lights, but are rarely collected in large numbers, unlike their relatives in the genus *Acyломus* Sharp, with which they co-occur throughout their range.

Materials and Methods

In total, 235 specimens (including types) were examined from various U.S. institutions (see below). Genitalia dissections were made by softening the specimen in hot water, removing the entire abdomen, placing the abdomen in hot 10% KOH until clear, then extracting the genitalic sclerites. The tegmen and penis were separated from each other for clearer interpretation of structures. Genital sclerites were generally remounted in dimethylhydantoin formaldehyde (DMHF) resin on rectangles of cellulose acetate pinned with the specimen. The genitalia of a few specimens previously dissected by Warren Steiner were placed in microvials with glycerin and pinned with the specimens. Lectotype designation labels on specimens state the year I selected the specimen to be the lectotype. These actions are validated with this publication.

Depositories

AMNH American Museum of Natural History, New York, NY (Lee Herman)
BYUC Monte L. Bean Life Science Museum, Brigham Young University, Provo, UT (Shawn Clark)
EGRC Edward Riley Collection, College Station, TX
FMNH Field Museum of Natural History, Chicago, IL (James Boone)
FSCA Florida State Collection of Arthropods, Gainesville, FL (Paul Skelley)
LSAM Louisiana State Arthropod Museum, Baton Rouge, LA (Victoria Bayless)

MCZC Museum of Comparative Zoology, Harvard University, Cambridge, MA (Philip Perkins)
 MEMU Mississippi Entomology Museum, Mississippi State University, Starkville, MS (Terence Schiefer)
 MTEC Montana Entomology Collection, Bozeman, MT (Michael Ivie)
 OSAC Oregon State Arthropod Collection, Corvallis, OR (Christopher Marshall)
 OSEC K.C. Emerson Museum, Oklahoma State University, Stillwater, OK (Don Arnold)
 OSUC Charles A. Triplehorn Insect Collection, Ohio State University, Columbus, OH (Norman Johnson)
 SEMC Snow Entomological Museum, University of Kansas, Lawrence, KS (Zachary Falin)
 TAMU Texas A&M University Collection, College Station, TX (Edward Riley)
 UDCC University of Delaware, Newark, DE (Charles Bartlett)
 UGCA University of Georgia, Athens, GA (Joseph McHugh)
 UNHC University of New Hampshire Collection, Durham, NH (Donald Chandler)
 USNM Smithsonian Institution, Washington, DC (Warren Steiner)

Xanthocomus Guillebeau, 1893

Xanthocomus Guillebeau 1893: 291. Type species: *Xanthocomus striatus* Guillebeau, 1893.

Leptostilbus Casey 1916: 71. Type species: *Leptostilbus rutilans* Casey, 1916, **here designated**. **New synonymy**.

Diagnosis. Recognized among North American phalacrids by the mandible having a ventral fold; ventral seta-lined ridge behind eye oblique (not transverse); prosternal process with apex arcuate and with row of stiff setae; metaventral postcoxal lines smoothly arcuate; posterior tarsi with tarsomere I short, tarsomere II much longer than I; presence of rows of rounded (not crescentiform) punctures on the elytra; the elongate body form (pronotum more than half as long as wide); reddish coloration; and microsculpture very weak or absent over most of the elytral disc.

