

# New Amphibian and Reptile County Records from Eastern South Dakota, USA

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Current understanding of amphibian and reptile distributions in South Dakota is minimal compared to many other states in the region, and as a result, many distributional gaps exist. Eastern South Dakota (east of the Missouri River) was once a combination of mixed and tallgrass prairies with prairie pothole wetlands spanning much of the northern region but has since been modified into a landscape dominated by agriculture. The conversion of these prairie habitats into croplands is occurring

at an alarming rate and is contributing to the continued loss and degradation of existing wetlands (Wright and Wimberly 2013). In addition, land formerly considered poorly suited for agriculture is now being removed from the Conservation Reserve Program and converted to row crops (e.g., corn, soybeans) for the production of biofuels (Fargione et al. 2009). As a result of this continued habitat loss, regional declines in both abundance and diversity of species are expected.

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It is clearly difficult to quantify changes in distributions when no baseline has been established. Ballinger et al. (2000) has served as the primary resource documenting species occurrences within South Dakota, and few records have been published since. Here, we report 17 new county records from eastern South Dakota that are the result of field work conducted across this region during 2013 and 2014. County records were determined by examining Ballinger et al. (2000), Platt et al. (2005), individual accounts published in *Herpetological Review*, and through examination of museum holdings. All voucher specimens were deposited at the Biodiversity Collections at the University of Texas

at Austin (TNHC) and were verified by Travis J. LaDuc. Locality information was collected by a handheld GPS (WGS 84), and all nomenclature follows that of Crother (2012). Many of the closest known localities to these records are from specimens formerly part of the University of South Dakota Herpetological Collection that is now housed at the University of Nebraska State Museum (UNSM) or from specimens at the James Ford Bell Museum of Natural History (JFBM) at the University of Minnesota.

#### CAUDATA — SALAMANDERS

**AMBYSTOMA MAVORTIUM (Western Tiger Salamander).** DEUEL Co.: Mundahl Waterfowl Production Area (44.67588°N, 96.54827°W). 18 July 2013. Drew R. Davis. TNHC 86202 (DRD 417). Juvenile individual (70 mm SVL; 55 mm tail length; 14.7 g) collected while seining in an emergent wetland. This record fills a gap in the distribution of this species on the eastern edge of South Dakota and is known from all surrounding counties in both South Dakota (Grant, Codington, Hamlin, Brookings; Fisher et al. 1999; Ballinger et al. 2000) and Minnesota (Lac Qui Parle, Lincoln, Yellow Medicine; Moriarty and Hall 2014). The nearest known collected specimens are from ca. 9 km to the east, from Sioux Nation Wildlife Management Area, Yellow Medicine Co., Minnesota (JFBM 13660, 13676). We recognize this individual as *A. mavortium* but note that little information is known about the boundary between *A. mavortium* and *A. tigrinum* in South Dakota.

#### ANURA — FROGS

**ANAXYRUS AMERICANUS (American Toad).** DEUEL Co.: Coteau Prairie Waterfowl Production Area (44.89663°N, 96.71521°W). 16 May 2013. Jacob L. Kerby, Molly J. Fox, and Katie J. Ferguson. TNHC 93498 (DRD 143). Adult male (60 mm SVL; 28.29 g) collected while calling in submerged vegetation. This species has been previously reported from Deuel Co. (Fischer et al. 1999; Naugle et al. 2005), but no voucher specimens exist (Ballinger et al. 2000). This record fills a gap in the distribution of this species along the eastern border of South Dakota and is known from Brookings and Grant counties, South Dakota (Ballinger et al. 2000) and Lac Qui Parle, Lincoln, and Yellow Medicine counties, Minnesota (Moriarty and Hall 2014). The nearest known specimens are from ca. 40 km to the southeast, from north of Canby, Yellow Medicine Co., Minnesota (JFBM 13436, 13437).

**LITHOBATES CATESBEIANUS (American Bullfrog).** CLAY Co.: Missouri River backwater adjacent to United States Army Corps of Engineers North Alabama Bend property (42.76037°N, 96.97012°W). 7 July 2014. Drew R. Davis. TNHC 93499 (DRD 1224). Juvenile individual (42 mm SVL; 7.22 g) collected in vegetation along shoreline. This species has been previously reported from Clay Co. (Fischer et al. 1999; Naugle et al. 2005), but no voucher specimens exist (Ballinger et al. 2000). This record fills a gap in the distribution of this species in southeastern South Dakota and is previously known to the west in Yankton Co. (Ballinger et al. 2000), and to the south in Dixon and Cedar counties, Nebraska (Ballinger et al. 2010; Fogell 2010; Davis et al. 2014). Additional observations exist from Union Co. to the east (Fogell 2003) and Turner and Lincoln counties to the north (Backlund 2004), but no voucher specimens have been collected. The nearest known specimen is from ca. 12 km to the west, from northeast of Wynot, Cedar Co., Nebraska (TNHC 86200; Davis et al. 2014).

