

2008

New Records of Eurymerodesmid Millipeds (Diplopoda: Polydesmida) from Arkansas, Kansas, Louisiana, Oklahoma, and Texas

Chris T. McAllister
cmcallister@se.edu

Rowland M. Shelley
North Carolina State Museum of Natural Sciences

Follow this and additional works at: <http://scholarworks.uark.edu/jaas>

 Part of the [Entomology Commons](#)

Recommended Citation

McAllister, Chris T. and Shelley, Rowland M. (2008) "New Records of Eurymerodesmid Millipeds (Diplopoda: Polydesmida) from Arkansas, Kansas, Louisiana, Oklahoma, and Texas," *Journal of the Arkansas Academy of Science*: Vol. 62 , Article 28.
Available at: <http://scholarworks.uark.edu/jaas/vol62/iss1/28>

This article is available for use under the Creative Commons license: Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0). Users are able to read, download, copy, print, distribute, search, link to the full texts of these articles, or use them for any other lawful purpose, without asking prior permission from the publisher or the author.

This General Note is brought to you for free and open access by ScholarWorks@UARK. It has been accepted for inclusion in Journal of the Arkansas Academy of Science by an authorized editor of ScholarWorks@UARK. For more information, please contact scholar@uark.edu, cmiddle@uark.edu.

New Records of Eurymerodesmid Millipeds (Diplopoda: Polydesmida) from Arkansas, Kansas, Louisiana, Oklahoma, and Texas

C. McAllister^{1,3} and R. Shelley²

¹RapidWrite, 102 Brown Street, Hot Springs National Park, AR 71913

²Research Lab., North Carolina State Museum of Natural Sciences, MSC #1626 Raleigh, NC 27699-1626

³Correspondence: drctmcallister@aol.com

The milliped family Eurymerodesmidae occupies a variety of habitats in the central, southcentral, and southeastern United States; it ranges from northeastern NE, central IL, and southeastern NC to the Rio Grande and nearly to Tampa Bay, FL (Shelley 1990). The only component genus is *Eurymerodesmus* Brölemann, 1900, which comprises 25 species, nearly half of which (11 or 44%) occur in LA. *Eurymerodesmus mundus* Chamberlin, 1931, occurs from NE to AR and TX (McAllister et al. 2004), and herein, we document it from LA and new sites in AR and OK. We also provide new records of *E. amplus* (TX), *E. angularis* (LA), *E. b. birdi* (AR, KS, and TX), *E. melacis* (TX), and *E. mundus* and *E. pulaski* (AR).

Between October 2001 and October 2003, locales in Caddo Parish (Par.) were searched for *E. mundus*. Other eurymerodesmids were sampled through December 2007 from sites in AR, KS, LA, NE, OK, SD, and TX, many being along trails in state parks. Specimens were collected from damp areas in mixed deciduous and pine forests by overturning decaying logs and leaf litter with potato rakes. They were placed in vials containing 70% ethanol, returned to the laboratory for processing and sorting, and shipped to RMS for determination to the lowest taxonomic level. Voucher specimens are deposited in the North Carolina State Museum of Natural Sciences (NCSM). All localities cited below constitute new county/parish records.

Eurymerodesmus mundus Chamberlin 1931

AR: *Scott Co.*, Waldron, 6 January 2006, Waldron High School Students, ♂. **LA:** Caddo Par. near Ida, off US 71 and Munnerlyn Chapel Road (32°59.2'N, 93°53.5'W, elevation = 76 m), 24 October 2003, CTM ♂. **OK:** *Washita Co.*, Crowder Lake St. Pk., 8 November 2003, CTM, ♂, ♀. This species occurs in Lafayette, Miller, Polk, and Sevier cos., AR (McAllister et al. 2004), and the above record is the northernmost in the state. In OK, *E. mundus* has been reported from 13 cos. (Fig. 1), the above record being the westernmost (McAllister et al. 2004). The LA male was under bark of a decaying pine log at the edge of

deciduous forest that had been recently clear-cut. This record confirms McAllister et al.'s (2004) prediction of eventual discovery in this region of LA. The distribution is shown below in Fig. 1.

