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S. W. Chordas III
*The Ohio State University*, chordas.2@osu.edu

R. Tumlison
*Henderson State University*

H. W. Robison
*Southern Arkansas University*

J. Kremers

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Twenty Three True Bug State Records for Arkansas, with Two for Ohio, U.S.A.

S. W. Chordas III1, R. Tumlison2, H.W. Robison3 and J. Kremers4

1Center for Life Sciences Education, The Ohio State University, 260 Jennings Hall, 1735 Neil Avenue, Columbus, Ohio 43210
2Department of Biology, Henderson State University, Arkadelphia, Arkansas 71999, 3 Department of Biological Sciences, Southern Arkansas University, Magnolia, Arkansas 71754; 42019 Clark Road, Clarksville, Arkansas 72830-3922

Correspondence: chordas.2@osu.edu

Over the past half decade, 64 Hemiptera (Heteroptera) species have been published as new records for Arkansas (Chordas and Kremers, 2009). New bug records reported herein were from three sources; recently collected specimens from the authors' current and ongoing Arkansas projects, specimens from the University of Arkansas-Monticello collection (UAM), and one of us (JK) captured bugs at his resident property in Clarksville (Johnson County) Arkansas. Identification of the true bugs from these sources revealed 23 species (in 9 families) that are new state records for Arkansas. The first author collected two of these species in Ohio and we include these as new records for that state as well. Further, Daniel Swanson (see acknowledgments) provided additional Reduviidae records we include (noted as *DS).

We newly report the following 23 species (alphabetically by family, then species): Alydidae: Alydus pilosulus Herrich-Schaeffer, 1848 (also from Ohio); Anthocoridae: Cardiastethus assimilis (Reuter, 1871); Coreidae: Acanthocephala femorata (Fabricius, 1775), Hypselonotus punctiventris Stål, 1862, Leptoglossus clypealis Heidemann, 1910; Lygaeidae: Melacoryphus facetus (Say, 1832), Oncopeltus fasciatus (Dallas, 1852); Miridae: Collaria oculata (Reuter, 1871), Diphleps unica Bergroth, 1924; Eustictus necopinus necopinus Knight, 1923, Hyaliodes hartii Knight, 1941, Lopidea robinae (Uhler, 1861), Phytocorus erectus Van Duzea, 1920, Tropidostepes cardinalis Uhler, 1878; Nabidae: Pagasa fusca (Stein, 1857); Reduviidae: Narvesus carolinensis Stål, 1859, Oncerotrachelus acuminatus (Say, 1832), Rhiginia cruciata (Say, 1832) (also from Ohio); Rhopalidae: Harmostes fraterculus (Say, 1832), Jadera haematoloma (Herrich-Schaeffer, 1847); Rhyparochromidae: Atrazonotus umbrosus (Distant, 1893), Ozophora picturata Uhler, 1871, Paromiulus longulus (Dallas, 1852). We also provide dorsal images of all 23 species, updated distribution maps (north of Mexico), and a few ecological notes.

Voucher specimens of all 23 species were deposited into the C.A. Triplehorn Insect Collection (The Ohio State University, Columbus Ohio), duplicates were retained by the first author (SWC) or JK and are housed in personal collections. Brailovsky (2006), Chordas et al. (2005 & 2008), Decker and Yeargan (2008), Henry and Froeschner (1988), Maw et al. (2000), McPherson (1992) and Schaefer and Schaffner (1994) were used as distributional references. Blatchley (1926), Hoebeke and Wheeler (1982), Knight (1941), McPherson et al. (1990) and Slater (1992) were used for species identifications; additional literature required for some identifications are listed under individual species discussion.

New State Records: Alphabetically by family.

Alydidae (Broad-Headed bugs): Alydus pilosulus is a widespread species across the US and was anticipated for Arkansas (Figs 1 & 2). Collection data Arkansas: Johnson County. Clarksville, Arkansas, Clark Road (runs parallel & between State Route 64 & U.S. Route 40). Joe Kremers. N35.46: W-93.49. Three specimens were collected, one each on 2-19 August 2005, 30 September 2005, 22 July 2007. We also identified one specimen collected with a sweepnet from Ohio. Collection data Ohio: Wayne County: SW portion; Shreve Lake wildlife area, off Brown Road. 1 August 2010. Steve Chordas III. N40.686: W-82.044.
find. A single specimen was collected. Collection data
Arkansas: Garland County (West Edge), Camp Clearfork, Ouachita National Forest, \( \approx 1 \) km S of U.S. Route 270, \( \approx 30 \) km W of Hot Springs, 20 June 2008, UV light, Brian Baldwin, N34.51: W-93.39.

