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New Records and Notes on the Natural History of Selected Vertebrates from Southern Arkansas

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Tumlison et al. (1992) noted that the vertebrate fauna of southwestern Arkansas was less well known than that of other regions of the state. The same situation exists in southeastern Arkansas. Occasional papers have attempted to better document this southern Arkansas vertebrate fauna (McAllister et al. 2008, 2009, Robison and McAllister 2007, Tumlison 1992).

This report documents new records of distribution and provides notes on the natural history of selected vertebrates from southern Arkansas. Southwestern Arkansas lies almost entirely within the West Gulf Coastal Plain natural division (Foti 1974) whereas southeastern Arkansas includes part of the Mississippi Alluvial Plain, and the influence of the Ouachita Mountains occurs in the northern part of the region.

Field observations and collections were made by the authors and students at Henderson State University and Southern Arkansas University. Fishes were obtained by the use of seines, amphibians and reptiles were taken by hand, and mammal records were obtained by use of museum special traps or observations of road hit animals.

Specimens of fishes, amphibians, and reptiles were fixed in 10% formalin, stored in 40-50% isopropanol, and are housed at Southern Arkansas University (SAU) and Henderson State University (HSU). Small mammals collected by traps were prepared as museum specimens or, in the case of roadkill, were vouchered via digital photography. Birds also were recorded with digital photography. Due to several recent changes in nomenclature, scientific names of reptiles and amphibians follow "Standard Common and Current Scientific Names for North American Amphibians, Turtles, Reptiles, and Crocodilians, 2009" (http://www.cnah.org/nameIntro.asp).

Class Osteichthyes:

Ichthyomyzon castaneus Girard – Chestnut Lamprey. Robison and Buchanan (1988) initially provided lamprey records for Arkansas. Robison et al. (2006) reported additional lamprey records for Arkansas including some from southern Arkansas. The 2 records presented here provide additional documentation of this rarely taken parasitic species. One specimen was taken from a *Moxostoma* sucker collected at the Saline River near AR St. Hwy. 172 (Sec. 11, T14S, R9W), Drew County, AR, on 12 June 1989, by H. W. Robison and SAU students. A second specimen was taken from Moro Creek at AR St. Hwy. 160 (Sec. 10, T15S, R12W), Bradley County, AR, on 14 April 1991, by HWR.

Ichthyomyzon gagei Hubbs and Trautman – Southern Brook Lamprey. One specimen of *I. gagei* was collected from Moro Creek at AR St. Hwy. 275 (Sec. 34, T12S, R12W), Bradley County, AR, on 18 February 1990, by HWR.

Anguilla rostrata (Lesueur) – American Eel. Being catadromous, freshwater eels mature in freshwater then swim downstream to breed in the Sargasso Sea, south of Bermuda. The young return to rivers of eastern North America and migrate upstream, where they mature after several years. However, dams on major rivers have severely limited the extent of the upstream migration, and thus the distribution of American eels (Robison and Buchanan 1988).

Drawdown of water in the lower lake and Caddo River (DeGray Lake system, Clark County) to allow maintenance work on the dam resulted in many fishes becoming entrapped in a concrete rectangle below the spillway. From this area, we captured 35 eels on 3, 5, and 6 March 2010. Most records of eels from Arkansas have been based on specimens caught by fishermen, thus they represent the size classes ranging from 381-762 mm in length (Robison and Buchanan 1988). Smaller eels (less than 400 mm in length) feed largely on aquatic insects (Ogden 1970) so are less often caught on hook-and-line. Most of our 35 individuals, caught with a large aquarium dip net, were less than 400 mm in length and the smallest was only

205 mm in total length. Variation in sizes observable within the sample of specimens likely represent multiple migrations from the sea, all of whose upstream progress was halted by the dam. The concrete basin did not contain any specimens from the upper end of the size range.

Esox niger Lesueur – Chain Pickerel. In Arkansas, this larger pickerel occurs mostly in the Coastal Plain lowlands and deltaic provinces of the southern and eastern regions of the state (Robison and Buchanan 1988). Spawning is known to occur as early as late February (Keith 1972). On 3 March 2010, we collected 4 specimens of *E. niger* from the Caddo River below the lower dam of DeGray Lake, Clark County. The specimens were about 25 mm long, suggesting a spawning date of early February – apparently the earliest record of spawning in Arkansas.