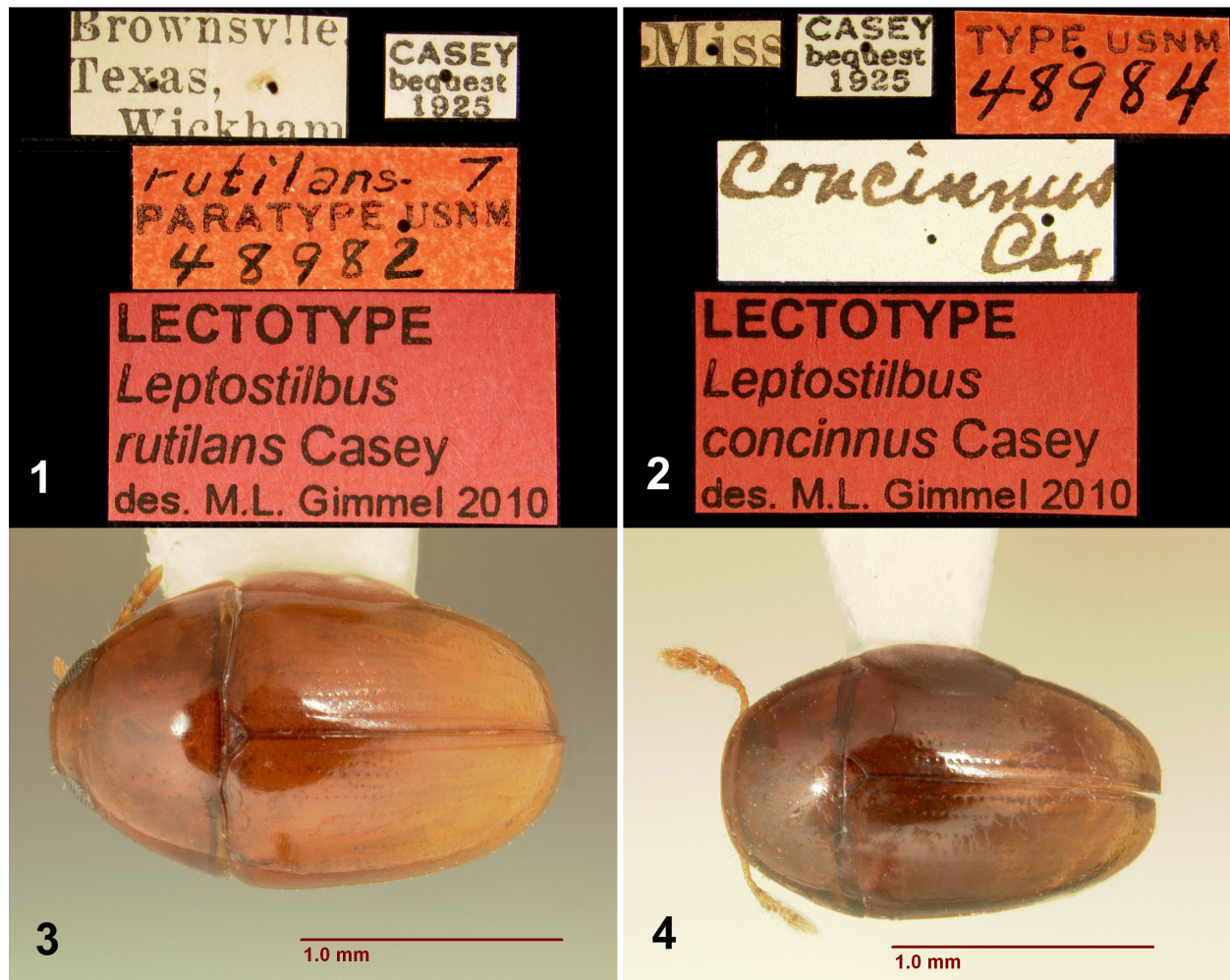
Notes. With the addition of species from *Leptostilbus*, the genus *Xanthocomus* contains nine described species collectively distributed from the northern United States south to Argentina. They are also widespread in the West Indies. After examining the types of *X. striatus* (Muséum National d'Histoire Naturelle, Paris), the type species of *Xanthocomus*, and those of several other species, I have concluded that these genera should be combined. All species share the diagnostic characters presented above with the exception of the species described as *Stilbus elongatulus* Casey (1890: 136). Casey (1916: 73) subsequently transferred this species to *Leptostilbus* based on the structure of the hind tarsi, but neglected to observe the state of the metaventral postcoxal lines, which are distinctly acuminate posteriorly in this species. Additionally, the elytra are microsculptured with dense transverse lines. It actually belongs in the genus *Acylopus* Sharp, as *Acylopus elongatulus* (Casey, 1890), **comb. nov.** Neither Casey nor any more recent workers have designated a type species for *Leptostilbus*, so I have rectified this situation.