Coreidae (Leaf-footed bugs): *Acanthocephala femorata* was expected for Arkansas as it had been recorded from several surrounding states (Fig. 5). *Acanthocephala femorata* is a large distinctive bug (body length 28-34 mm) (Fig. 6). This species is also figured nicely in both Henry and Froeschner (1988), page 70 and Brailovsky (2006), page 256. It is now the third species of this genus reported for Arkansas (Chordas et al. (2005) reported *A. terminalis*, Chordas and Kremers (2009) reported *A. declivis*). A single specimen, from the UAM collection, was collected in November 1980 from Drew County.

*Hypselonotus punctiventris* (Fig. 7). A single specimen was collected off a bull thistle flower (*Cirsium vulgare*) flower. This species is not in Blatchley (1926). It was ultimately identified using illustrations in Distant (1880-1893; tab 14). The photo of this species (Fig. 8) is the field photo of the specimen just prior to it being hand collected. Collection data Arkansas: Ashley County, Crossett Arkansas, logging road off Hwy 133 south side of Crossett. 20 April 2008. Hand collected off of bull thistle flower. Renn Tumlison. N33.1097: W-91.9566.

**Leptoglossus clypealis** is primarily a western species with Arkansas on the edge of its eastern range (Fig. 9). This species has a distinctive anterior spine that extends between the antennal bases (Fig. 10). Three specimens were collected (1 each on 24 May 2006, 19 July 2006, 13 August 2006) all from the Johnson county location (see *Alydus pilosulus*).

*Lygaeidae (Seed bugs): Melacoryphus facetus* is known mostly in the south and the east (Fig. 11). A single specimen of this species (Fig. 12) was collected on 9 June 2005 from the Johnson county location (see *Alydus pilosulus*).
Oncopeltus fasciatus, the large milk weed bug, is widespread and common in the eastern half of the US and Canada (Fig. 13). The photo (Fig. 14) is a field photo taken of one of the specimens just after a mating pair was hand collected. Although well known and expected for Arkansas, we found no literature record for this species and thus list it as a new for Arkansas. We also did not find a literature record for Kentucky, but did find the University of Kentucky Department of Entomology at (www.uky.edu; “critter files”) lists this species with pictures, ID information, etc. Thus, we include Kentucky in our distribution map (shaded differently). Collection data Arkansas: Clark County, DeGray Lake, Spillway Dam Recreation Area off County Road 18. 26 July 2008. Hand collected off Buttonbush (Cephalanthus occidentalis). Renn Tumlison. N34.2204; W-93.1002.

Miridae (Plant bugs): Collaria oculata. The Alberta literature record was questioned by Maw et al (2000); we follow their listing (Fig. 15). Arkansas was within the known distribution. Two specimens (Fig. 16) were collected on 20 and 27 June 2008 from the Garland County site (see Cardiastethus assimilis).

Arkansas lies along the western edge (Fig. 17) of the known range of Diphleps unica (Fig. 18). This species is also figured in Henry and Froeschner (1988), page 256. A single male specimen was collected 20 June 2008 from the Garland County site (see Cardiastethus assimilis).

Eustictus necopinus necopinus (Figs. 19 & 20): A single specimen was collected 20 June 2008 from the Garland County site (see Cardiastethus assimilis).

Largely a northern species (Fig. 21), Arkansas is on the southern part of the range of Hyaliodes harti (Fig. 22). Two specimens were collected 20 June 2008 from the Garland County site (see Cardiastethus assimilis).

Arkansas lies along the western edge of the known distribution of Lopidea robinae (Fig. 23). A single male specimen (Fig. 24a) of this species was collected.
on 1-7 July 2005 from the Johnson county location (see *Alydus pilosulus*). An image of the distinctive male right clasper is shown in Fig. 24b.

