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## New State Records For Some Pentatomomorpha (Heteroptera) of the United States

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# New State Records For Some Pentatomomorpha (Heteroptera) of the United States

## **Cover Page Footnote**

The bulk of the work that went into this study was carried out during my time in the UMMZ, and I am grateful to Mark O'Brien (UMMZ) and Gary Parsons (MSUC) for the privilege of studying the material under their care. I thank Edwin L. Freese and Jane O'Donnell (UCMS) for correspondence regarding some pentatomomorph records from Iowa and Connecticut, respectively. I owe much appreciation to three reviewers, whose stylistic comments and knowledge of obscure references, greatly improved the content and utility of this manuscript.

## New state records for some *Pentatomomorpha* (Heteroptera) of the United States

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### Abstract

Forty-two new state records, distributed among the Alydidae, Coreidae, Largidae, Pyrrhocoridae, and Rhopalidae, are reported for 25 species of *Pentatomomorpha* found in the United States.

**Keywords:** True bugs, faunistics, distribution, Nearctic

My studies of the heteropteran groups of Michigan have afforded ample opportunity to examine material from all over the United States. As a retroactive companion piece to my Michigan Coreoidea synopsis (i.e., Swanson 2011), I have re-examined and identified Coreoidea and Pyrrhocoroidea in the two major collections in southern Michigan in order to bring to light unreported state records among that material. As a result, 42 new extra-Michigan state records for species from five pentatomomorphan families, comprising material from the Michigan State University Albert J. Cook Arthropod Research Collection in East Lansing, the University of Michigan Museum of Zoology Insect Collection in Ann Arbor, and the author's personal collection, are herein reported.

### Materials and Methods

After examining the determined coreoid and pyrrhocoroid holdings and identifying most of the undetermined U.S. material in two Michigan university collections, the locality data of these specimens was compared with the most recent catalog for Heteroptera found north of Mexico (Henry and Froeschner 1988). Further records were culled after comparing with various post-1988 regional faunistic studies, as well as some pre-1988 references overlooked by the authors of the catalog (see annotations). The remaining specimen data are the subject of this treatment.

The identification of each specimen included in this study was rendered or confirmed by me, using my own keys (Swanson, unpublished) to the United States taxa synthesized from various sources

(e.g., Torre-Bueno 1941, Packauskas 1994, Schaefer 2004). All new records pertain to specimens vouchered in one of the collections listed below.

Label data were not copied verbatim, although complete locality information is included. Any additions, changes, or interpretive elements I provide are shown in brackets. Multiple localities are included, where possible, to fortify new records. Distributional or taxonomic notes are offered where deemed necessary or useful.

As mentioned, the initial authority on which a state having a published record is based belongs to Froeschner (Alydidae: 1988a; Coreidae: 1988b) and Henry (Largidae: 1988a; Pyrrhocoridae: 1988b; Rhopalidae: 1988c). An updated distribution within the United States and Canada is included for each species treated herein. Records overlooked or reported subsequently are annotated in the distribution north of Mexico given at the end of each species account, whereas new records herein reported are presented in bold type; thus, this treatment also may be used as a partial compilation of references overlooked in Henry and Froeschner's (1988) catalog. The abbreviations used for each U.S. state and Canadian province or territory follow the United States Postal Service and the Canada Post Corporation, respectively.

Collections are designated as follows: Daniel R. Swanson, personal collection (DRS); Albert J. Cook Arthropod Research Collection, Michigan State University, East Lansing, Michigan (MSUC); and University of Michigan Museum of Zoology Insect Collection, Ann Arbor, Michigan (UMMZ).

## Results

As a result of this investigation, 42 new state records for 25 species in 22 genera in 5 families have been compiled. The following 22 states have new records: AL, AZ, CT, FL, GA, IL, KS, KY, LA, MD, MN, MT, ND, NE, NM, NY, OK, OR, TN, TX, WV, WY.

### Superfamily COREOIDEA

#### Family ALYDIDAE

Eleven new state records are reported for 8 species in 6 genera.

*Alydus conspersus* Montandon, 1893. – **CONNECTICUT**: [Litchfield Co.], Lakeville, 2 September 1934 [add. date: 29 June 1935], R. F. Hussey, det. R. F. Hussey 1936 [2 ♀] (UMMZ); Litchfield Co., Salisbury – Twin Lakes, 10 September 1982, M. & A. O'Brien, det. D. R. Swanson 2012 [1 ♂] (UMMZ); **MINNESOTA**: [Hennepin Co.], Minneapolis, 5 October 1918, R. F. Hussey, det. D. R. Swanson 2012 [1 ♀] (UMMZ).