Key to North American species of *Xanthocomus*

1. Second and third elytral intervals with irregular row of punctures, interval punctures nearly the same size as striae punctures (best observed at about midpoint of length of elytra, Fig. 3); male hind tibial spurs stout, directed away from tibial axis at a distinctly greater angle than inner hind tibial spines; parameres with only a median longitudinal suture, without median cleft (Fig. 5); apex of penis with median obtuse point (Fig. 6) ***X. rutilans* (Casey)**
- Second and third elytral intervals without row of punctures or with only faint traces of punctures (Fig. 4); male hind tibial spurs slender, directed away from tibial axis at same angle as inner hind tibial spines; parameres with wide median cleft (Fig. 7); apex of penis with median acuminate point (Fig. 8) ***X. concinnus* (Casey)**

Xanthocomus rutilans (Casey, 1916), **comb. nov.**

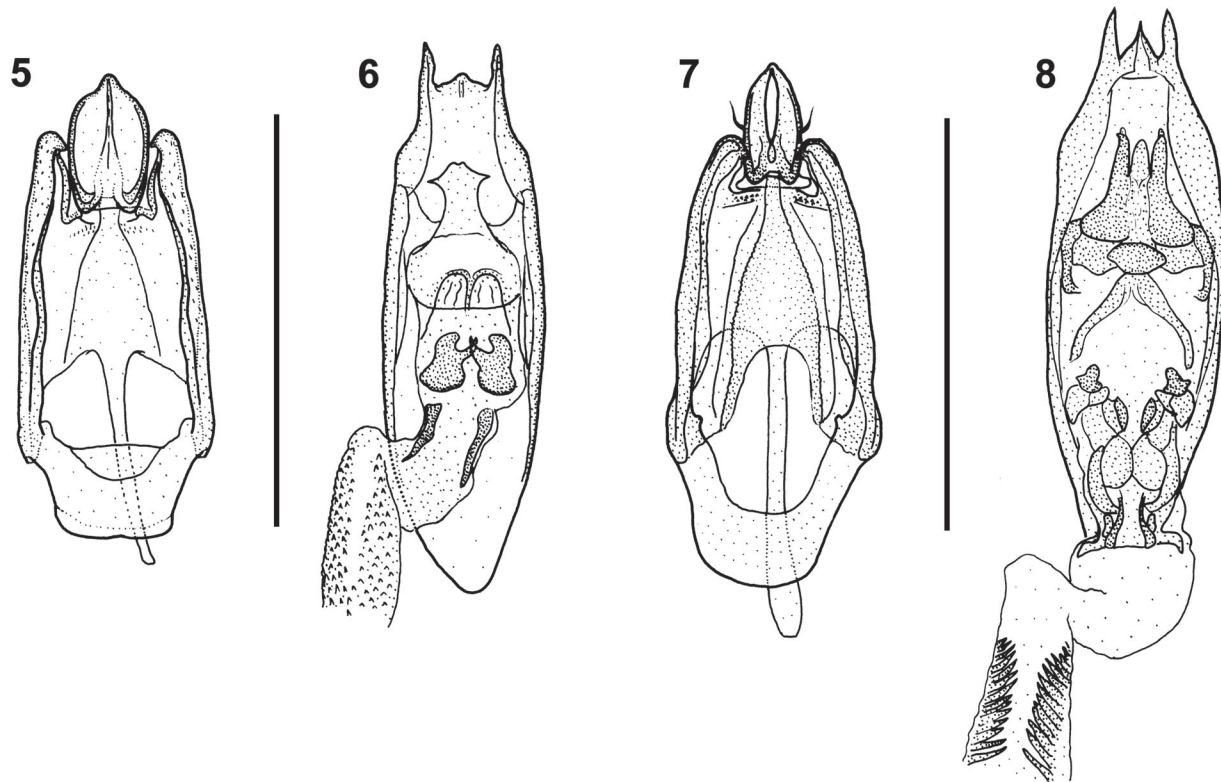
Leptostilbus rutilans Casey 1916: 72.



Figures 1-4. *Xanthocomus* spp. lectotype labels and dorsal habitus. 1,3) *X. rutilans* (Casey). 2,4) *X. concinnus* (Casey).

Diagnosis. May be distinguished from *X. concinnus* by the presence of obvious punctures in the (especially second and third) elytral intervals, especially at about midpoint of elytra (Fig. 3). The male hind tibiae are also modified such that the apical spurs are stouter and directed more medially. The aedeagus provides the most reliable characters for separation (Fig. 5, 6), including the fused parameres (movable apical portion of tegmen) without a median cleft, and the apex of the penis not acutely pointed medially. The main character presented by Casey to separate the two species, namely the extent of the stiff setae at the apex of the prosternal process, is subject to variation due to abrasion.