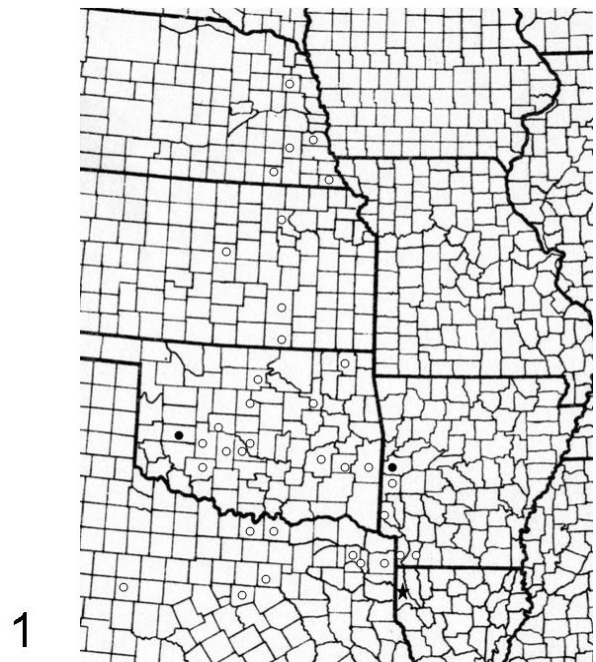


Figure 1. Distribution of *E. mundus*. Open circles (previous records); closed circles (new records); star (state record).

Eurymerodesmus amplus Causey 1952

TX: *Cherokee Co.*, Caddoan Mounds State Historic Park, 1 March 2003, CTM, G. Torres, 8♂, 7♀, 3 juvs. *Freestone Co.*, Fairfield Bay St. Pk., 9.7 km NE Fairfield, 21 December 2002, CTM, J. T. McAllister, III, 3♂. *Hardin Co.*, Village Creek St. Pk., Lumberton, 15 June 2004, CTM, ♂. *Limestone Co.*, Confederate Reunion Grounds St. Pk., 21 December 2002, CTM, J. T. McAllister, III, 3♂, 2♀. This milliped has been reported from several western parishes in LA and 18 cos. in east TX, and an allopatric population exists to the west in Mason Co., TX, on the Edwards Plateau region (Shelley 1990).

C. McAllister and R. Shelley

Eurymerodesmus angularis Causey 1951

LA: Webster Par., Lake Bistineau St. Pk., 1 January 2004, CTM, ♂. *Eurymerodesmus angularis* occurs in 6 LA pars., 7 cos. in AR, and 3 in TX (Shelley 1990; McAllister et al. 2004).

Eurymerodesmus birdi birdi Chamberlin 1931

AR: Scott Co., Lake Winkle, Waldron, 3 February 2006, S. Pickens, ♂. **KS:** Cherokee Co., 1.6 km S Galena off St. Hwy 26 at Schermerhorn Park, 4 May 2005, CTM, ♂. **TX:** Cass Co., Atlanta St. Pk., 3 October 2001, CTM, RMS, ♂. Harrison Co., Caddo Lake St. Pk., 12 November 2001, CTM, 3♂. This widely ranging milliped is known from AR, KS, LA, MS, MO, OK, and TX (Shelley 1990; McAllister and Shelley 2003; McAllister et al. 2002a,b, 2003a,b).

Eurymerodesmus melacis Chamberlin and Muliak 1941

TX: Brown Co., Brownwood St. Pk., 27 November 2002, CTM, ♂, juv. Coleman Co., 3.2 km E Talpa off US 67, 23 December 2006, CTM, 7♂. Edwards Co., 3.2 km SW Telegraph off US 377, 21 February 2004, CTM, 7♂. Sutton Co., Caves of Sonora, 18 November 2005, CTM, ♂♂, ♀♀, juv. *Eurymerodesmus melacis* is the westernmost congener in TX (Fig. 2), it inhabits caves on the Edwards Plateau, and is endemic in the state (Shelley 1990).