Notes: Froeschner (1988a) listed this species from "Dakota"; see Rider (2012) for a discussion about the probable localities of these records. Hussey (1922a) and Weber (1935) reported this species (the former as *Coriscus conspersus*) from North Dakota, and Clem and Ray (2016) listed a specimen from South Dakota in the appendix. I have examined the following corroborative material: **SOUTH DAKOTA**: Lawrence Co., Cheyenne Crossing, Black Hills National Forest, 13–14 July 1974, Richard A. Arnold, det. D. R. Swanson 2012 [1 ♀] (MSUC); idem. Thomas A. Bowling [1 ♂] (MSUC).

Distribution: USA: AZ, CO, CT, IA, IL, IN, MA, ME, MI, MN, ND (Hussey 1922a), NH (Parshley 1917), NJ, NY, OH, PA, SD, UT, WI, WY (Dennis et al. 2010); Canada: AB, BC, MB (Maw et al. 2000), NB (Maw et al. 2000), ON, QC, SK (Maw et al. 2000).

*Alydus eurinus* (Say, 1825). – **MINNESOTA**: Otter Tail Co., Fergus Falls, Swan Lake Road, roadside weeds, 19 July 2013, 46.2315°N 96.0315°W, #29, 1290 ft., D. R. Swanson, det. D. R. Swanson 2013 [1 ♂] (DRS); Wadena Co., 10 July 1952, George W. Byer, det. D. R. Swanson 2012 [1 ♂] (UMMZ); **WEST VIRGINIA**: [Fayette Co.], Page, goldenrod, 10 September 1960, B. A. Wilson, det. D. R. Swanson 2012 [1 ♂, 2 ♀] (MSUC); [Mercer Co.], Bluefield, 12 June 1954, R. L. Fischer, det. D. R. Swanson 2012 [1 ♂] (MSUC); Pendleton Co., Brandywine, Brandywine Rec. Area, 20 June 2016, 38.6016°N 79.2027°W, 1890 ft., D. R. Swanson, #30, det. D. R. Swanson 2017 [1 ♂] (DRS).

Notes: Froeschner (1988a) listed this species from "Dakota"; see Rider (2012) for

a discussion about the probable localities of these records. Hussey (1922a) reported this species (as *Coriscus eurinus*) from North Dakota, and I have examined the following corroborative material: **NORTH DAKOTA**: Richland Co., Wahpeton, jct. Hwy. 210 & Westmore Ave., 19 July 2013, 46.2727°N 96.6258°W, #31, 1010 ft., D. R. Swanson, det. D. R. Swanson 2013 [2 ♂] (DRS); **SOUTH DAKOTA**: Codrington Co., Watertown, Pelican Lake Rec. Area, 19 July 2013, 44.8656°N 97.2082°W, #34, 1770 ft., D. R. Swanson, det. D. R. Swanson 2013 [1 ♀] (DRS); Badlands, 16 June 1955, R. L. Fischer, det. D. R. Swanson 2012 [1 ♂] (MSUC). Evans et al. (1978) recorded *Alydus pluto* Uhler, 1872 from the Yukon Territories, which record was later referred to this species by Scudder (1997).

Distribution: USA: AK (Scudder 1997), AL (Clem and Ray 2016), AR, AZ, CA, CO, CT, DC, FL, GA, IA, IL, IN, KS, KY, LA (Masner 1983), MA, MD (Brown and Bahr 2008), ME, MI (Townsend 1890, Hussey 1922b, Swanson 2011), MN, MO, MS (Lago and Testa 2000), MT, NC, ND (Hussey 1922a), NE, NH, NJ, NM, NY, OH, OK (Drew and Schaefer 1963, Smith et al. 1996), PA, RI (Parshley 1917), SC, SD, TN (Clem and Ray 2016), TX, UT, VA, VT (Parshley 1917), WI, WV; Canada: AB, BC, MB (Maw et al. 2000), NB (Maw et al. 2000), NS (Maw et al. 2000), NT (Maw et al. 2000), ON, PE (Maw et al. 2000), QC, SK (Maw et al. 2000), YT (Evans et al. 1978, Scudder 1997).

*Alydus scutellatus* Van Duzee, 1903. – **WYOMING**: Albany Co., Medicine Bow National Forest, Curtis Gulch Campground, T28N – R73W – Sec. 8, 8–10 July 1974, Daniel K. Young, det. D. R. Swanson 2012 [1 ♀] (MSUC); [Albany Co.], Centennial, Snowy Ranch, 10000 ft., 9 August 1950, R. R. D[reisbach] & R. K. Schwab, det. R. F. Hussey 1951, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Distribution: USA: CA (Van Duzee 1917a), CO, IA, MT, NM, WY; Canada: AB, BC.