Type material. Eight syntypes in USNM, lectotype here designated in order to stabilize the species and generic names, point-mounted male with genitalia removed and mounted in DMHF on an acetate card on the same pin, “Brownsville \ Texas \ Wickham // CASEY \ bequest \ 1925 // rutilans 7 \ PARATYPE USNM \ 48982 [species name and numbers handwritten] [red label] // LECTOTYPE \ Leptostilbus \ rutilans Casey \ des. M.L. Gimmel 2010 [red label]” (Fig. 1) (USNM). Paralectotypes (6): 5 with labels “Brownsville \ Texas \ Wickham // CASEY \ bequest \ 1925 // rutilans [numeral corresponding to paratype number] \ PARATYPE USNM \ 48982 [species name and numbers handwritten] [red label] // PARALECTOTYPE \ Leptostilbus \ rutilans Casey \ det. M.L. Gimmel 2010 [yellow label]”; 1 with labels “Brownsville \ Texas \ Wickham // CASEY \ bequest \ 1925 // TYPE USNM \ 48982 [number handwritten] [red label] // Leptostilbus \ rutilans \ Csy. [handwritten] // PARALECTOTYPE \ Leptostilbus \ rutilans Casey \ det. M.L. Gimmel 2010 [yellow label]”.



Figures 5-8. Aedeagus of *Xanthocomus* spp. **5-6)** *X. rutilans* (Cameron Co., Texas). **5)** Tegmen, ventral aspect. **6)** Penis, ventral aspect. **7-8)** *X. concinnus* (West Feliciana Par., Louisiana). **7)** Tegmen, ventral aspect. **8)** Penis, ventral aspect. Scale bars = 0.5 mm.

Other material examined (n=98). **USA: ARIZONA: Cochise Co.:** Chiricahua Mountains, 16 Jul 1938, R.I. Sailer (1, SEMC); **FLORIDA: DeSoto Co.:** Nocatee, 06 Dec 1988, sweeping, K.E. Jenkins (1, FSCA); **Highlands Co.:** Lake Placid, 08 Dec 1959, A.M. Nadler (1, AMNH); **Hillsborough Co.:** Ruskin, 26 Jan 1989, in palms, J. Shirley & P. Forkgen (1, FSCA); **Indian River Co.:** Vero Beach, 12 Dec 1974, at light, M.C. Thomas (1, FSCA); same but 18 Feb 1975 (1, FSCA); **Miami-Dade Co.:** Miami Beach, 15 Feb 1940 (1, FMNH); Homestead, 20 Aug 1952, M.H. Hatch (1, OSAC); same but 30 Apr 1955 (2, OSAC); 6 miles N of Homestead, 15 Jul 1972, beating, M. Druckenbrod (2, USNM); **Monroe Co.:** Matecumbe, Nov 1931, Siepmann (1, FMNH); Long Key, 23 Jul 1948, L.B. Beamer (1, SEMC); Key Largo, 26 Feb 1956, H.V. Weems, Jr. (1, FSCA); Upper Key Largo, 23-24 Jul 1984, E.G. & T.J. Riley (1, TAMU); Big Pine Key, 06 Jan 1977, W.E. Steiner (1, USNM); Fleming Key, 15-16 May 1979, insect flight trap, J.A. Acree & H.V. Weems, Jr. (1, FSCA); Everglades National Park, Flamingo, 12 May 1990, E.G. Riley (4, TAMU); **Saint Lucie Co.:** Saint Lucie, 12 Dec 1980, L.E. Watrous (1, FMNH); **TEXAS: Cameron Co.:** Sabal Palm Grove Sanctuary, 19-20 Jun 1981, blacklight trap, R. Turnbow & E. Ortiz (1, TAMU); Sabal Palm Grove Sanctuary, 02 May 1982, R. Turnbow (1, TAMU); same except 04 Oct 1986, E. Riley & J. Negrón (1 [disarticulated], LSAM); same except 05 May 1989, E. Riley (1, TAMU); same except 18 Oct 1989, N.M. Downie (1, FMNH); same except 20 Oct 1990, T. Carlow & E. Riley (1, TAMU); same except 16 Oct 1993, UV light, Backmon, Quinn & Riley (2, TAMU); Sabal Palm Grove Sanctuary, 16-17 Oct 1993, E.G. Riley (10, TAMU); same except 08 Apr 1994 (8, TAMU); same except 23 Apr 1994, UV light (10, TAMU); Sabal Palm Grove Sanctuary, 10 Oct 1994, E.G. Riley-13 (2, TAMU); Sabal Palm Grove Refuge (site 7), 25.85125°N, 97.41864°W, 20 Sep 2008, palm forest margin, E.G. Riley-108 (5, TAMU); Sabal Palm Grove Refuge (site 9), 25.85092°N, 97.41604°W, 21 Sep 2008, re-vegetated area, E.G. Riley-111 (1, TAMU); Sabal Palm Grove Refuge (site 8), 25.85158°N, 97.42028°W, 18 Oct 2008, palm forest margin, resaca bank, E.G. Riley-277 (3, TAMU); same except 16 May 2010, E.G. Riley-1995 (1, TAMU); Sabal Palm Grove Refuge (site 11), 25.85601°N, 97.41726°W, 18 Oct 2007, beating dead palm fronds, E.G. Riley-279 (3, TAMU); Sabal Palm Grove Refuge (site 1), 25.84799°N, 97.41881°W, 21 May - 05 June