**PSEUDACRIS MACULATA (Boreal Chorus Frog).** DEUEL Co.: Nelson Waterfowl Production Area (44.90949°N, 96.63149°W). 18 June 2013. Jacob L. Kerby, Molly J. Fox, and Katie J. Ferguson. TNHC 93497 (DRD 279). Tadpoles (N = 3) collected via dip net while sampling for macroinvertebrates. This species has been reported from Deuel Co. (Fischer et al. 1999; Naugle et al. 2005), but no voucher specimens exist (Ballinger et al. 2000). This record fills a gap in the distribution of this species in eastern South Dakota and is known from Brookings, Grant, and Hamlin counties, South Dakota (Ballinger et al. 2000) and Lac Qui Parle, Lincoln, and Yellow Medicine counties, Minnesota (Moriarty and Hall 2014). The nearest known specimens are from ca. 26 km to the north, from near Milbank, Grant Co., South Dakota (TNHC 93496).

#### TESTUDINES — TURTLES

**CHELYDRA SERPENTINA (Snapping Turtle).** BROOKINGS Co.: SD Hwy 14, 0.2 km by road NW jct 13<sup>th</sup> St (44.32086°N, 96.81798°W). 23 June 2013. Drew R. Davis. TNHC 93556 (DRD 266). Adult female (220 mm carapace length; 176 mm plastron length) collected while crossing the highway. The nearest known specimen is from ca. 27 km to the southeast from northwest Moody Co., South Dakota (TNHC 93505; see below).

DAY Co.: W shore of Enemy Swim Lake (45.43355°N, 97.28558°W). 9 June 2014. Drew R. Davis and Andrew D. Koch. TNHC 93512 (DRD 1040). Shell (94 mm carapace length) of sub-adult found along the shoreline. The nearest known specimen is from ca. 29 km to the north from near Clear Lake, Marshall Co., South Dakota (TNHC 93502; see below).

DEUEL Co.: Johnson I Waterfowl Production Area (44.62590°N, 96.49980°W). 14 May 2013. Drew R. Davis and Elizabeth A. Berg. TNHC 93555 (DRD 136). Adult male (285 mm carapace length; 214 mm plastron length) collected dead in the water along southern edge of wetland. The cause of death is unknown, but was not due to predation or physical injury. The nearest known specimen is from ca. 42 km to the southwest from west of Brookings, Brookings Co., South Dakota (TNHC 93556; see above).

MARSHALL Co.: Clear Lake Game Production Area (45.69561°N, 97.34107°W). 6 August 2014. Drew R. Davis and Andrew D. Koch. TNHC 93502 (DRD 1397). Juvenile individual (39 mm carapace length; 29 mm plastron length; 14.32 g) collected in a small seep area N of Clear Lake. The nearest known specimen is from ca. 29 km to the south from Enemy Swim Lake, Day Co., South Dakota (TNHC 93512; see above).

MINNEHAHA Co.: Lost Lake Waterfowl Production Area (43.67732°N, 97.05741°W). 8 July 2013. Drew R. Davis. TNHC 93513 (DRD 439). Adult found dead along W side of dugout pond (skull vouchered). The nearest known specimens are from ca. 69 km to the east from Luverne, Rock Co., Minnesota (JFBM R100, P143).

MOODY Co.: 482<sup>nd</sup> Ave at jct with 223<sup>rd</sup> St (44.15322°N, 96.56906°W). 24 August 2013. Paul Nelson. TNHC 93503 (DRD 1412). Juvenile individual (35 mm carapace length; 27 mm plastron length; 10.6 g) hatched from an egg collected from a DOR adult female turtle. A DOR specimen was reported by Fogell (2003), but was not collected as a voucher specimen. The nearest known specimen is from ca. 21 km ENE from Altona Wildlife Management Area, Lincoln Co., Minnesota (JFBM P215).

This species has been observed across South Dakota (Backlund 2004; Bandas and Higgins 2004), but few voucher specimens exist (Ballinger et al. 2000). Records for this species exist

in adjacent counties in Minnesota (Lincoln, Pipestone, Rock, Yellow Medicine; Moriarty and Hall 2014) and Iowa (Lyon; LeClere 2013), but not North Dakota (Sargent; Wheeler and Wheeler 1966; Jundt 2000).

**CHRYSEMYS PICTA (Painted Turtle).** DEUEL Co.: Johnson I Waterfowl Production Area (44.62628°N, 96.50025°W). 14 May 2013. Drew R. Davis and Elizabeth A. Berg. TNHC 93514 (DRD 135). Shell of adult (186 mm carapace length; 180 mm plastron length) found along southern shore of a large wetland. This record fills a gap in the distribution of this species along the eastern edge of South Dakota and is previously known from Brookings and Grant counties, South Dakota (Ballinger et al. 2000) and Lac Qui Parle, Lincoln, and Yellow Medicine counties, Minnesota (Moriarty and Hall 2014). The nearest known specimen is from ca. 44 km to the southwest from Oakwood Lakes, Brookings Co., South Dakota (UNSM 18156).

