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Chris T. McAllister
Texas A&M University-Texarkana

Rowland M. Shelley
North Carolina State Museum of Natural Sciences

James T. McAllister III
Brookhaven College

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Geographic Distribution Records for Scolopendromorph Centipedes (Arthropoda: Chilopoda) from Arkansas, Oklahoma, and Texas

Chris T. McAllister

Department of Biology
Texas A&M University-
Texarkana, TX 75505

Rowland M. Shelley

Research Laboratory
North Carolina State Museum of Natural Sciences
4301 Reedy Creek Rd.
Raleigh, NC 27607

James T. McAllister, III

Brookhaven College
3939 Valley View Lane
Dallas, TX 75244

*Corresponding Author

Abstract

During 2001-2003, we collected eight species of scolopendromorph centipedes from 17 counties of Arkansas (AR), seven counties of Oklahoma (OK), and 17 counties of Texas (TX). The following taxa were collected: *Cryptops leucopodus* (Rafinesque) from Bowie and Cass counties, TX, and Pulaski County, AR; *Hemiscolopendra marginata* (Say) from Columbia, Garland, Hempstead, Little River, Pike, Polk, and Yell counties, AR, and Cass, Cherokee, Coryell, Houston, Johnson, Kimble, Marion, Nacogdoches, Smith, and Tom Green counties, TX; *Scolopocryptops rubiginosus* L. Koch from Bowie and Dallas counties, TX; *Scolopocryptops sexspinosus* (Say) from Clark, Columbia, Conway, Faulkner, Hot Spring, Garland, Miller, Montgomery, Polk, Pope, and Pulaski counties, AR, LeFlore and McCurtain counties, OK, and Marion, Red River, and Rusk counties, TX; *Scolopendra heros* Girard from Atoka, Major, and McCurtain counties, OK; *Scolopendra polymorpha* Wood from Woodward County, OK; *Theatops posticus* (Say) from Montgomery County, AR, Choctaw, Marshall, and McCurtain counties, OK, and Cass, Dallas, Freestone, Hopkins, Houston, Red River, and Titus counties, TX; and *Theatops spinicaudus* (Wood) from Garland, Hot Spring, Little River, Pike, and Scott counties, AR, and Atoka, Choctaw, and McCurtain counties, OK. Most significantly, our records of *S. rubiginosus* are well outside its distributional range as depicted in Shelley (2002). A total of 43 new county records is documented, including 14 in Arkansas, nine in Oklahoma, and 20 in Texas.

Introduction

Shelley (2002) recently provided a faunistic monograph on North American scolopendromorph centipedes. It represented the most comprehensive synopsis to date of this important centipede order that includes three families, eight genera, and 21 species. Records of Arkansas, Oklahoma, and Texas scolopendromorphs and centipedes of other orders have never before been consolidated; there are a few reports scattered in miscellaneous papers, and most of the Arkansas records that exist are ones provided by Charles H. Bollman (Bollman, 1888, 1893). Chamberlin (1931, 1942, 1943) and Chamberlin and Muliak (1941) also reported on some chilopods of Oklahoma, Arkansas, and Texas, and Reddell (1965, 1970) provided checklists of centipedes inhabiting caves in Texas. Hoffman and Shelley (1996) reported distributional information on *Hemiscolopendra marginata*, the range of which encompasses most of Arkansas, southeastern Oklahoma, and Texas. Shelley (1990) noted some Arkansas records of *Theatops posticus* and records of the tribe Plutoniuminae were provided by Shelley (1997). The purposes of this paper are to document some distributional information on scolopendromorph centipedes of the Ark-La-Tex and to report additional Arkansas, Oklahoma, and Texas localities for eight species.