Figures 9-10. Distribution of *Xanthocomus* spp. in North America (star = type locality; square = state record only). **9)** *X. rutilans*. **10)** *X. concinnus*.

2009, UV light, palm forest, E.G. Riley-1037 (1, TAMU); Laguna Atascosa NWR (site 1), 26.22375°N, 97.35454°W, 25 Mar 2009, dense coastal brush, beating, J. King & E. Riley-594 (1, TAMU); vicinity Southmost School, 01 May 1979, C.L. Smith (1, UGCA); Brownsville, 01 Jun 1904, H. Barber (1, USNM); same but 08 Jun 1934, J.N. Knull (1, OSUC); same but 08 May 1935 (1, OSUC); same but 07 Apr 1950, D.J. & J.N. Knull (1, OSUC); same but 04 Jul 1939, J. Russel (1, SEMC); same but 04 Mar 1936, on cotton roots in soil, P.A. Glick (1, TAMU); same but 06 March 1936 (1, TAMU); **Hidalgo Co.:** Santa Ana National Wildlife Refuge, Willow Lake, 13 m, 26°04[.]832'N, 98°08[.]458'W, 07 Feb 2005, C.L. & S.L. Staines (1, USNM); same except Jaguarundi Trail, 23 m, 26°03[.]727'N, 98°08[.]458'W, 09 Feb 2005, C.L. & S.L. Staines (6, USNM); Santa Ana National Wildlife Refuge, 25 m, 26°05[.]041'N, 98°08[.]194'W, 22 Jan 2005, blacklight, C.L. & S.L. Staines (1, USNM); Lower Rio Grande Valley NWR, La Coma (site 2), 26.05611°N, 98.03635°W, 09 Apr 2009, re-vegetated site, beating, J. King & E. Riley-697 (1, TAMU); same except 23 Apr 2009 and J. King & E. Riley-806 (2, TAMU); **San Patricio Co.:** Welder Wildlife Refuge, 27 Sep 1976, blacklight trap, R. Turnbow (1, FSCA); **Willacy Co.:** Lower Rio Grande National Wildlife Refuge, East Lake Tract, 22 m, 2[6]°31[.]462'N, 97°52[.]291'W, 25 Jan 2005, C.L. & S.L. Staines (2, USNM).

Distribution (Fig. 9). Restricted to subtropical portions of the United States, southern Florida, southern Texas, and southeastern Arizona. The species also occurs south to at least Venezuela and Trinidad.

Xanthocomus concinnus* (Casey, 1916), comb. nov.Leptostilbus concinnus* Casey 1916: 72.

Diagnosis. May be distinguished from *X. rutilans* by the absence of obvious punctures in the elytral intervals (Fig. 4). The male hind tibiae are similar to those of the female, and the apical spurs are directed more apically. The aedeagus provides the most reliable characters for separation (Fig. 7, 8), including the fused parameres (movable apical portion of tegmen) with a broad median cleft, and the apex of the penis acutely pointed medially.