Hybognathus hayi Jordan – Cypress Minnow. Robison and Buchanan (1988) reported this species from Coastal Plain areas of Arkansas. The following represent additional records of this species and clarifies its southern distribution in the state. Five specimens were taken in Smackover Creek at AR St. Hwy. 7 (Sec. 32, T15S, R16W), Union County, AR, on 10 July 1991, by HWR. Also in Union County, 2 specimens were collected from Three Creeks at AR St. Hwy. 15 (Sec. 20, T19S, R17W), on 15 September 1988, by HWR.

Notropis chalybaeus (Cope) – Ironcolor Shiner. Robison (1977) discussed the distribution, habitat, and status of *N. chalybaeus* in Arkansas, and Robison and Buchanan (1988) mapped its occurrence in the state. The following provides additional records of distribution for this uncommon species from south Arkansas. On 6 October 1989, 2 specimens were collected from Three Creeks at AR St. Hwy. 15 (Sec. 20, T19S, R17W), Union County, AR, by HWR and the SAU Vertebrate Natural History class. An earlier collection from Lafayette County at Bayou Bodcau at U.S. Hwy. 82 (Sec. 7, T16S, R23W), on 23 September 1978 by HWR yielded 3 juvenile specimens.

Moxostoma poecilurum (Jordan) – Blacktail Redhorse. Robison and Buchanan (1988) reported this uncommon sucker mostly from the Ouachita River system below its impoundments in south-central Arkansas. A young-of-the-year specimen was collected from farther south, in eastern Union County, from LaPere Creek at AR St. Hwy. 129, 3.2 km (2 mi.) South of Huttig, AR (Sec. 35, T19S, R11W), on 17 October 1992, by HWR and students.

Class Amphibia:

Pseudacris fouquetii Lemmon, Lemmon, Collins, and Cannatella – Cajun Chorus Frog (formerly known as Upland Chorus Frog, *P. triseriata*). Although this species is collected commonly and many records exist across the state, Trauth et al. (2004) show only 1 record of this species from Union County, AR. Additional records of *P. fouquetii* presented herein fill an apparent void in this large county. Two specimens were collected from a roadside ditch ca. 3.2 km (2 mi.) south of Strong on AR St. Hwy. 271 (Sec. 16, R12W, T19S) on 21 February 1989, by HWR. Another individual was taken on 1 March 1992 from a flooded ditch 7 miles south of El Dorado on AR St. Hwy. 7 (Sec. 12, R15W, T19S), by HWR.

Ambystoma opacum (Gravenhorst) – Marbled Salamander. Trauth et al. (2004) showed no records for this amphibian for Hot Spring County, but Robison and McAllister (2006) reported a specimen from the extreme SE corner of the county. We have specimens collected more broadly across the county: near Glen Rose near Ten-Mile Creek (Sec. 3, T4S, R16W), 28 March 2004, HSU 1352; and 17.7 km (11 mi.) SE Bismarck off AR St. Hwy. 283 (Sec. 34, T5S, R19W), 1 March 2000, HSU 621 (2 specimens).

Class Chelonia:

Compared with distributions shown in Trauth et al. (2004), we have new county records of 2 turtle species.

Sternotherus odoratus (Latreille) – Stinkpot turtle. A specimen was collected in Clark County, from a pond at the jct. of AR St. Hwys. 51 and 7 (Sec. 16, T7S, R19W), 1 March 2006, HSU 1399.

Sternotherus carinatus (Gray) – Razorback Musk Turtle. Hot Spring County, off Hwy. 67 at Midway, Sec. 5, T6S, R18W, 21 April 2000, HSU 654; 0.4 km (0.25 mi.) W Ouachita River, Grigsby Ford Road, (SE ¼, Sec. 25, T4S, R18W), 27 February 2000, HSU 1040.