*Darmistus subvittatus* Stål, 1859. – **OREGON**: Curry Co., Humbug State Park, 25 August 1962, R. L. Fischer, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Distribution: AZ, CA, CO, NE (Schaefer 2003), NM (Schaefer 2003), OR, SD (Harris 1937), TX, UT (Schaefer 2003), WA (Schaefer 2003), WY (Schaefer 2003).

*Megalotomus quinquespinosus* (Say, 1825). – **TENNESSEE**: Shelby Co., Shelby Forest State Park, 7 June 1971, Bruce Wildie, det. D. R. Swanson 2012 [1 ♂]

(MSUC); Stewart Co., Land Between the Lakes, nr. Model, 9–10 June 1971, R. L. Fischer, det. D. R. Swanson 2012 [3 ♂, 4 ♀] (MSUC); idem. D. K. Young [3 ♀] (MSUC); **WEST VIRGINIA**: [Greenbrier Co.], Alderson, 11 September 1960, B. A. Wilson, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Distribution: USA: AL (Clem and Ray 2016), AR (Tugwell et al. 1973, Chordas et al. 2005), AZ, CA, CO, CT (Parshley 1917, 1923), DC, DE, FL, GA (Clem and Ray 2016), IA, IL, IN, KS, KY, MA, MD (Brown and Bahr 2008), ME, MI, MO, NC, ND (Hussey 1922a), NH (Parshley 1917), NJ, NY (Van Duzee 1917b), OH, OK (Drew and Schaefer 1963), PA, SC, SD (Harris 1937), TN, UT, VA (Hoffman 1975), VT (Parshley 1917), WA, WI, WV; Canada: AB, BC, MB (Maw et al. 2000), ON, QC.

*Stachyocnemus apicalis* (Dallas, 1852). – **GEORGIA**: [Haralson Co.], Bremen, 19 June 1954, R. L. Fischer, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Notes: Froeschner (1988a) listed this species from “Dakota”; see Rider (2012) for a discussion about the probable localities of these records.

Distribution: USA: AL (Clem and Ray 2016), AZ, CA, CO, CT (Schaefer and Schaffner 1997), “Dak.,” DC, FL, GA, IL (Hart 1907), IN, MT, NC, NJ, NM, NY, OK (Drew and Schaefer 1963), SC, SD (Harris 1937, Clem and Ray 2016), TX, VA (Hoffman 1975), WY (Lavigne et al. 1976); Canada: AB.

*Stenocoris (Stenocoris) tipuloides* (De-Geer, 1773). – **LOUISIANA**: St. Helena Par., 10 mi. SW. Fluker, Hiways 1047 at 1048, 13 April 1972, E. H. Metzler, det. D. R. Swanson 2012 [3 ♂] (MSUC); Orleans Par., N. O. City Park, 28 January 1972, E. H. Metzler, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Notes: Van Duzee (1917b) and Ahmad (1965) reported this species from Florida and Texas, the latter author having studied two females from the United States. However, Froeschner (1988a) stated “The nominate subgenus *Stenocoris* does not occur in our region.” Hoffman (1994) added records for Georgia, South Carolina, and Virginia but mentioned “inconsistencies” associated with this name’s usage. Jansen and Halbert (2016) included *S. tipuloides*, as well as two species in the subgenus *Oryzocoris* Ahmad, 1965, as present in Florida. The material I have examined and here referred to *S. (S.) tipuloides* agrees with the characterization of Ahmad (1965), and should this be the incorrect name for this species, as suggested by Hoffman (1994), then the material may easily be referred to the appropriate taxon

following the new characterizations. Besides the new state record reported above, I also have studied corroborative material for Florida, Mississippi, and Texas: **FLORIDA**: [Manatee Co.], nr. Whitfield[?], George Ames[?], Collection C. V. Riley, det. D. R. Swanson 2012 [1 ind., abdomen missing] (MSUC); Everglades National Park, 3 April 1960, W. T. Van Velzen, det. D. R. Swanson 2012 [1 ♂, 2 ♀] (MSUC); **MISSISSIPPI**: [no further locality data], “576”, det. D. R. Swanson 2012 [1 ♂, 1 ♀] (MSUC); **TEXAS**: Cameron Co., Brownsville, ex. USDA light trap, 15 March 1972, H. M. Graham, det. D. R. Swanson 2012 [1 ♂] (MSUC); Cameron Co., Los Fresnos, ex. USDA light trap, 16 March 1972, H. M. Graham, det. D. R. Swanson 2012 [1 ♂] (MSUC); Starr Co., Benston [sic]-Rio Grande Valley State Park, 16 March 1972, T. A. Bowling, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Distribution: AL (Clem and Ray 2016), FL, GA (Hoffman 1994), LA, MS (Blatchley 1926), SC (Hoffman 1994), TX, VA (Hoffman 1994).