Type material. Three syntypes in USNM, lectotype here designated in order to stabilize the species name, point-mounted male with genitalia removed and mounted in DMHF on an acetate card on the same pin, “Miss [=Vicksburg, Mississippi] // CASEY \ bequest \ 1925 // TYPE USNM \ 48984 [number handwritten] [red label] // concinnus \ Csy. // LECTOTYPE \ *Leptostilbus concinnus* Casey \ des. M.L. Gimmel 2010 [red label]” (Fig. 2) (USNM). Paralectotypes (2): with labels, one female with genitalia dissected, “Miss // CASEY \ bequest \ 1925 // concinnus [numeral corresponding to paratype number] \ PARATYPE USNM \ 48984 [numbers handwritten] [red label] // PARALECTOTYPE \ *Leptostilbus concinnus* Casey \ det. M.L. Gimmel 2010 [yellow label]”.

Other material examined (n=126). USA: ALABAMA: **Jefferson Co.:** Birmingham, 10 Aug 1955, at light, H.R. Steeves, Jr. (1, FMNH); **Lawrence Co.:** Joe Wheeler State Park, 34°47'09"N, 87°23'16"W, 27 May 2004, blacklight in mixed forest, T.L. Schiefer (1, MEMU); ARIZONA: **state record only:** 18 Nov 1907, A. Koebele (2, FMNH); DELAWARE: **New Castle Co.:** Newark, 03 May 1969, student collector (1, USNM); FLORIDA: **Alachua Co.:** 27 Mar 1954, F.W. Mead (1, FSCA); Gainesville, 16 Apr 1955, at light, R.A. Morse (1, FSCA); near Paynes Prairie State Park, 07 Nov 1986, at light, P. Skelley (1, FSCA); **Collier Co.:** Bonita Springs, 11 Jul 1972, UV light, M. Druckenbrod (1, USNM); **Highlands Co.:** Lake Placid, 13 Jul 1948, L.D. Beamer (2, SEMC); vicinity of Sebring Airport, 09 Apr 1994, R. Turnbow (1, FSCA); **Hillsborough Co.:** Tampa, Mac Dill Field, 5-15 Apr 1943, B. Malkin (1, FMNH); **Indian River Co.:** Vero Beach, 12 May 1964, W.L. Bidlingmayer (1, FSCA); **Lafayette Co.:** Hwy. 27, Suwannee River near Branford, 17 Apr 1999, S.M. Clark (1, BYUC); **Marion Co.:** Ocala National Forest, Big Scrub Campground, 12 Mar 1977, blacklight, D. Platt & E. Riley (1, EGRC); Ocala National Forest, 24 Jul 1998, mercury vapor and blacklight, R. Turnbow (1, UGCA); Lynn, 23 Jun 1995, M.C. Thomas (1, FSCA); **Miami-Dade Co.:** 6 miles N of Homestead, 15 Jul 1972, beating, M. Druckenbrod (1, USNM); Homestead, 05 Jan 1977, W.E. Steiner (1, USNM); **Pinellas Co.:** Dunedin, 05 Apr 1921, S.W.B. (1, AMNH); Clearwater, 11 Apr 1943, B. Malkin (1, FMNH); Honeymoon Island State Park, 04 May 1988, E.G. Riley (1, TAMU); **Saint Johns Co.:** Ponte Vedra Beach, 02 Mar 1945, sifted from wash-up, L. Lacey (1, AMNH); **Saint Lucie Co.:** 20 Aug 1986, R.L. Escher (1, FSCA); **Seminole Co.:** Sanford, Apr 1956, W. Rosenberg (1, USNM); GEORGIA: **Clarke Co.:** Athens, Horseshoe Bend, 28 Aug 1967 (1, UGCA); **Lowndes Co.:** 21 Jul 1962, E.I. Hazard (1, FSCA); **McIntosh Co.:** Eulonia, 16 Mar 1984, sweep, S.C. Marken (1, UNHC); ILLINOIS: **Cook Co.:** Mar, Blackwelder (1, USNM); Argo, 28 Apr 1938, H. Dybas (1, FMNH); Evanston, 05 Jun 1904 (1, FMNH); **DuPage Co.:** Argonne National Laboratory, 12 Jun 1967, bait trap, J. Wagner & W. Suter (1, FMNH); same but 05 Jul 1967 (1, FMNH); **Warren Co.:** Roseville, 12 Aug 1950, R.I. Sailer (1, USNM); **Winnebago Co.:** New Milford, 23 Jun 1944, H.S. Dybas (1, FMNH); INDIANA: **Marion Co.:** S.W.B. (1, AMNH); KANSAS: **Jefferson Co.:** Falin property, 1.5 km N of jct. 94th St. & Kingman Rd., 39°13.38'N, 95°24.24'W, 19-24 Jul 2005, ex FIT, lower meadow, KAN1F05 153, Z.H. Falin (1, SEMC); LOUISIANA: **Ascension Par.:** near Sorrento, 30°10.423'N, 90°52.467'W, 18 May 2008, at light, M. Ferro & M. Gimmel (1, LSAM); **Bossier Par.:** 3 Feb 1938, soil in peach orchard, W.F. Turner (1, USNM); **East Baton Rouge Par.:** Baton Rouge, 08-11 May 1998, at light, A. Tishechkin (1, LSAM); **Natchitoches Par.:** Kisatchie National Forest, Red Dirt Wildlife Management Area, 05-06 Apr 1985, D.A. Rider (1, LSAM); same but 20 Jun 1986, E.G. Riley (1, LSAM); **Saint Tammany Par.:** Lake Ramsay Wildlife Management Area, SC3-3, 22-24 Aug 1997, longleaf pine savannah pitfall trap, D. Colby (1, LSAM); **West Feliciana Par.:** Feliciana Preserve, 30°47.68'N, 91°15.24'W, beating grass tussocks, 12 Mar 2006, M. Gimmel (2, LSAM); same but 19 Feb 2011 (2, LSAM); MARYLAND: **Montgomery Co.:** Potomac, 28 Aug 1973, W.E. Steiner (1, USNM); same but 16 May 1974 (1, USNM); same but 17 May 1974 (1, USNM); **Prince Georges Co.:** Greenbelt Park, 25 Dec 1971,