Materials and Methods

Between October 2001 and September 2003, we collected centipedes in 17 counties (Clark, Columbia, Conway, Faulkner, Garland, Hempstead, Hot Spring, Johnson, Little River, Miller, Montgomery, Pike, Polk, Pope, Pulaski, Scott, and Yell) of Arkansas, seven counties (Atoka, Choctaw, LeFlore, Major, Marshall, McCurtain, and Woodward), of Oklahoma and 17 counties (Bowie, Cass, Cherokee, Coryell, Dallas, Freestone, Hopkins, Houston, Johnson, Kimble, Marion, Nacogdoches, Red River, Rusk, Smith, Titus, and Tom Green) of Texas. The majority of specimens were taken from damp areas off trails in pine and hardwood forests by overturning decaying logs, leaf litter, and stones with potato rakes. Centipedes were also collected by peeling bark off rotting logs and stumps. At each locale, specimens were placed in individually labeled vials containing 70% ethanol and returned to the laboratory for preliminary processing and sorting. Centipedes were shipped to the second author (RMS) and identified to species. Voucher specimens were deposited in the North Carolina State Museum of Natural Sciences (NCSM).

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Results and Discussion

A total of eight species of centipedes, representing five genera and three families within the order Scolopendromorpha, was found during our survey. The most common species collected was *Hemiscolopendra marginata* (Say, 1821) reported from seven Arkansas and 10 Texas counties. A complete list of taxa collected is presented below and annotated with distributional and ecological information. Specimens collected by the first and third authors are indicated by the initials CTM and JTM, respectively.

Annotated List

Family Scolopendridae

Scolopendra heros Girard, 1853. **OKLAHOMA: Atoka County**, 4.8 km E Springtown, off OK St. Hwy. 43, under trash pile, 4 April 2002, CTM & BSC 405 class. **Major County**, Whitlaw Ranch, 20.6 km SW Waynoka off US 412, 13 September 2003, S. Barclay. **McCurtain County**, Beaver's Bend State Park, David Boren Trail, 3 June 2003, CTM & BSC 405 class. Although expected statewide and reported previously from 21 counties in Oklahoma (see Shelley, 2002), these represent new county records.

Scolopendra polymorpha Wood, 1861. **OKLAHOMA: Woodward County**, Ft. Supply WMA, 1.6 km S. Ft. Supply off US 183, 12 September 2003, Z. D. Ramsey (**new county record**). Except for the eastern periphery, the species is expected statewide in Oklahoma, albeit it has been previously reported from only 13 counties (Shelley, 2002).

Hemiscolopendra marginata (Say, 1821). **ARKANSAS: Columbia County**, Logoly State Park, 28 December 2001, CTM & JTM (**new county record**). **Garland County**, vic. Bear off Brady Mountain Road, 6 April 2002, CTM (**new county record**). **Hempstead County**, 3.2 km W Springhill off AR St. Hwy. 355, 14 February 2002, C. S. Harris (**new county record**). **Little River County**, Wilton off US St. Hwy. 71, #1 April 2003, A. Shoemaker. **Pike County**, Daisy State Park, Lake Greeson, 10 February 2002, CTM; and Crater of Diamonds State Park, 10 February 2002, CTM. **Polk County**, Pioneer Cemetery Historic Site, 2.4 km W. Queen Wilhelmina State Park along AR St. Hwy. 88 on Rich Mountain, 11 June 2002, CTM & J. L. Hollis; and Grannis, off US 71, 19 April 2003, S. Singer (**new county record**). **Yell County**, Sunlight Bay Park, Lake Nimrod, 24 December 2002, CTM & JTM (**new county record**). **TEXAS: Cass County**, 1.6 km E TX St. Hwy. 8, off FM 955, 29 October 2002, D. Moore. **Cherokee County**, Rusk-Palestine State Park, 1 March 2003, CTM & G. Torres (**new county record**). **Coryell County**, Mother Neff State Park, 25 January 2002, CTM. **Houston County**, 29.0 km E Crockett, Ratcliff Recreation Area off TX St. Hwy. 7 at 4-C Trail, 1 March 2003, CTM & G. Torres. **Johnson County**, Cleburne State Park, 25 January 2002, CTM (**new county**

record). **Kimble County**, South Llano River State Park, 22 February 2003, CTM. **Marion County**, 6.4 km NW Jefferson and Lake O' the Pines, 3 February and 8 March 2003, D. Moore (**new county record**). **Nacogdoches County**, jct. county rd. 628 and FM 2782, Stephen F. Austin Interpretive Trail, 1 March 2003, CTM & G. Torres. **Smith County**, Tyler State Park, 22 March 2003, D. Moore (**new county record**). **Tom Green County**, San Angelo State Park, 28 November 2002, CTM (**new county record**). This is a widespread species whose range extends from the northern periphery of Arkansas westward into Texas to Presidio County (Hoffman and Shelley, 1996). The species has been reported previously from 41 counties of Texas and is expected to be nearly statewide in distribution in Arkansas, having been reported previously from 20 counties (Shelley, 2002). We report herein 10 new county records, five each from Arkansas and Texas.

