New Geographic Distribution Records for Centipedes (Chilopoda: Scolopendromorpha) from Oklahoma

Chris T. McAllister

Science and Mathematics Division, Eastern Oklahoma State College, Idabel, OK 74745

Henry W. Robison

9717 Wild Mountain Drive, Sherwood, AR 72120

Matthew B. Connior

Health and Natural Sciences, South Arkansas Community College, El Dorado, AR 71730

Since the seminal publication on scolopendromorph centipedes by Shelley (2002), our knowledge of the centipede fauna of Oklahoma has increased significantly (McAllister et al. 2003, 2004, 2006). However, there remain several distributional gaps for many of these centipedes in the state. Here, we continue to help fill some of those gaps with six new county records for four species within three families. Additionally, in an effort to aid in future research, we provide an updated distribution for all Oklahoma scolopendromorphs.

Between October 2009 and March 2013, we followed techniques of McAllister et al. (2003) in collecting centipedes from sites in six counties of the state, primarily from trails in State Parks, including those in Atoka, Blaine, Choctaw, Osage, Pushmataha, and Woodward. We also visited Black Mesa State Park in Cimarron County and Quartz Mountain State Park in Greer County in February 2011, but found no centipedes. Specimens were placed in vials containing 70% ethanol and, following preliminary identification, representative samples were shipped to R. M. Shelley at the North Carolina State Museum of Natural Sciences (NCSM), Raleigh, for verification of identifications and deposition of select vouchers. Other voucher specimens were deposited in the Sam Noble Oklahoma Museum of Natural History (SNOMNH), Norman. Collectors of specimens are the coauthors who are designated below by their initials.

Annotated List of Taxa

Scolopendromorpha: Scolopendridae

Scolopendra heros Girard – Woodward Co., Boiling Springs State Park off Park Road 52 (36.455402°N, 99.291403°W), 11 Feb. 2011, CTM (SNOMNH). Although expected statewide, this large centipede had been reported previously from 22 counties of the state (Shelley 2002; McAllister et al. 2003) (Fig. 1) and several counties to the east in adjoining Arkansas (McAllister et al. 2010). *Scolopendra heros* is the largest North American centipede with lengths exceeding 200 mm (Sandefur 1998; Walls 2000).

Scolopocryptopidae

Scolopocryptops rubiginosis L. Koch -State Osage Со., Osage Hills Park (36.735789°N, 96.185397°W), 9 Oct. 2009, CTM, HWR (NCSM). Previous records for this centipede (Shelley 2002; McAllister et al. 2003, 2006) include 11 counties of the state (Fig. 2). We provide the northernmost record in Oklahoma which is well within the distribution of S. rubiginosus in the central USA (see Shelley 2002, fig. 108; McAllister et al. 2003, fig. 1, 2006, fig. 1).

Scolopocryptops sexspinosus (Say) – Atoka Co., McGee Creek State Park off McGee Creek Dam Road (34.327498°N, 95.914813°W), 8 Mar. 2013, CTM, MBC



Figure 1. Records of *Scolopendra heros* in Oklahoma. Dots = previous records; star = new record.



Figure 2. Records of *Scolopocryptops rubiginosus* in Oklahoma. Dots = previous records; stars = new records.



Figure 3. Records of *Scolopocryptops sexspinosus* in Oklahoma. Dots = previous records; stars = new records.



Figure 4. Records of *Theatops posticus* in Oklahoma. Dots = previous records; stars = new records.



Figure 5. Records of *Theatops spinicaudus* (solid dots), *Scolopendra viridis* (solid squares), *Hemiscolopendra marginata* (open squares), and *Cryptops leucopodus* (open dots) in Oklahoma.



Figure 6. Records of *Scolopendra polymorpha* in Oklahoma. Dots = previous records.

(SNOMNH). Choctaw *Co.*. Ft. Towson Historic Site, off co. rd. E2060 (34.026165°N, 95.259259°W). 11 Nov. 2011. CTM (SNOMNH). Pushmataha Co., Indian Nation Turnpike, mile marker 34 (34.485056°N, 95.73412°W), 20 Feb. 2011, CTM, HWR (NCSM). This scolopendromorph had been reported previously from only eight counties of the state and is expected in the eastern half of Oklahoma (Shelley 2002; McAllister et al. 2003, 2006) (Fig. 3). We provide three new county records for the southeastern part of the state.

Cryptopidae

Theatops posticus (Say) – Blaine Co., Roman Nose State Park off Park Road 60 (35.935669°N, 98.431486°W), 18 Feb. 2011, CTM, HWR (SNOMNH). This centipede has a spotty distribution in the state with eight previous records (Shelley, 1997, 2002; McAllister et al. 2004) spanning from the western portion (Woodward County) to the far southeastern corner of the state (McCurtain County) (Fig. 4).

Interestingly, four other scolopendromorphs of Oklahoma have fewer than seven county records documented (see Shelley 2002; McAllister et al. 2003, 2006), including Theatops spinicaudus (Wood) with six, Scolopendra viridis Say with three. Hemiscolopendra marginata (Say) with three, and Cryptops leucopodus (Rafinesque) with 5). One other, Scolopendra four (Fig. polymorpha Wood is expected statewide except for the eastern portion of the state and has 12 counties (Fig. 6) documented for its distribution Oklahoma (Shelley 2000: McAllister et al. 2003). With additional collecting, especially in the western and southwestern parts of the state, we expect new county records to be added to our growing knowledge of the scolopendromorph centipede fauna of Oklahoma.

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References

- McAllister CT, Connior MB, Robison HW. 2010. New distributional records for the centipede, *Scolopendra heros* (Chilopoda: Scolopendromorpha: Scolopendridae), in Arkansas. Tex. J. Sci. 62:157-160.
- McAllister CT, Shelley RM, Cameron ML. 2004. Significant new distribution records for the centipede, *Theatops posticus* (Say) (Chilopoda: Scolopendromorpha: Cryptopidae), from Oklahoma, with four new records from the Ark-La-Tex. Proc. Okla. Acad. Sci. 84:73-74.
- McAllister CT, Shelley RM, McAllister JT III. 2003. Geographic distribution records for scolopendromorph centipedes (Arthropoda: Chilopoda) from Arkansas, Oklahoma, and Texas. J. Ark. Acad. Sci. 57:111-114.
- McAllister CT, Shelley RM, Robison HW. 2006. Additional distributional records for scolopendromorph centipedes (Chilopoda) from Arkansas, Kansas, Louisiana, New Mexico, Oklahoma, and Texas, with the first report of *Theatops spinicaudus* (Wood) (Cryptopidae) from Texas. Texas J. Sci. 58:299-308.
- Sandefur C. 1998. The giant centipedes of the genus *Scolopendra*: their private care and husbandry. Privately printed. unnumbered p.
- Shelley RM. 1997. The Holarctic centipede subfamily Plutoniuminae (Chilopoda: Scolopendromorpha: Cryptopidae) (nomen correctum ex subfamily Plutoniinae Bollman, 1893). Brimleyana 24:51-113.
- Shelley RM. 2002. A synopsis of the North American centipedes of the order Scolopendromorpha (Chilopoda). Virginia Mus. Nat. Hist. Mem. No. 5:1-108.
- Walls JG. 2000. The guide to owning millipedes and centipedes. Neptune City (NJ): T.F.H. Publications. 64 p.

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