*Tollius curtulus* (Stål, 1859). – **WYOMING**: Albany Co., Medicine Bow National Forest, Curtis Gulch Campground, T28N – R73W – Sec. 8, 8–10 July 1974, F. William Ravlin, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Distribution: USA: CA, CO, IL, NY, OR, UT, WY; Canada: AB, BC, SK (Maw et al. 2000).

#### Family COREIDAE

Sixteen new state records are reported for 9 species in 9 genera.

*Acanthocephala terminalis* (Dallas, 1852). – **WEST VIRGINIA**: [Webster Co.], Cowen, July 1934, [no collector], det. D. R. Swanson 2012 [1 ♀] (MSUC); [Wood Co.], Rockport, 11 June 1954, D. L. Haynes, det. D. R. Swanson 2012 [2 ♀] (MSUC).

Notes: McPherson et al. (2011) synonymized *Acanthocephala confraterna* (Uhler, 1871) with this species; many of the annotations refer to this or another junior synonym, and the record for Texas reported by Froeschner (1988b) is referred here.

Distribution: USA: AL (Blatchley 1926, McPherson et al. 2011), AR (Chordas et al. 2005), CO, CT, DE (McPherson et al. 2011), FL, GA (Scott and Fiske 1902, Palmer and Bennett 1988, McPherson et al. 2011), IA (Osborn 1892, McPherson et al. 2011), IL, IN, KS (Tucker 1907a, b; McPherson et al. 2011), KY (McPherson et al. 2011), LA, MA, MD, MI (Hussey 1922b, Swanson 2011), MN, MO, MS (McPherson et al. 2011), NC, NE

(McPherson et al. 2011), NJ, NY, OH (Adkins 1917), OK, PA, RI (Parshley 1917), SC, SD (Harris 1937, McDaniel 1989), TN, TX, VA (Hoffman 1975, McPherson et al. 2011), WI, WV; Canada: ON (Maw et al. 2000).

*Catorhintha apicalis* (Dallas, 1852). – **NEW MEXICO**: Sierra Co., 3 mi. W. Kingston, 30 July 1989, R. L. Fischer, det. D. R. Swanson 2012 [2 ♂] (MSUC); Socorro Co., T45 R6W Sec. 5, 27 July 1989, Manda Kasture, det. D. R. Swanson 2012 [1 ♀] (MSUC); Socorro Co., T25 R2W Sec. 31, 28 July 1989, Manda Kasture, det. D. R. Swanson 2012 [1 ♂] (MSUC); Socorro Co., T25 R7W Sec. 29, 29 July 1989, Manda Kasture, det. D. R. Swanson 2012 [1 ♂] (MSUC); Socorro Co., Water Canyon, T35 R3W Sec. 26, 29 July 1989, Manda Kasture, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Notes: Brailovsky and Garcia (1987) synonymized *Ficana* Stål, 1862 with *Catorhintha* Stål, 1859.

Distribution: AZ, CA, CO, NM.

*Chariesterus antennator* (Fabricius, 1803). – **LOUISIANA**: [East Baton Rouge Par.], Baton Rouge, 24 May 1934, F. E. Lyman, det. D. R. Swanson 2012 [3 ♂, 2 ♀] (UMMZ); **NEW MEXICO**: McKinley Co., Gallup, 10 July 1960, J. E. Bath, det. D. R. Swanson 2012 [1 ♂] (MSUC); **TENNESSEE**: Fentress Co., Allardt, 15 August 1922, T. H. Hubbell, det. R. F. Hussey 1924 [1 ♂] (UMMZ); Knox Co., Knoxville, 28 September 1919, H. C. Fortner, det. R. F. Hussey [1 ♂] (UMMZ); [Sevier Co.], Headquarters, Great Smoky Mountains National Park, 15 August 1947, 1600 ft., Bullock-Dreisbach, det. R. I. Sailer [1 ♀] (MSUC).

Distribution: USA: AR (Tugwell et al. 1973, Chordas et al. 2005), CO, FL, GA, IA (Osborn 1898, 1899), IL, IN, KS, LA, MD (Blöte 1935, Brown and Bahr 2008), MI, MS, NC, NE (McDaniel 1989), NJ, NM, NY, OH (Osborn 1900, 1904), OK, PA, SC, SD (Parshley 1922, Harris 1937, McDaniel 1989), TN, TX, VA, WI (Williams 2004); Canada: ON (Paiero et al. 2003).

