Three New True Bug (Hemiptera: Miridae) Records for Oklahoma

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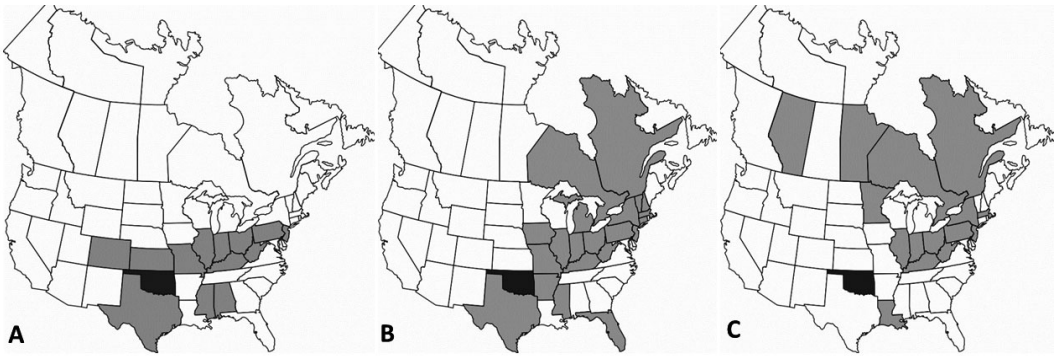
Over the past few years, several new geographic records for hemipterans have been documented for Oklahoma (Henry et al. 2010; Chordas and McAllister 2012, 2016; Chordas et al. 2017; McAllister and Robison 2017) as well as description of new taxa (Henry and Sweet 2015). Here, we provide new distributional records for three true bugs of the family Miridae in the state.

Between May and October 2018, various hemipterans were collected below a night light at a residence in Hochatown, McCurtain County. Specimens were collected with an insect aspirator and transferred to individual vials containing 70% (v/v) ethanol. They were subsequently shipped to the senior author (SWC) for identification. Voucher specimens were deposited in the C. A. Triplehorn Collection at The Ohio State University, Columbus, Ohio. The following specimens were identified.

Three male *Phytocoris breviusculus* Reuter, 1876 were taken with the following collection data: ***Oklahoma***: McCurtain County, off Halibut Bay Road in Hochatown (34° 10' 17.0286"N, 94° 45' 5.7414"W); 11 V 2018; C. T. McAllister (CTM), collector (unique museum specimen code: OSUC 620944). Photographs of this bug are available on BugGuide (https://bugguide.net/node/view/309222). Habitat of the area consisted of various hardwoods (*Quercus* spp.) and pines (*Pinus* spp.) in Ouachita uplands. In addition, a single male *Tropidosteptes cardinalis* Uhler, 1878 (Fig. 1) was collected by CTM from the same site (on 7 V 2018, OSUC 620945) and a *Pilophorus crassipes* Heidemann, 1892 was collected by CTM there on 1 IX 2018 (OSUC 620946). Photographs of *P. crassipes* are available on BugGuide (https://bugguide.net/node/view/290667).

Figure 1. Dorsal view of *Tropidosteptes cardinalis*.

Phytocoris breviusculus is a relatively small (3.9–4.6 mm) mirid of the juniperanus group that possesses a wing membrane sprinkled with dark or minute pale spots. This bug is attracted to lights and can be also found on a wide variety of plants, but most commonly occurring on cedars (*Juniperus* spp.) (Stonedahl 1988) which are present at the study site. It has also been reported that *P. breviusculus* is at least partially predaceous on mites and scale insects (Henry et al. 2005). It has been recorded from the eastern US from Pennsylvania to Kansas and further south to Alabama, Mississippi, and Texas (Henry and Wheeler 1988); however, this mirid has not been previously documented from Oklahoma (Fig. 2A) so we report *P. breviusculus* here as a



Figures 2A–C. Three new bugs (Miridae) for Oklahoma. A. Distribution of *Phytocoris breviusculus* in North America north of México. Light shade = prior literature records (Henry and Wheeler 1988; Henry et al. 2005); dark shade = new state record. B. Distribution of *Tropidosteptes cardinalis* in North America north of México. Light shade = prior literature records (Henry and Wheeler 1988; Maw et al. 2000; Henry et al. 2005; Chordas et al. 2011); dark shade = new state record. C. Distribution of *Pilophorus crassipes* in North America north of México. Light shade = prior literature records (Henry and Wheeler 1988; Maw et al. 2000; Henry et al. 2005); dark shade = new state record.

new geographic record.

Tropidosteptes cardinalis is a bright reddish-colored mirid (see also color fig. 28 of this species in Chordas et al. [2011]). It is known from adjacent Arkansas (Chordas et al. 2011), Missouri, and Texas as well as other US states and eastern Canada (Fig. 2B) but this plant bug had not previously been documented in the refereed literature for Oklahoma.

Pilophorus crassipes is small (3 to 5 mm) brown and black colored plant bug with striking silvery bands on the hemelytra; a characteristic present in species of this genus. The hind tibia of this species is distinctly curved (Knight 1941). Records of this plant bug are concentrated around the Great Lakes region (Fig. 2C) and extend as far south as Louisiana but this species had not previously been reported in the refereed literature for Oklahoma.

Eleven other hemipterans within eight families were collected during this six-month period and all have been reported previously from Oklahoma including the following taxa: **Alydidae:** *Alydus pilosulus* Herrich-Schaeffer, 1847; *Megalostomus quinquespinosus* (Say, 1825); **Berytidae:** *Jalysus wickhami* (Van Duzee, 1906); **Coreidae:** *Acanthocephala declivis* (Say, 1823); **Miridae:** *Pseudatomoscelis seriatus* (Reuter, 1876); **Pentatomidae:** *Banasa euchlor*a Stål, 1872; *Thyanta custator* (Fabricius, 1803); **Reduviidae:** *Microtomus purcis* (Drury, 1782); **Rhyparochromidae:** *Ozophora picturata* Uhler, 1871; *Pseudopachybrachius basali*s (Dallas, 1852); **Scutelleridae:** *Stethaulax marmorata* (Say, 1831). Of these, only *A. pilosulus* is considered uncommon in the state.

Additional collections using various sampling techniques for hemipterans in Oklahoma should be conducted including the search for several uncommon reduviids (assassin bugs) recently reported from adjacent Arkansas (Chordas and Tumlison 2016) that would eventually become new distributional records for the state.

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