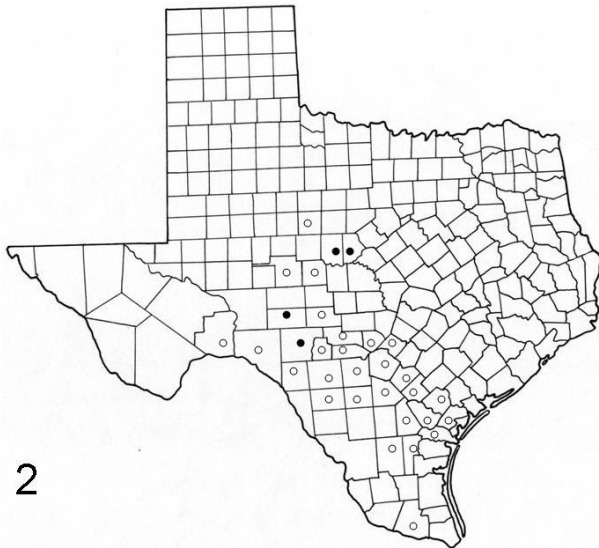


Figure 2. Distribution of *E. melacis* in TX. Open circles (previous records); closed circles (new records).

Eurymerodesmus pulaski (Causey 1950)

AR: Saline Co., 4.8 km S Shannon Hills, 26 December 2006, CTM, ♂, ♀, juv. Previously known only from Pulaski Co. (Shelley 1990; McAllister et al.

2002b, 2003a), *E. pulaski* was reported as "*Leptodesmus hispidipes*" by Bollman (1888) and *Paresmus pulaski* by Causey (1950); it was collected in the 1880s, 4.8 km south of Sweet Home by C. H. Bollman. Recent samples by McAllister et al. (2002b, 2003a) documented *E. pulaski* from Pinnacle Mountain St. Pk. and on the UALR campus and Rosedale Edition in western Little Rock. It is 1 of 5 endemic species of *Eurymerodesmus* in the state (Robison et al. 2008).

Interestingly, no eurymerodesmids were found by CM at several sites in northeastern NE or immediately north of the MO River watercourse in southeastern SD (Clay, Union and Yankton cos.), although there are records of *E. mundus* from Cass, Cuming, Jefferson, Lancaster, and Richardson cos., NE (Shelley 1990). This further supports the contention of Shelley (1990) that *Eurymerodesmus* probably does not occur in SD and the MO River is a boundary for the family.

Little milliped sampling has taken place recently in LA in general and the northwestern region in particular. Papers on the state's fauna include Chamberlin (1918a,b, 1920, 1942), Viosca (1919), Causey (1953, 1954, 1955, 1958, 1963), and Loomis (1959), and records can be gleaned from studies of taxa occurring there (Hoffman 1958; Shelley 1980, 1982, 1984a,b, 2002, 2006; Shelley and Golovatch 2000, Shelley and McAllister 2006). Northwestern LA is expected to harbor a diversity of species as suggested by studies in neighboring states (McAllister et al., 2002a,b, 2003a,b, 2004, 2005; McAllister and Shelley, 2005; Shelley et al. 2003a,b, 2005). Additional sampling in this region is recommended.

Acknowledgments

CM thanks the AR Game and Fish Commission, NE Game and Parks Commission, OK Department of Wildlife Conservation, SD Department of Game, Fish, and Parks, and the TX Parks and Wildlife Department for Scientific Collecting Permits. We also thank various collectors who provided assistance and specimens included in this study, especially C. S. Harris, J. T. McAllister, III, D. I. Moore, and Waldron (AR) High School students.