Andropogon, M. Druckenbrod (1, USNM); same but 27 Feb 1972 (2, USNM); Cheverly, 38°56'N, 76°55'W, 19 Jul 1994, W.E. Steiner & J.M. Swearingen (1, USNM); **MASSACHUSETTS: Middlesex Co.:** Groton, Spencer Circle, 19 Aug 2008, T. Murray (1, UNHC); **MICHIGAN: Wayne Co.:** Detroit, 13 Sep (1, USNM); Detroit, 31 May, H.C. Fall collection (1, MCZC); **MISSISSIPPI: Franklin Co.:** tributary of McGehee Creek, T6N, R4E, Sec. 26 SW, 27 Jul 1992, T.L. Schiefer (1, MEMU); **Lincoln Co.:** 10 Mar 1938, W.F. Turner (1, USNM); **Oktibbeha Co.:** Craig Springs, 27 Nov 1981, white pan trap on ground, W.H. Cross (1, MEMU); Craig Springs, 25 Jan 1982, interception trap-black, C.L. Snodgrass (1, MEMU); **MISSOURI: Randolph Co.:** 1 mile E of Moberly, 30 Apr 1972, E.G. Riley (1, EGRC); **NEW YORK: Richmond Co.:** Staten Island, Great Kills, 20 Oct 1939 (1, FMNH); **Suffolk Co.:** 02 May 1960, M.I. Blenderman (2, AMNH); same but Jun 1960 (1, AMNH); same but 17 Jun 1960 (2, AMNH); same but 09 Oct 1968 (1, AMNH); same but 20 Sep 1970 (1, AMNH); **NORTH CAROLINA: Wake Co.:** Schenck Forest, near Raleigh, 10 Apr 1994, sweeping, C.R. Bartlett (1, UDCC); **OHIO: Cuyahoga Co.:** Bedford, 19 May 1945, J.C. Pallister (1, AMNH); **Franklin Co.:** Sharon Woods Metropolitan Park, 26-30 Jun 1973, A.J. Penniman (1, MTEC); **OKLAHOMA: Atoka Co.:** 1 mi N of Caney, 17 Nov 1959, indian grass, chinch bug survey (1, OSEC); **Latimer Co.:** Oct 1982, K. Stephan (1, TAMU); same but Nov 1984 (1, TAMU); same but Apr 1988 (1, TAMU); same but Jul 1988 (1, TAMU); same but Dec 1991 (1, TAMU); same but Jun 1993 (1, TAMU); same but Jul 1995 (1, TAMU); Nov 1984, sifting flood debris, K. Stephan (1, TAMU); 5 miles W of Red Oak, 07 May 1977, K. Stephan (1, TAMU); same but 02 Jul 1977 (1, TAMU); same but Jul 1980 (2, TAMU); same but Sep 1980 (1, TAMU); same but Aug 1981 (1, TAMU); **Payne Co.:** 1 mile W of Stillwater, 11-14 Jul 1977, Malaise trap (1, OSEC); Lake Carl Blackwell, 31 Jul 1993, S. Sheffield (2, OSEC); near Lake Carl Blackwell, 16 Aug 1993 (1, OSEC); OSU pasture 15, 22 Jan 1997, Berlese funnel sample in pasture, J. Gibson (1, OSEC); **Sequoyah Co.:** 4 miles E of Vian, 17 Nov 1959, big bluestem, chinch bug survey (1, OSEC); **PENNSYLVANIA: Montgomery Co.:** Flourtown, 27 Jul 1949, at light, W.F. Chamberlain (1, TAMU); **SOUTH