**Phytocoris erectus** occurs across eastern North America (Fig. 25) and was expected for Arkansas. One male specimen (keyed and matched with the male clasper illustrations in Knight (1941)) of this species (Fig. 26) was collected on 24 June 2005 from the Johnson county location (see *Alydus pilosulus*). Phytocoris erectus North of Mexico.

Arkansas falls within the known range (Fig. 27) of *Tropidosteptes cardinalis* (Fig. 28). Two specimens (1♂, 1♀) of this species were hand collected off an ash sapling on 24 April 2005 from the Johnson county location (see *Alydus pilosulus*).

**Nabidae** (Damsel bugs): The cosmopolitan (Fig. 29) *Pagasa fusca* (Fig. 30) was anticipated for Arkansas. A single specimen was collected on 10 December 2005, Columbia County, Magnolia, Henry W. Robison. Some records for this species may need to be confirmed and/or updated (see Scudder 2008).

**Reduviidae** (Assassin bugs): Distributed across the mid and eastern US (Fig. 31), *Narvesus carolinensis* (Fig. 32) was anticipated for Arkansas. Two individuals were collected, one each 1-9 June 2005 and 25-30 June 2005 from the Johnson county location (see *Alydus pilosulus*). Also from Hot Springs Co, Malvern, 15 June 1958, R.L. Fischer (*DS, Mich. St. U.*).

**Oncerotrachelus acuminatus** was anticipated for Arkansas (Fig. 33). One specimen (Fig. 34) was identified from the UAM material. Label data

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Arkansas: Drew County, 5 October 1981, M. Weaver. We also include an historic specimen from [Crittenden Co.], 1278 Carlisle, January 1891, (*DS, Oh.St.U.).

*Rhiginia cruciata* is mainly an eastern bug (Fig. 35) and was anticipated for Arkansas and Ohio. One UAM specimen was identified. Label data Arkansas: Drew County, 6 October 1987, Foust. We collected one Ohio specimen (Fig. 36). Label data Ohio: Hocking County, Trib of Queer Creek, ≥3km East of S. Bloomingville, 2 June 1998, Malaise trap, N39.427: W-82.576. We also include six other Ohio records: [Gallia Co] Vinton, 5-12 June 1900, H.Osborn; [Scioto Co], Shawnee For., 9 June 1943, D.J./J.N. Knall (*DS, Oh.St.U.); Fairfield Co, 16 May 1945, F.W. Mead; Lawrence Co, Coal Grove, 11 October 1952; Hocking Co, Neotoma, 8 June 1952, C.A./D.M. Triplehorn (*DS, Fla.St.Col.Arth.); Ross Co, Bainbridge, 4 June 1960, G.C. Eickwort (*DS, Mich.St.U).

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*Jadera haematoloma* is primarily a southern bug (Figure 39) we anticipated for Arkansas. The common name is the red-shoulder bug, a distinctive feature (see Figure 40). One UAM specimen was identified. Label data AR: Drew County, 26 October 1980, D. McElroy. Another specimen was taken on 12 August 2003 from the Johnson county location (see *Alydus pilosulus*).

*Rhyparochromidae*: Widespread species (Fig. 41). *Atrazonotus umbrosus* (Fig. 42) was expected. Collection data Arkansas: Faulkner County, 9 April 2010 in pocket gopher burrow, N35.071: W-92.523.

*Rhyparochromidae*: Widespread species (Fig. 41). *Atrazonotus umbrosus* (Fig. 42) was expected. Collection data Arkansas: Faulkner County, 9 April 2010 in pocket gopher burrow, N35.071: W-92.523.

*Rhynalidae* (scentless plant bugs): Arkansas falls within the known range (Fig. 37) of *Harmostes fraterculus* (Fig. 38). A single specimen was collected on 26 September 2005 from the Johnson county location (see *Alydus pilosulus*).

*Ozophora picturata* was projected for Arkansas (Fig. 43). We collected two specimens of this species (Fig. 44) between 2 and 30 September 2005 in UV traps from the Johnson county location (see *Alydus pilosulus*).
Paromius longulus is found through the southeast US (Figure 45). Two specimens were identified from UAM material. Label data Arkansas: Drew County, 12 September 1981, F. Durwachjer; Drew County, 25 November 1986, F. Shepard. One other specimen was captured from a gopher burrow in Johnson County, Ludwig, 0.8km West of SR21-CR35/36 junction, 1 November 2008, Matt Connier.

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