*Cimolus obscurus* Stål, 1870. – **FLORIDA**: Alachua Co., Gainesville, 12 January 1924, H. S. Holl, det. R. F. Hussey 1950 [1 ♂] (UMMZ); Alachua Co., Gainesville, 5 March 1922, [no collector], det. R. F. Hussey 1950 [1 ♂] (UMMZ); Alachua Co., 11 March 1923, Alexander-Walker, det. R. F. Hussey 1925 [1 ♀] (UMMZ); **OKLAHOMA**: Cleveland Co., Norman, Cimarron Trails apartment complex, 10 October 2007, 35.2453°N 97.4885°W, #204, 1170 ft., D. R. Swanson, det. D. R. Swanson 2008 [1 ♀] (DRS).

Distribution: FL, LA, OK, SC, TX.

*Euthochtha galeator* (Fabricius, 1803). – **ALABAMA**: Calhoun Co., Camp MacClellan, Choccolocco Mountain, 13 July 1925, H. D. Smith, det. D. R. Swanson 2012 [1 ♂] (UMMZ); **KENTUCKY**: Laurel Co., Bald Rock, 11 June 1978, R. L. Fischer, det. D. R. Swanson 2012 [5 ♂, 3 ♀] (MSUC); Lee Co., 2.9 rd. mi. SW. on Virgil Todd Rd., nr. rock face, 28 July 2010, 37.5109°N 83.8240°W, #31, 720 ft., D. R. Swanson, det. D. R. Swanson 2010 [1 ♂] (DRS); **MINNESOTA**: Houston Co., [no additional data], 20 May 1938 [add. dates: 21 May 1938, 28 May 1939], H. E. Milliron, det. D. R. Swanson 2012 [1 ♂, 3 ♀] (MSUC); **WEST VIRGINIA**: [Wood Co.], Rockport, 11 June 1954, D. L. Haynes, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Distribution: USA: AL, AR (Tugwell et al. 1973, Chordas et al. 2005), CT, FL, GA (Scott and Fiske 1902), IA (Osborn 1892, Hendrickson 1930), IL, IN, KS, KY, MA, MD (Brown and Bahr 2008), MI, MN, MO, NC, NE, NH (Parshley 1917), NJ, NY, OH, OK (Drew and Schaefer 1963, Smith et al. 1996), PA, RI (Parshley 1917), SC, SD (Parshley 1922, Harris 1937, McDaniel 1989), TN (Lambdin et al. 2003), TX, VA, WI, WV; Canada: ON.

*Mamurius mopsus* Stål, 1862. – **TEXAS**: Hidalgo Co., Mission, 16 March 1972, J. Zimmerman, det. D. R. Swanson 2012 [1 ♂] (MSUC); Maverick Co., 23.7 mi. S. Del Rio jct. Rt. 90 on Rt. 277, 14 October 2007, 29.0829°N 100.6430°W, #231, 920 ft., D. R. Swanson, det. D. R. Swanson 2008 [1 ♀] (DRS); Starr Co., Falcon State Park, 20 March 1972, Roland F. Fischer, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Distribution: AZ, TX.

*Merocoris distinctus* Dallas, 1852. – **MONTANA**: Carter Co., 11 mi. N. Ekalaka, sandy soils, grassland, ponderosa pine, UV, 5 August 1994, 3400', J. H. Wilterding, det. D. R. Swanson 2017 [1 ♂] (MSUC); **WEST VIRGINIA**: Greenbrier Co., Alvon, 18 June 1957, R. L. Fischer, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Notes: The species of this genus are often confounded and some of the records referred to other species actually refer to *M. distinctus*. The Floridian record (i.e., Uhler 1876) is referred to *Merocoris typhaeus* (Fabricius, 1798), following the interpretation of Baranowski and Slater (1986). Records from the western states (i.e., Van Duzee 1914, 1917b; Froeschner 1988b) might refer to *Merocoris curtatus* McAtee, 1919 and currently remain suspect. Identifications

also were compared with Brailovsky and Barrera's (2009) key. Uhler (1876), Wirtner (1904), Van Duzee (1917b), and Froeschner (1988b) reported this species as *M. typhaeus* or *var. distinctus* from Pennsylvania, and I have examined the following corroborative material: **PENNSYLVANIA**: [Pike Co.], Milford, 7 September 1955, R. Angle, det. D. R. Swanson 2012 [1 ♀] (MSUC). The record of *M. typhaeus* reported for Tennessee by Lambdin et al. (2003) almost certainly refers to this species, and I have examined the following corroborative material: **TENNESSEE**: Fentress Co., Allardt, 16 August 1922 [add. date: 13 August 1924], elev. ca. 1600 ft., T. H. Hubbell, det. D. R. Swanson 2012 [2 ♂] (UMMZ); Stewart Co., Land Between the Lakes, nr. Model, 9–10 June 1971, D. K. Young, det. D. R. Swanson 2012 [1 ♂] (MSUC); Van Buren Co., Fall Creek Falls State Park, 11 August 1951, T. J. Cohn, det. D. R. Swanson 2012 [1 ♂, 1 ♀] (UMMZ). Van Duzee (1917b), Froeschner (1988b), and Williams (2004) reported this species as *M. typhaeus* or *var. distinctus* from Wisconsin, and I have examined the following corroborative material: **WISCONSIN**: Shawano Co., [no further locality data], 26 August 1950 [add. date: 31 August 1950], [no collector], det. D. R. Swanson 2012 [2 ♀] (MSUC); [Oconto Co.], Lakewood, 1 August 1950 [add. date: 26 August 1950], [no collector], det. D. R. Swanson 2012 [1 ♂, 1 ♀] (MSUC).