Literature Cited

Bollman CH. 1888. Preliminary list of the Myriapods of Arkansas, with descriptions of new species. *Entomologica Americana* 4:1-8.

New Records of Eurymeresmid Millipeds from Arkansas, Kansas, Louisiana, Oklahoma, and Texas

- Causey NB.** 1950. Five new Arkansas millipeds of the genera *Eurymeresmus* and *Paresmus* (Xystodesmidae). *Ohio Journal of Science* 50:267-272.
- Causey NB.** 1953. On five new North American millipeds and records of some established species. *American Midland Naturalist* 50:152-158.
- Causey NB.** 1954. Three new species and new records of southern millipeds. *Tulane Studies in Zoology* 2:63-68.
- Causey NB.** 1955. New records and descriptions of polydesmoid millipeds (Order Polydesmida) from the eastern United States. *Proceedings of the Biological Society of Washington* 68:21-30.
- Causey NB.** 1958. Pill millipeds (Desmonidae, Polydesmida) in the United States. *Proceedings of the Biological Society of Washington* 71:173-178.
- Causey NB.** 1963. Additional records of Louisiana millipeds. *Proceedings of the Louisiana Academy of Science* 26:63-68.
- Chamberlin RV.** 1918a. Myriapods from Okefenokee Swamp, GA, and from Natchitoches Par., Louisiana. *Annals of the Entomological Society of America* 11:369-380.
- Chamberlin RV.** 1918b. Two new diplopods from Louisiana. *Canadian Entomologist* 50:361-364.
- Chamberlin RV.** 1920. A new leptodesmid diplopod from Louisiana. *Proceedings of the Biological Society of Washington* 33:97-100.
- Chamberlin RV.** 1942. New southern millipeds. *Bulletin of the University of Utah* 32:3-19.
- Chamberlin RV and RL Hoffman.** 1958. Checklist of the millipeds of North America. *Bulletin No. 212, United States National Museum*, 236 pp.
- Hoffman RL.** 1958. Revision of the milliped genus *Pachydesmus* (Polydesmida:Xystodesmidae). *Proceedings of the United States National Museum* 108:181-218.
- Loomis HF.** 1959. Millipeds collected enroute from Florida to San Antonio, Texas, and vicinity. *Journal of the Washington Academy of Science* 49:157-163.
- McAllister CT and RM Shelley.** 2005. Discovery of the milliped, *Auturus louisianus louisianus* (Chamberlin, 1918), in Texas (Diplopoda: Polydesmida: Eurymeresidae). *Entomological News* 116:187-188.
- McAllister CT, CS Harris, RM Shelley, and JT McAllister III.** 2002a. Millipeds (Arthropoda: Diplopoda) of the Ark-La-Tex. I. New distributional and state records for seven counties of the West Gulf Coastal Plain of Arkansas. *Journal of the Arkansas Academy of Science* 56:91-94.
- McAllister CT, RM Shelley, and JT McAllister III.** 2002b. Millipeds (Arthropoda:Diplopoda) of the Ark-La-Tex. II. Distributional records for some species of western and central Arkansas and eastern and southeastern Oklahoma. *Journal of the Arkansas Academy of Science* 56:95-98.
- McAllister CT, CS Harris, RM Shelley, and JT McAllister III.** 2003a. Millipeds (Arthropoda: Diplopoda) of the Ark-La-Tex. III. Additional records from Arkansas. *Journal of the Arkansas Academy of Science* 57:95-98.
- McAllister CT, CS Harris, RM Shelley, and JT McAllister, III.** 2003b. Millipeds (Arthropoda: Diplopoda) of the Ark-La-Tex. IV. New geographic distribution records from southcentral and southeastern Oklahoma. *Proceedings of the Oklahoma Academy of Science* 83:83-86.
- McAllister CT, RM Shelley, and DI Moore.** 2004. Noteworthy records of the millipeds, *Eurymeresmus angularis* and *E. mundus* (Polydesmida: Eurymeresidae), from northeastern and westcentral Texas. *Texas J. Sci.* 56:1-5.
- McAllister CT, RM Shelley, H Enghoff, and ZD Ramsey.** 2005. Distribution of the milliped *Virgoiulus minutus* (Brandt, 1841): first records from Mississippi, Oklahoma, and Texas. *Western North American Naturalist* 65:258-266.
- Robison HW, CT McAllister, CL Carlton, and G Tucker.** 2008. The Arkansas endemic biota: An update with additions and deletions. *Journal of the Arkansas Academy of Science* 62: *In press*.
- Shelley RM.** 1980. Revision of the milliped genus *Pleurolooma* (Polydesmida: Xystodesmidae). *Canadian Journal of Zoology* 58:129-168.
- Shelley RM.** 1982. Revision of the milliped genus *Auturus* (Polydesmida: Platyrrhacidae). *Canadian Journal of Zoology* 60:3249-3267.
- Shelley RM.** 1984a. A synopsis of the milliped genus *Abacion* Rafinesque (Callipodida: Caspiopetalidae). *Canadian Journal of Zoology* 62:980-988.