This species has not been well-studied in Arkansas, but it is common in DeGray Lake. Over a period of 2 years, we caught, marked, and released 28 individuals within 1 cove near DeGray Lodge in Hot Spring County. These individuals ranged from young with a minimum carapace length of 36 mm (hatchlings are

23-31 mm – Trauth et al. 2004) to adults with a maximum carapace length of 141 mm (149 mm is the maximum for this species – Trauth et al. 2004). Young specimens (carapace length 36-45 mm, n=12) were caught on 4 dates spanning the month of September (2002, 2003). Further, a 40 mm individual was caught 6 August 2004, and 3 individuals with carapace lengths of 40, 42, and 42 were captured 20 May 2003. Because sampling trips were not taken during all summer months, it is not known whether the reproductive season is bimodal or continuous.

Class Reptilia:

The following localities for collection of lizards and snakes all represent new county records of distribution (Trauth et al. 2004). Unless otherwise noted, the county records fill gaps in which surrounding counties already have published records.

Plestiodon anthracinus pluvialis (Baird) – Southern coal skink (formerly genus *Eumeces*). Grant County, 14.5 km (9 mi.) N Sheridan off U.S. Hwy. 167 (NE ¼, Sec. 25, T3S, R13W), 23 April 2000, HSU 661.

Plestiodon laticeps Schneider – Broadhead skink (formerly genus *Eumeces*). Hempstead County, on AR St. Hwy. 73 (Sec. 34, T11S, R26W), 27 January 1998, HSU 262.

Cemophora coccinea copei Jan – Northern Scarlet snake. Pike County, on AR St. Hwy. 84 (Sec. 2, T6S, R25W), 30 May 1998, HSU 410. This locality represents the most westward record for southern Arkansas.

Lampropeltis getula holbrooki Stejneger – Speckled Kingsnake. On 23 May 1990 a single individual of this species was found dead on the road 4.8 km (3 mi.) E of Prattsville on U.S. Hwy. 270 (Sec. 1, T5S, R14W) in Grant County, AR. Because the specimen was mashed severely, no voucher specimen was taken.

Nerodia fasciata confluens (Blanchard) – Broadbanded water snake. Clark County, 0.8 km (0.5 mi.) down Cedar Grove Road off Old Military Road (Sec. 16, T6S, R20W), 30 April 2000, HSU 703; Ouachita Baptist University Pond (Sec. 17, T7S, R19W), 27 March 1998, HSU 226. Hempstead County, 16 km (10 mi.) S Hope, County Road 7 (Springhill) (Sec. 19, T14S, R24W), 4 May 2006, HSU 1457.

Regina rigida sinicola (Huheey) – Gulf crayfish snake. Garland County, Lake Hamilton Primary School (Sec. 26, T3S, R21W), 28 April 2004, HSU 1351. Record extends known distribution NW of records in adjacent Hot Spring and Saline Counties.

Storeria dekayi wrightorum Trapido – Midland Brown snake. Clark County, Arkadelphia, North Park Drive (Sec. 18, T7S, R19W), 27 March 1997, HSU 78, 79; DeGray Lake at lower dam (NW ¼, Sec. 36, T6S, R20W), 13 March 2000, HSU 586.

Thamnophis sirtalis sirtalis (Linnaeus) – Eastern garter snake. Clark County, 4.8 km (3 mi.) W of Arkadelphia, Mt. Zion Road (Sec. 22, T7S, R20W), 1 October 1996, HSU 835; Skyline Drive, 5.8 km (3.6 mi.) W AR St. Hwy. 7 (Sec. 17, T6S, R20W), 26 March 2000, HSU 702.

Virginia striatula (Linnaeus) – Rough earth snake. Hot Spring County, Malvern (Sec. 25, T4S, R17W), 7 May 2000, HSU 766.

Opheodrys aestivus (Linnaeus) – Rough green snake. Grant County, 14.5 km (9 mi.) N Sheridan off U.S. Hwy. 167 (NE ¼, Sec. 25, T3S, R13W), 25 April 2000, HSU 662.