Family Scolopocryptopidae

Scolopocryptops sexspinosus (Say, 1821). **ARKANSAS: Clark County**, 4.8 km NE Caddo Valley, off AR St. Hwy. 283, 31 January 2003, CTM (**new county record**). **Columbia County**, Logoly State Park, 28 December 2002, CTM & JTM. **Conway County**, Petit Jean State Park, 24 December 2002, CTM & JTM (**new county record**). **Faulkner County**, Woolly Hollow State Park on Huckleberry Trail, 25 December 2002, CTM & JTM (**new county record**). **Garland County**, vic. Bear off Brady Mountain Road, 4 April 2002, CTM; and 4.8 km W Crystal Springs off US 270, Charlton Recreation Area, 11 June 2002, CTM (**new county record**). **Hot Spring County**, Lake DeGray State Park, 1 February 2002, CTM (**new county record**). **Miller County**, 1.6 km S Genoa off AR St. Hwy. 196, 14 February 2002, C. S. Harris (**new county record**). **Montgomery County**, Mount Ida, 28 May 2003, CTM & JTM. **Polk County**, 3.2 km N Mena off US 88, Earthquake Trail, 13 August 2003, CTM. **Pope County**, 9.7 km N Hector off AR St. Hwy. 27, 24 June 2002, CTM. **Pulaski County**, 3.2 km S Sweet Home off AR St. Hwy. 365, 27 December 2002, CTM & JTM. **OKLAHOMA: LeFlore County**, Choctaw Nation historic site off OK St. Hwy 1 on Rich Mountain, 3 April 2003, CTM & Z. Ramsey (**new county record**). **McCurtain County**, Beaver's Bend State Park, 1 March 2002, CTM; and 11.3 km S Smithville off US 259 on county rd. 891, 11 September 2002, CTM & J. Kessler. **TEXAS: Marion County**, 6.4 km NW Jefferson, 22 December 2002, D. Moore (**new county record**). **Red River County**, 19.3 km N Clarksville, off TX Hwy 37, 26 April 2003, CTM & G. Torres (**new county record**). **Rusk County**, vic. Mt. Enterprise off US 84, Griff Ross Trail, 27 February 2003, CTM & G. Torres (**new county record**). This is the most common scolopendromorph centipede in eastern North America and its range includes all of

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Arkansas, the eastern half of Oklahoma, and eastern and east-central Texas (Shelley, 2002); however, we report 10 new county records herein.

Scolopocryptops rubiginosus L. Koch, 1878. **TEXAS:** **Bowie County**, Texarkana off I-30, S. Cowhorn Creek Loop, 16 January 2003, CTM (**new county record**). **Dallas County**, Cedar Hill State Park, 21 January and 16 November 2002, CTM (**new county record**). **Red River County**, 19.3 km N Clarksville, off TX Hwy 37, 26 April 2003, CTM & G. Torres (**new county record**). In Texas, the species was previously known only from the northern fringe of the state along the Red River in Grayson County and a disjunct record from the south in San Patricio County (Shelley, 2002). Our new records (Fig. 1) are well outside the range as depicted in Shelley (2002; Fig. 108), and the Bowie County, Texas, record suggests its possible occurrence in adjacent parishes of extreme northwestern Louisiana that would represent a new state record.