C. McAllister and R. Shelley

- Shelley RM.** 1984b. A revision of the milliped genus *Dicellarius* with a revalidation of the genus *Thrinaxoria* (Polydesmida: Xystodesmidae). Proceedings of the Biological Society of Washington 97:473-512.
- Shelley RM.** 1990. Revision of the milliped family Eurymerodesmidae (Polydesmida: Chelodesmidea). Memoirs of the American Entomological Society 37:1-112.
- Shelley RM.** 2000. Parajulid studies II. The subgenus *Hakiulus* Chamberlin (Julida: Parajulidae: Parajulinae: Aniulini). Myriapodologica 6:121-145.
- Shelley RM.** 2002. The milliped genus *Oriulus* Chamberlin (Julida: Parajulidae). Canadian Journal of Zoology 80:100-109.
- Shelley RM and SI Golovatch.** 2000. The milliped family Haplodesmidae in the Hawaiian Islands, with records of *Prosopdesmus jacobsoni* Silvestri from Florida and Louisiana (Polydesmida). Bishop Museum Occasional Papers 64:48-49.
- Shelley RM and CT McAllister.** 2006. Composition and distribution of the milliped tribe Pachydesmini west of the Mississippi River (Polydesmida: Xystodesmidae). Western North American Naturalist 66:45-54.
- Shelley RM, CT McAllister, and JL Hollis.** 2003a. A new milliped of the genus *Abacion* Rafinesque, 1820 from Arkansas, U.S.A. (Callipodida: Abacionidae). Zootaxa 170:1-7.
- Shelley RM, CT McAllister, and MF Medrano.** 2006. Distribution of the milliped genus *Narceus* Rafinesque, 1820 (Spirobolida: Spirobolidae): Occurrences in New England and west of the Mississippi River; a summary of peripheral localities; and first records from Connecticut, Delaware, Maine, and Minnesota. Western North American Naturalist 66:374-389.
- Shelley RM, CT McAllister, and SB Smith.** 2003b. Discovery of the milliped *Pleurolooma flavipes* Rafinesque in Texas, and other records from west of the Mississippi River (Polydesmida: Xystodesmidae). Entomological News 114:2-6.
- Shelley RM, CT McAllister, and ZD Ramsey.** 2005. Discovery of the milliped *Scytonotus granulatus* (Say, 1821) in Oklahoma and Alabama, with a review of its distribution (Polydesmida: Polydesmidae). Western North American Naturalist 65:112-117.
- Viosca P.** 1919. Reptiles, batrachians, fishes and invertebrates: Myriapods of Louisiana. Annual Report of the Louisiana State Museum for 1918, New Orleans, p. 44.