Class Aves:

Petrochelidon pyrrhonota (Vieillot) – Cliff Swallow. In southern Arkansas, Cliff Swallows historically were considered to be migratory birds, first seen about March and April, as they migrated north to breeding grounds. However, the construction of concrete bridges in southern Arkansas has provided acceptable nest-building localities, permitting the birds to breed throughout most of the southern counties of Arkansas (Tumlison 2007). Within the Gulf Coastal Plain physiographic province, most observations of nests occurred in southwestern counties along the Red River and its tributaries, and only occasional nests were found in eastern counties (with the exception of the lower Ouachita River at the U.S. Hwy. 82 bridge).

On 25 October 2008, 8 new nests of Cliff Swallows were found in Bradley County on the U.S. Hwy. 278 bridge over the Saline River (Sec. 2/3, T13S, R9W). On 26 December 2006, the site contained no nests of the swallows, and the first nests were found

after the next breeding season, on 5 June 2007 (Tumlison 2009). The 2007 nests were constructed over the river, but the new 2008 nests were located over ground. These observations document the beginning and continued use of the site for breeding.

On 29 December 2007, 3 cliff swallow nests were discovered on the AR St. Hwy. 144 bridge over Connerly Bayou, at its confluence with Lake Chicot, Chicot County, Arkansas (Sec. 25, T15S, R2W). This new record is the easternmost in Arkansas, extending records of breeding almost to the Mississippi River. However, recent observations made 13 February 2010 indicated no new nests, and that the old nests were deteriorating, thus expansion of the breeding range into Chicot County has occurred, but a breeding population does not appear to be established. This nesting record also is only the second record of breeding in the Mississippi Alluvial Plain physiographic province of Arkansas (the other was a single nest over Bayou Bartholomew in Lincoln County (Tumlison 2007)). Of note, Bayou Bartholomew flows southward through eastern Ashley County (and near Chicot County), but no nests have been observed on the U.S. Hwy. 82 bridge that crosses the Bayou.

Tumlison (2009) observed early nesting by cliff swallows in Arkansas, under the U.S. Hwy. 82 bridge on the Ouachita River, Ashley County, on 22 March. On 20 March 2010, 6 cliff swallows had returned to that nesting area and nesting behavior was validated based on nest occupancy and the discovery of failed eggs from the previous year. The eggs had been evicted from nests that were being renovated for the present season. Two broken eggs with dried yolks were discovered directly under the nests, and they were clean – easily distinguished from the heavily sedimented substrate left after the recent floodwaters had receded. Cliff swallows commonly select colony sites and may occupy and renovate old nests if there are few ectoparasites present (Brown and Brown 1995).

Ardea herodias Linnaeus – Great Blue Heron. The Great Blue Heron is a permanent resident in all regions of Arkansas, and individuals have been seen standing in nests as early as late February, although the peak of breeding season occurs during April and May (James and Neal 1986). Heronries (group nesting sites) have been observed in 10 counties (county names were not listed – James and Neal, 1986). We discovered a small heronry off U.S. Hwy. 82, 2.1 km (1.3 mi.) S of Strong, Union County, AR in 2009. On 19 March 2010, Great Blue Herons were seen standing or sitting in at least 10 of the 14 nests. The heronry consists of nests constructed primarily in one hardwood tree (one nest was in a nearby dead pine) located about 200 m from the highway, over water, and at the back edge of a swampy area. When RT approached the edge of the highway to photograph the site on 19 March 2010, the birds dispersed from the site but all returned within 3 minutes. At the time, a maximum of 11 Great Blue Herons were seen at the site.

Class Mammalia:

Marmota monax (Linnaeus) – Woodchuck. The distribution of the woodchuck has been expanding, especially in southwestern Arkansas, during the last decade (Tumlison et al. 2001). A recent survey of wildlife personnel, citizen reports, and new specimen records indicated that the southern expansion had continued into Clark, Pike, Montgomery, and Ouachita counties (Tumlison et al. 2007). During that survey, personnel of the Arkansas Game and Fish Commission (AGFC) reported seeing a woodchuck in Sevier County, but no specifics were given.

On 10 October 2007, David Arbour (a resident of DeQueen, AR, employed by the Oklahoma Department of Wildlife Conservation) photographed a road hit specimen of a woodchuck by the Rolling Fork River Bridge on U.S. Hwy. 70, about 5 km (3.1 mi.) W of DeQueen (Sec. 21, T8S, R32W), Sevier County, AR. This observation represents the most southwestward documented record of the woodchuck in Arkansas.