Distribution: AL, AR, AZ(?), CA(?), CO, CT (Parshley 1917, 1923), GA (Scott and Fiske 1902), IA, IL, IN (Blatchley 1926), KS, MA, MD, ME (Parshley 1917), MI (Swanson 2011), MO, MT, NC (Torre-Bueno and Engelhardt 1910, Van Duzee 1917b, Brimley 1938), NH (Parshley 1917), NJ, NM(?), NY, OH, OK, PA (Uhler 1876, Wirtner 1904, Van Duzee 1917b), RI (Parshley 1917), SC, SD (Parshley 1922, Harris 1937, McDaniel 1989), TN, TX (Uhler 1876), VA, VT (Parshley 1917), WI (Van Duzee 1917b, Williams 2004), WV; Canada: AB, MB (Maw et al. 2000), ON (Gibson 1910, 1912, 1917; Maw et al. 2000), QC (Maw et al. 2000), SK (Maw et al. 2000).

*Narnia snowi* Van Duzee, 1906. – **OKLAHOMA**: Cimarron Co., Kenton, 3 July 1926 [add. date: 4 July 1926], T. H. Hubbell, det. R. Packauskas 1995 [1 ♂, 2 ♀] (UMMZ).

Distribution: AZ, CA, CO, NM, OK, TX.

*Nisoscolopocerus apiculatus* Barber, 1928. – **NORTH DAKOTA**: Slope Co., Amidon, 24 August 1920, T. H. Hubbell, det. R. F. Hussey 1950 [1 ♀] (UMMZ).

Notes: Barber (1928) described this species from specimens previously referred to *Coriomeris humilis* (Uhler, 1872) (Pseudophloeinae), based on morphological similarities with the genus *Scolopocerus* Uhler, 1875 (Coreinae). It is worth noting that a single male of *C. humilis* residing in the UMMZ shares the exact same locality data as the above specimen of *N. apiculatus*; the former was reported by Hussey (1922a). Barber (1928) stated that Uhler's (1875) specimen from Gila River was not *Dasycoris humilis* Uhler, 1872 but rather belonged to his new species; thus, Uhler's (1875) record is treated as the first for Arizona.

Distribution: USA: AZ (Uhler 1875), CO, ND, NE, NM; Canada: AB, MB (Maw et al. 2000), SK (Maw et al. 2000).

#### Family RHOPALIDAE

Ten new state records are reported for 5 species in 5 genera.

*Arhyssus nigristernum* (Signoret, 1859). – **ALABAMA**: Cleburne Co., Shoal Creek Ford, 6 mi. NNW. Edwardsville, 25 July 1965, J. & L. Donahue, det. D. R. Swanson 2012 [1 ♂, 1 ♀] (MSUC).

Notes: Snow (1904), Hambleton (1908), and Van Duzee (1917b) included records for Arizona and California, but these records were excluded by Chopra (1968) and Henry (1988c), the latter treatments followed here.

Distribution: USA: AL, AR, CO (Gillette and Baker 1895), CT, DC, FL, IA (Osborn 1892, Hendrickson 1930), IL (Swanson et al. 2017), IN, KS, KY, LA, MA, MD, ME, MI, MO, MS, NC, NH (Parshley 1917), NJ, NY, OH, PA, RI, TN, TX, VA, WV; Canada: BC (Parshley 1919, Downes 1927), ON, QC.

*Harmostes fraterculus* (Say, 1831). – **NEW YORK**: Nassau Co., Lynbrook, 31 August 1959, George Eickwort, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Distribution: AR (Chordas et al. 2011), AZ, CA, DC, FL, GA, IL, IN, KS (Tucker 1907a, b), MD, MN, MO, MT (Göllner-Scheiding 1978), NC, NJ, NY, OK, PA, TN (Lambdin et al. 2003), TX, VA, WA (Göllner-Scheiding 1978).