CAROLINA: Charleston Co.:** Charleston, Jun 1943, B. Malkin (1, FMNH); **TEXAS: Brazos Co.:** Jct. Hwy. 30 & Navasota River, Apr 1994, sweep, E.G. Riley (1, TAMU); **Cameron Co.:** Sabal Palm Grove Sanctuary, 20 Oct 1990, T. Carlow & E. Riley (1, TAMU); **Galveston Co.:** 3.5 miles SW of Jamaica Beach, 29 Mar 1997, night sweeping behind sand dunes, E.G. Riley (1, TAMU); **Hidalgo Co.:** Bentsen R.G.V.S.P. (site 2), 26.18009°N, 98.38461°W, 20 Sep - 03 Oct 2008, UV light, J. King & E. Riley-191 (4, TAMU); **Kleberg Co.:** ca. 1 mile S of Nueces County line, 15 May 1999, sweep near beach, E.G. Riley (14, TAMU); **Orange Co.:** Orange, 24 Aug 1964, P.J. Spangler (1, USNM); **Robertson Co.:** 1.5 miles N of Benchley, 26 Apr 1987, sweep marsh-day, R. Anderson (1, TAMU); **San Patricio Co.:** Welder Wildlife Refuge, 28 Apr 1979, R. Turnbow (1, FSCA); **Shelby Co.:** Flat Fork Creek, Hwy. 96 near Tenaha, 16 Oct 1993, S.M. Clark (1, BYUC); **Starr Co.:** Rio Grande City, Fort Ringold, 9-10 Nov 2002, blacklight trap, D. Hildebrandt (1, MEMU); **state record only:** Belfrage (2, MCZC); **TENNESSEE: Blount Co.:** Great Smoky Mountains National Park, Cades Cove ATBI Plot, MT-0320021007, 23 Sep - 07 Oct 2002, Malaise trap, I.C. Stocks (1, LSAM); **VIRGINIA: Accomack Co.:** Wallops Island, 01 Jun 1913, W.L. McAtee (1, USNM); **WISCONSIN: Racine Co.:** Burlington, 03 Sep 1966, D.W. Brzoska (1, USNM).

Distribution (Fig. 10). Widely distributed in the eastern United States, from Massachusetts and Wisconsin south to Texas and Florida, and Arizona (state record only).

Acknowledgments

I thank Warren Steiner (USNM, Washington, DC) for encouraging my interest in North American phalacrids, accommodating me on my visit to the USNM, and for sharing his accumulated notes, drawings, and material. I thank the curators listed above for their help in arranging and sending specimen loans. Chris Carlton reviewed an early version of this manuscript and provided helpful comments. Joseph McHugh and Warren Steiner kindly provided pre-submission reviews. This manuscript is approved by the Director, Louisiana Agricultural Experiment Station as manuscript number 2011-234-5735.

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Received July 1, 2011; Accepted August 7, 2011.

Subject edited by F. Shockley.