Sealander and Heidt (1990) provided maps of the known distribution of mammals in Arkansas. An examination of specimens of mammals housed in the vertebrate collections at Henderson State University produced the following list of specimen localities which represent new county records.

Blarina carolinensis (Bachman) – Southern short-tailed shrew. Clark County, 8 km (5 mi.) NW Gurdon, 31 June 1992, HSU 521-523; N of Mill Creek (Sec. 11, T7S R19W), 13 November 2006, HSU 645; 4.8 km (3 mi.) W Arkadelphia, Mt. Zion Road, 23 January 1994, HSU 536.

Cryptotis parva (Say) – Least shrew. Clark County, Arkadelphia, OBU campus, 29 November 2001, HSU 535.

Scalopus aquaticus (Bangs) – Eastern mole. Clark County, AR St. Hwy. 26W, Manor Estates (Sec. 23,

T7S, R20W), 9 May 1997, HSU 366, 368; 8.1 km (5 mi.) W of Arkadelphia, AR St. Hwy. 51 (Sec. 32, T7S, R20W), Fall 2004, HSU 529; Pike County, Delight, Fall 2001, HSU 460; Saline County, Benton, 22 November 1999, HSU 349.

Myotis austroriparius (Rhoads) – Southeastern myotis. Nevada County, Willisville Well N333231.8 W931930.8, 3 May 2000, HSU 486.

Perimyotis subflavus (Cuvier) – Tri-colored bat, formerly known as Eastern pipistrelle. Hot Spring County, 0.4 km (0.25 mi.) off AR St. Hwy. 347, mining shaft, April 1992, HSU 51-53.

Geomys breviceps Baird – Baird's pocket gopher. Hot Spring County, Perla, 19 October 1991 (HSU 32), 29 November 1991 (HSU 33), 20 February 1992 (HSU 34), 17 October 1991 (HSU 35, 36).

Oryzomys palustris J. A. Allen – Marsh rice rat. Clark County, 8 km (5 mi.) NW Gurdon, 31 July 1992, HSU 520; ca. 4.8 km (3 mi.) W of Arkadelphia off Central School Road, 21 January 1992, HSU 59; Hot Spring County (SW ¼, NE ¼, NE ¼, Sec. 11, T5S, R18W), 4 February 1992, HSU 1-3.

Peromyscus gossypinus (Rhoads) – Cotton mouse. Clark County, lower dam at DeGray Lake, 4 December 2001, HSU 456.

Microtus pinetorum V. Bailey – Woodland vole. Clark County, 4.8 km (3 mi.) W Arkadelphia off AR St. Hwy. 26, 20 February 1992, HSU 48. Dallas County, 0.4 km (0.25 mi.) from Crooks Creek, AR St. Hwy. 229, 14 November 2004, HSU 505.

Vulpes vulpes (Desmarest) – Red fox. Sealander and Heidt (1990) noted that the red fox was scarce in the southwestern part of Arkansas, and that populations seem to have been declining in the last 20 years. However, sightings are relatively common in the area around Arkadelphia, Clark County, and DeGray Lake.

For example, RT has photographed a red fox in a wooded area 4.8 km (3 mi.) W of Arkadelphia, Clark County, AR, on 19 August 2006 and 19 April 2008. Also, M. Karnes reported seeing a female red fox with two kits almost daily about 1900 hrs in the evening, from 14 June – 2 July 2009. She was usually lying at the edge of a brush line or sitting at attention while the kits played and wrestled at the edge of a clearing. The female was attentive, but never appeared to fear passing traffic. The location was approximately 1.3 km (0.8 mi.) W of the I-30 overpass on Country Club Road, Clark County, AR (SE ¼ , SW¼, Sec. 12, T7S, R20W).

Further, we have recent specimen records of red foxes in southern Arkansas: Hot Spring County, DeGray Lake near DeGray State Park, 26 December 1998, HSU 356; Drew County, 1.6 km (1 mi.) NW of Monticello, U.S. Hwy. 278, HSU 560.

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