Family Cryptopidae

Theatops posticus (Say, 1821). **ARKANSAS:** **Montgomery County**, Mount Ida, 28 May 2003, CTM & JTM (**new county record**). **OKLAHOMA:** **Choctaw County**, Raymond Gary State Park, 24 April 2003, CTM & G. Torres (**new county record**). **Marshall County**, Buncombe Creek Recreation Area off OK Hwy. 99, 25 April 2003, CTM & G. Torres (**new county record**). **McCurtain County**, Beaver's Bend State Park, Boren Trail, 3 June 2003, CTM (**new county record**). **TEXAS:** **Cass County**, 1.6 km E TX St. Hwy. 8 on FM 955, 29 October 2002, D. Moore (**new county record**). **Dallas County**, Cedar Hill State Park, Talala Trail, 21 January 2002 and 16 November 2002, CTM (**new county record**). **Freestone County**, Fairfield Lake State Park, 21 December 2002, CTM & JTM (**new county record**). **Hopkins County**, Cooper Lake State Park-South Sulphur Unit, 3 January 2003, CTM (**new county record**). **Houston County**, 29.0 km E Crockett, Ratcliff Recreation Area off TX St. Hwy. 7 at 4-C Trail, 1 March 2003, CTM & G. Torres (**new county record**). **Red River County**, 19.3 km N Clarksville, off TX Hwy 37, 26 April 2003, CTM & G. Torres (**new county record**). **Titus County**, vic. Cookville at White Oak Creek, 20 September 2003, M. Cameron (**new county record**). Part of the range of this species includes an area extending from the Atlantic coast to the eastern periphery of the Central Plains in Seminole County, Oklahoma, and Limestone County, Texas, south of Dallas (Shelley, 1990). The Dallas and Marshall county sites reported here are the farthest west the species has been documented in northcentral Texas and southcentral Oklahoma, respectively. Although expected statewide in Arkansas, it is now known from only four counties of the state and only five counties in Oklahoma; in Texas, it is expected throughout the eastern one quarter of the state (Shelley, 1997).



Fig. 1. Distribution of *Scolopocryptops rubiginosus* in Arkansas, Oklahoma, and Texas. Previous records (dots); new records (stars).

Theatops spinicaudus (Wood, 1862). **ARKANSAS:** **Garland County**, vic. Bear off Brady Mountain Road, 6 April 2002, CTM. **Hot Spring County**, Lake DeGray State Park, 1 February 2002, CTM. **Little River County**, Wilton off US Hwy. 71, 6 February 2003, A. Shoemake (**new county record**). **Pike County**, Crater of Diamonds State Park, 10 February 2002, CTM. **Scott County**, 3.7 km SW "Y" City off US 71/270, 5 April 2003, CTM & Z. D. Ramsey (**new county record**). **OKLAHOMA:** **Atoka County**, McGee Creek State Park off OK St. Hwy. 3, 31 October 2002, CTM (**new county record**). **Choctaw County**, vic. Fort Towson off US 70, 18 April 2002, CTM (**new county record**). **McCurtain County**, Beaver's Bend State Park, David Boren Trail, 21 March 2002 and 3 June 2003, CTM; and 11.3 km S Smithville off US 259 on county road 891, 13 September 2002, CTM & J. Kessler. Interestingly, *T. spinicaudus* is considered to have statewide distribution in Arkansas, except for the extreme southern tier of counties, and has been reported previously from 24 counties of the state (Shelley, 1997). In Oklahoma, *T. spinicaudus* was previously known only from McCurtain and Muskogee counties (Shelley, 1997, 2002). The species has yet to be reported from Texas (Shelley, 2002) but these records suggest it may occur in the extreme northeast part of the state in the Ark-La-Tex region.

Cryptops leucopodus (Rafinesque, 1820). **ARKANSAS:** **Pulaski County**, Pinnacle Mountain State Park, 26 December 2001, CTM & JTM; and 3.2 km S Sweet Home

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off AR St. Hwy. 364, 27 December 2001, CTM & JTM. **TEXAS: Bowie County**, Texarkana, off I-30, S. Cowhorn Creek Loop, 16 January 2003, CTM (**new county record**). **Cass County**, 1.6 km E TX St. Hwy. 8 off FM 955, 29 October 2002, D. Moore (**new county record**). It is expected statewide in Arkansas, but authentic specimens have been reported from only eight counties; in Texas, it is found in the northeastern one-fourth of the state and has been reported previously from 16 counties; and in Oklahoma, *C. leucopodus* is expected in the southeastern one-third of state (Shelley, 2002).

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