*Jadera haematoloma* (Herrich-Schäffer, 1847). – **LOUISIANA**: [East Baton Rouge Par.], Baton Rouge, 27 April 1934, F. E. Lyman, det. D. R. Swanson 2012 [1 ♂] (UMMZ); **NEBRASKA**: Cuming Co., West Point, Karl Timmerman Mem. Bridge, 20 July 2013, 41.8395°N 96.7276°W, 1350 ft., D. R. Swanson, #38, det. D. R. Swanson 2013 [1 ♀] (DRS).

Distribution: AL, AR (Chordas et al. 2011), AZ, CA, CO, FL, IA (Hoebeke and Wheeler 1982), IL, IN (Deay and Gould 1935), KS, LA, MI (Barber 1912), MO, NC, NE, OK (Ortenburger 1926, Drew and Schaefer 1963, Smith et al. 1996, Chordas and McAllister 2012), SD (Harris 1937), TX.

*Liorhysus hyalinus* (Fabricius, 1794). – **ILLINOIS**: Champaign Co., Urbana, Meadowbrook Park on S. Race St., 12 May 2012, 40.0805°N 88.2085°W, 730 ft., D. R. Swanson, #25, det. D. R. Swanson 2012 [1 ♂, 1 ♀] (DRS); Champaign Co., Urbana, Student Sustainable Farm, 12 Sept. 2013, 40.0800°N 88.2169°W, 710 ft., D. R. Swanson, #88, det. D. R. Swanson 2016 [2 ♂] (DRS); Champaign Co., Champaign, UIUC campus, NRSA, 16 August 2016, 40.0916°N 88.2427°W, 750 ft., D. R. Swanson, #57, det. D. R. Swanson 2017 [1 ♂] (DRS); Johnson Co., Goreville, 13 June 1958, J. G. Brady, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Distribution: USA: AR, AZ, CA, CO, CT, FL, IA, ID (Harris and Shull 1944, Hampton 2005), IL, IN, KS, LA, MA, MD, MI (Swanson 2011), MO, MS, NC, NE, NM, NV, OH, OK (Drew and Schaefer 1963, Stoner et al. 1962), OR (Wheeler 2016), SC, SD, TN (Lambdin et al. 2003), TX, UT, VA, WI (Williams 2004), WY; Canada: BC, MB, ON, QC (Scudder 2008).

*Stictopleurus punctiventris* (Dallas, 1852). – **CONNECTICUT**: [Litchfield Co.], Lakeville, 2 September 1934, R. F. Hussey, det. R. F. Hussey 1948 [1 ♂] (UMMZ); **ILLINOIS**: Lake Co., Fort Sheridan, 25 June 1924, E. Liljebblad, coll., det. D. R. Swanson 2012 [1 ♀] (UMMZ); **MARYLAND**: Montgomery Co., Seneca Creek Park, 5 May 1973, Collector: Barry M. O'Connor, det. D. R. Swanson 2012 [1 ♀] (UMMZ); **OKLAHOMA**: [Comanche Co.], Lawton, 4 May 1956, Robt. Angle, det. D. R. Swanson 2012 [1 ♂] (MSUC); **WEST VIRGINIA**: [Fayette Co.], Page, goldenrod, 10 September 1960, B. A. Wilson, det. D. R. Swanson 2012 [1 ♀] (MSUC); Greenbrier Co., Alvon, 18 June 1957, R. L. Fischer, det. D. R. Swanson 2012 [1 ♂] (MSUC).

Notes: Hambleton (1908) and Van Duzee (1917b) reported this species (as *Corizus crassicornis* [Linnaeus, 1758]) from Wyoming, although these records probably were confounded with other species. Nevertheless, I have examined the following corroborative material for the state: **WYOMING**: Albany Co., Medicine Bow National Forest, Curtis Gulch Campground, T28N – R73W – Sec. 8, 8–10 July 1974, Daniel K. Young, det. D. R. Swanson 2012 [1 ♀] (MSUC); Lincoln Co.,

Salt River Range, 8 July 1934, Edna Brod-korp, det. D. R. Swanson 2012 [1 ♂] (UMMZ).

Distribution: USA: AK (Scudder 1997; Maw et al. 2000), AZ, CA, CO, CT, GA (Scott and Fiske 1902), ID, IL, IN, MA, MD, ME, MI, MN, MT, ND (Uhler 1878, Hussey 1922a), NE, NH, NJ, NM, NY, OH, OK, OR, PA, SD, TN (Lambdin et al. 2003, Vlach et al. 2010), TX, UT, VA (Hoffman 1975), VT (Parshley 1917, 1923), WA, WV, WY (Hambleton 1908, Van Duzee 1917b); Canada: AB, BC, MB (Maw et al. 2000), NB (Maw et al. 2000), NF (Maw et al. 2000), NS, NT (Uhler 1876; Maw et al. 2000), ON (Van Duzee 1889, 1917b; Gibson 1913; Torre-Bueno 1918; Brown 1934; Maw et al. 2000), PE (Maw et al. 2000), QC, SK, YT.