TURNER Co.: Crosley-Schaeffer Game Production Area (43.29219°N, 97.04749°W). 31 May 2014. Drew R. Davis. TNHC 93515 (DRD 946). Shell of a subadult found along southern shoreline of Mud Lake. This record fills a gap in the distribution of this species in southeastern South Dakota and is known from voucher specimens collected from surrounding counties (Minnehaha, Lincoln, Clay, Yankton, and Hutchinson; Ballinger et al. 2000). This species has been observed from Turner Co. but no vouchered specimens exist (Backlund 2004; Bandas and Higgins 2004). The nearest known specimen was collected from ca. 37 km to the northeast from Sioux Falls, Minnehaha Co., South Dakota (UNSM 18265).

#### SQUAMATA — SNAKES

**STORERIA OCCIPITOMACULATA (Red-bellied Snake).** BROOKINGS Co.: South Dakota State University (SDSU) Oak Lake Field Station (44.51009°N, 96.53282°W). 23 August 2013. Drew R. Davis. TNHC 93506 (DRD 580). Adult male (182 mm SVL; 54 mm tail length; 2.86 g) collected on a dirt road immediately north of the field station laboratory. Multiple additional individuals were encountered at this site under artificial cover. This record fills part of a large gap in the known distribution of this species in eastern South Dakota and is previously known from the north in Deuel Co., South Dakota (Ballinger et al. 2000) and to the east in Lincoln Co., Minnesota (Moriarty and Hall 2014). This species has been previously reported from Brookings Co., but no voucher specimens exist (Backlund 2004). The nearest known specimen is from ca. 39 km to the southeast from Altona Wildlife Management Area, Lincoln Co., Minnesota (JFBM 12927).

**THAMNOPHIS RADIX (Plains Gartersnake).** HUTCHINSON Co.: US Route 81, 0.1 km by road N jct 269<sup>th</sup> St (43.48884°N, 97.42117°W). 1 October 2014. Drew R. Davis. TNHC 93507 (DRD 1461). Adult male (450 mm SVL; 90 mm tail length; 38.52 g) collected DOR. This record fills a gap among Davison, Hanson, McCook, and Yankton counties, South Dakota (Ballinger et al. 2000). The nearest known specimen is from ca. 10 km to the northeast from south-central McCook Co., South Dakota (TNHC 93508; see below).

McCOOK Co.: SD Hwy 42, 1.0 km by road E jct 444<sup>th</sup> Ave (43.54342°N, 97.31573°W). 1 October 2014. Drew R. Davis. TNHC 93508 (DRD 1462). Adult male (445 mm SVL; 157 mm tail length; 37.38 g) collected DOR. This record fills a gap among Hanson, Hutchinson, Lake, and Minnehaha counties, South Dakota (Ballinger et al. 2000). The nearest known specimen is from ca. 10 km to

the southwest from extreme northwestern Hutchinson Co., South Dakota (TNHC 93507; see above).

MINNEHAHA Co.: N Six Mile Rd, 0.2 km by road S jct E Maple St (43.57090°N, 96.63180°W). 21 September 2014. Drew R. Davis. TNHC 93509 (DRD 1432). Adult female (495 mm SVL; 136 mm tail length; 57.27 g) collected DOR. This record fills a gap among Lake, Lincoln, McCook, and Moody counties, South Dakota (Ballinger et al. 2000), Rock Co., Minnesota (Moriarty and Hall 2014), and Lyon Co., Iowa (LeClere 2013). This species has previously been reported from Minnehaha Co. (Fogell 2003; Backlund 2004); however, no voucher specimens have been collected. The nearest known specimen is from Lake Alvin, ca. 15 km to the south in Lincoln Co., South Dakota (UNSM 16216).

**THAMNOPHIS SIRTALIS (Common Gartersnake).** BROOKINGS Co.: South Dakota State University (SDSU) Oak Lake Field Station (44.51070°N, 96.53052°W). 23 August 2013. Drew R. Davis. TNHC 93511 (DRD 578). Subadult male (395 mm SVL; 127 mm tail length; 22.97 g) collected under artificial cover along forest edge. This record fills part of a large gap in the known distribution of this species in eastern South Dakota and is not known from surrounding counties in South Dakota (Ballinger et al. 2000) or Minnesota (Moriarty and Hall 2014). The nearest known specimens are from ca. 82 km to the north from Big Stone National Wildlife Refuge, Lac Qui Parle Co., Minnesota (JFBM 13313–13315).

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