Backyard "Bug" Collecting Results in 6 New State Records for Arkansas, U.S.A.

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The aquatic Hemiptera of Arkansas are fairly well documented (see Chordas et al. 2005), but the terrestrial bugs are less well known. Recent projects and publications have begun to address this deficiency. Including the 6 reported herein, there have been 64 Hemiptera species newly recorded for Arkansas between 2005 and 2009 (Chordas et al. 2005, Chordas and Kovarik 2008a, Chordas and Kovarik 2008b).

The second author is an invertebrate enthusiast who maintains a large personal collection. The content of this collection is primarily an accumulation of invertebrates captured on or around his property in Clarksville (Johnson County) Arkansas (Figure 1). Identification of the Hemiptera from this “backyard bug collection” revealed 6 species (in 4 Hemiptera families) that are new state records for Arkansas. These 6 include: 2 Coreidae (Leaf-footed bugs), *Acanthocephala declivis* (Say, 1832) and *Piezogaster calcarator* (Fabricius, 1803); 1 Largidae (Largid bugs), *Largus succinctus* (Linnaeus, 1763); 2 Lygaeidae (Seed bugs), *Lygaeus kalmii angustomarginatus* Parshley, 1919 and *Neacoryphus bicrucis* (Say, 1825) and 1 Reduviidae (Assassin bugs), *Sirthenea stria carinata* (Fabricius, 1798). Of note, our record of *L. succinctus* is the first Arkansas record for this hemipteran family.

We report these 6 species as new state records for Arkansas. Dorsal view digital photographs of each species were taken from the second author’s curated specimens and are provided herein as a visual reference (see acknowledgments; color images available). We also include current distribution maps for all species as it has been over 20 years since comprehensive distributions were published.

Voucher specimens of all 6 species were deposited into the C.A. Triplehorn Insect Collection (The Ohio State University, Columbus Ohio), duplicates and remaining specimens were retained by the second author and are housed in his personal collection. Chordas et al. (2005), Henry and Froeschner (1988), Maw et al. (2000), McPherson (1992) and Wheeler (1983) were used as distributional references. Blatchley (1926) and Slater (1992) were used for species identifications.

New State Records: Alphabetically by family.

**Coreidae** (leaf-footed bugs): Although uncommon and restricted to a few southern states, *A. declivis* was probably for Arkansas as it had been recorded from 3 surrounding states (Figure 2). *Acanthocephala declivis* is a large bug (body length 28-34mm) (Figure 3). It is now the second species of this genus reported for Arkansas (see Chordas et al. 2005). Single specimens were collected on each of the following dates: 1-August-2005, 20-July-2006 and 25-October-2006.

**Largidae** (Largid bugs): Although only reported from 13 scattered states, *L. succinctus* is the most common species of this family (Henry and Froeschner 1988). A total of 11 specimens were taken: 3 on 23-July-2005, 1 on 1-August-2005, 6 on 26-September-2005 and 1 on 4-April-2006.

**Lygaeidae** (Seed bugs): *Piezogaster calcarator* (Figure 4) was anticipated for Arkansas, having been reported for 3 bordering states (Figure 5). It is now the second species of this genus reported for Arkansas (see Chordas et al. 2005). Single specimens were collected on each of the following dates: 1-August-2005, 20-July-2006 and 25-October-2006.

**Reduviidae** (Assassin bugs): Although only reported from 13 scattered states, *Sirthenea stria carinata* is the most common species of this family (Henry and Froeschner 1988).
1988) and was anticipated for Arkansas as it had been reported for 3 adjacent states (Figure 6). This is the first Arkansas record for this hemipteran family. Of expected Hemiptera, only Enicocephalidae (unique-headed bugs) and Piesmatidae (piesmatid bugs) lack Arkansas records (Chordas et al. 2005). A total of 6 specimens of this distinctive species (Figure 7) were collected (2 on 1-June-2005, 4 on 26-September-2005).

Lygaeidae (Seed bugs): We newly report two very common and widespread species. *Lygaeus kalmii angustomarginatus* (Figure 8) is the eastern subspecies and was expected for Arkansas because it has been reported from all states surrounding Arkansas except for Louisiana (Figure 9). Four individuals were collected on 19-August-2005.

Recorded from 31 states across the conterminous US and 2 provinces in Canada (Figure 10), *N. bicrucis* (Figure 11) was expected for Arkansas. Its known host-plant is ragwort (*Senecio* sp) (McLain 1992), a plant of some interest as it has been implicated as potentially toxic to equine grazers. Five specimens were taken: 2 on 5-June-2005, 3 on 19-August-2005.
Reduviidae (Assassin bugs): *Sirthenea stria carinata* is a brightly colored red, red/orange and black assassin bug (Figure 12). It has been reported to inflict a very painful bite (Blatchley 1926), a suspected characteristic for a species possessing such aposematic coloration. It is primarily distributed throughout the eastern US (Figure 13), but was anticipated for Arkansas. All three of our specimens were taken at lights, a place this species historically has been reported to be encountered (Blatchley, 1926). One specimen was collected on each of these dates: 27-September-2003, 5-September-2004, and 3-June-2005.

**Figure 11. Dorsal view of Neacoryphus bicrucis.**

**Figure 12. Dorsal view of Sirthenea stria carinata.**

**Figure 13. Distribution of Sirthenea stria carinata North of Mexico.**

### Acknowledgments

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### Literature Cited

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