#### Superfamily PYRRHOCOROIDEA

#### Family LARGIDAE

Four new state records are reported for 2 species in 1 genus.

*Largus convivus* Stål, 1861. – **ARIZONA**: Cochise Co., Rustlers Park, 18 June 1956, 8000 ft., R. & K. Dreisbach, det. D. Flynn [1 ♂] (MSUC); Navajo Co., White Mountains, Fools Hollow, Show low, 3 August 1989, Manda Kasture, det. D. R. Swanson 2012 [1 ♀] (MSUC); Pima Co., Santa Catalina Mts., Gen. Hitchcock tree, 2 September 1951, T. J. Cohn, det. D. R. Swanson 2012 [1 ♀] (UMMZ); **NEW MEXICO**: Otero Co., Sacramento Mountains, 2.3 mi. NW. Mayhill, James Canyon Forest Camp, 17 July 1956, elev. 6900 ft., T. J. Cohn & E. G. Matthews, #120A, det. J. C. Lutz [2 ♀] (UMMZ).

Notes: There is much confusion regarding the alpha taxonomy of this group, and the identifications were rendered using Halstead's (1972) key. Halstead (1972) treated *Wupatkius semo* Bliven, 1956, described from Arizona, as a junior synonym of *L. convivus*. Bliven (1973) disputed this treatment, and Henry (1988b) retained Bliven's genus and species.

Distribution: AZ, CA, CO, NM, TX.

*Largus succinctus* (Linnaeus, 1763). – **ALABAMA**: Monroe Co., 1 mi. N. Midway, 10 August 1992, B. M. O'Connor, det. D. R. Swanson 2012 [2 ♂, 2 ♀] (UMMZ); **TENNESSEE**: Henderson Co., Natchez Trace State Forest, 12 May 1968, Norman T. Baker, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Notes: See note in previous species account. Scott and Fiske (1902) and Van Duzee (1917b) reported this species from Georgia, and I have examined the following corroborative material: **GEORGIA**: Mitchell Co., Baconton, 8 April 1953, George W. Byers, det. D. R. Swanson 2012 [1 ♀] (UMMZ);



Decatur Co., Low hammock, Mosquito Cr. on GA. Hwy. 97, 15 June 1953, T. H. Hubell, #78, det. D. R. Swanson 2012 [1 nymph] (UMMZ); [Gordon Co.], Calhous [sic], 26 August 1949 [add. date: 28 August 1949], [no collector], det. D. R. Swanson 2012 [3 ♀] (MSUC). Townsend (1886) reported this species from Louisiana, and I have examined the following corroborative material: **LOUISIANA:** [Caddo Par.], Shreveport, 23 November 1921, [no collector], det. D. R. Swanson 2012 [1 ♀] (MSUC). Froeschner (1944) reported this species from Missouri, and I have examined the following corroborative material: **MISSOURI:** Franklin Co., Sullivan, 8 June 1960, W. T. Van Velzen, det. D. R. Swanson 2012 [3 ♂, 3 ♀] (MSUC); Franklin Co., Meramec State Park, 26 July 1988, D. J. Biddinger, det. D. R. Swanson 2012 [2 ♀] (MSUC). Henry (1988b) considered records from Arizona (e.g., Snow 1904, 1906, 1907) and California (e.g., Van Duzee 1909, Blöte 1931, Torre-Bueno 1931, Masner 1983) to be suspect, suggesting that these records apply to *Largus cinctus* Herrich-Schäffer, 1842. Blöte (1931) reported this species (as *Euryophthalmus succinctus* [Linnaeus, 1763]) from “Eastern Branch, near Bannings, D.C.”, although I am unable to confidently elucidate this locality.

Distribution: **AL**, **AR** (Chordas and Kremers 2009), **AZ**(?), **CA**(?), **CO**, **FL**, **GA** (Scott and Fiske 1902, Van Duzee 1917b), **LA** (Townsend 1886), **MD**, **MN**, **MO** (Froeschner 1944), **MS**, **NC**, **NJ**, **NM**(?), **NY**, **OK**, **PA**, **TN**, **TX**, **VA**.

#### Family PYRRHOCORIDAE

One new state record is reported for 1 species in 1 genus.

*Dysdercus bimaculatus* (Stål, 1854). – **KANSAS:** [Finney Co.], Mansfield, 13 June 1961, Green, det. D. R. Swanson 2012 [1 ♀] (MSUC).

Distribution: **AZ**, **KS**.

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