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

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This report documents new records of distribution and provides notes on the natural history of selected vertebrates from Arkansas. Field observations and collections were made by the authors and students at Henderson State University and Southern Arkansas University. All fish specimens documented below are housed in the Southern Arkansas University Vertebrate Collection (SAU) in Magnolia, Arkansas or in the Henderson State University Collection (HSU) in Arkadelphia, Arkansas. Specimens were collected with a 3.1 X 1.8 m seine with 3.175 mm mesh and 6.1 X 1.8 m seine with 3.175 mm mesh size. Mammal records were obtained by MBC by capture or observations of road hit animals and by additional investigation of mammal collections at institutions. Acronyms for specimen depositories are ASUMZ for the Arkansas State Museum of Zoology; HSU for the Henderson State University Collection; MSB for the Museum of Southwestern Biology; OMNH for the Sam Noble Oklahoma Museum of Natural History; SAU for the Southern Arkansas University Vertebrate Collection; and UCM for the University of Colorado Museum of Natural History.

Class Osteichthyes:

Ichthyomyzon castaneus Girard – Chestnut Lamprey. Lamprey records were initially provided for Arkansas by Robison and Buchanan (1988) and later updated by Robison et al. (2006) including some lamprey records from southern Arkansas. More recently, Tumilson and Robison (2010) reported several additional lamprey records from southern Arkansas. The following is a collection record of this rarely seen agnathan. A single specimen of *I. castaneus* was taken from a *Micropterus salmoides* specimen collected from the Sulphur River at US Hwy. 71 (Sec. 3, T19S, R27W), Miller County, AR, on 23 June 2005, by N. Dean and given to HWR. This represents the southwestern-most record of this lamprey species in the state.

Notropis maculatus (Hay) – Taillight Shiner. Robison (1978) reported Arkansas distributional records and described the habitat of this cyprinid species. The taillight shiner primarily inhabits the Coastal Plain lowlands and deltaic provinces of the southern and eastern regions of the state (Robison and Buchanan 1988). The following provides additional distribution records for this lowland shiner from south Arkansas. On 11 June 2001, 3 nuptial male specimens were collected from Calion Lake at Calion, AR (Sec. 22, T16S, R14W), Union County by HWR and the SAU Vertebrate Natural History class. Spawning in Arkansas is generally from April to mid-June (Robison and Buchanan 1988). A second collection taken from Lafayette County at Bayou Bodcau (Sec. 14, T15S, R24W) on 19 October 2002 by HWR yielded 2 specimens of *N. maculatus*.

Lepomis miniatus (Jordan) – Redspotted Sunfish. Robison and Buchanan (1988) mapped the occurrence of this sunfish in the state. McAllister et al. (2009) provided additional records of distribution for *L. miniatus* from Arkansas. On 7 June 1994 spawning *L. miniatus* were observed over solitary nests in a clear backwater area of Bayou Dorcheat at US Hwy. 82 (Sec. 7, T16S, R22W), Columbia County, AR by HWR. Subsequent seining yielded 4 individuals (1 nuptial male and 3 spawning females) of which 2 females were released at the site. Water temperature was 24.4°C (76° F) and water depth was 1.2 m (3.8 ft). This represents the first observation of spawning of *L. miniatus* in Arkansas. An earlier collection from Lafayette County at Bayou Bodcau (Sec. 14, T15S, R24W) on 20 October 1989 by HWR and the SAU Vertebrate Natural History class yielded 2 specimens of *L. miniatus*.

Lepomis symmetricus Forbes – Bantam Sunfish. Robison and Buchanan (1988) reported localities for this uncommon sunfish from southern Arkansas. Two specimens were collected from Calion Lake at Calion, (Sec. 22, T16S, R24W), Union County, AR on 3 July 2001. An additional specimen was collected from

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LaPere Creek at AR St. Hwy. 129, 3.2 km (2 mi.) South of Huttig, (Sec. 35, T19S, R11W), Union County, AR on 17 October 1992, by HWR and students.

Ouachita County now is represented by 2 collections of *L. symmetricus*. On 12 April 1997, 2 individuals (1 subadult and 1 juvenile, HSU 2055) were taken at Bragg Lake, 2.0 km (1.25 mi.) SE of Bragg City (Sec. 33, T12S, R18W). On 7 June 1997, 1 adult specimen (HSU 2184) was collected from Freeo Creek at AR St. Hwy. 9 (Sec. 36, T11S, R16W).

A record from Clark County (1 juvenile, HSU 2154) was obtained 20 April 1997 from McNeely Creek, ca. 6.5 km (4 mi.) S of Beirne, off AR St. Hwy. 61 (S31, T10S, R20W). A record for Pike County (1 adult, HSU 1557) was taken 6 April 1997 from a slough located 1.6 km (1.0 mi.) E of the jct. of AR St. Hwys. 195 and 301 (Sec. 13, T9S, R 24W). One adult and 3 juveniles (HSU 1343) were collected from Thompson Creek, ca. 11 km (7 mi.) NW Crossett, Ashley County, AR (Sec. 11, T17S, R9W), on 5 July 1996.

Etheostoma asprigene (Forbes) – Mud darter. Robison and Buchanan (1988) reported this species from Coastal Plain areas of Arkansas. The following represent additional distributional records of this darter. Three specimens were taken in an unnamed stream 9.7 km (6 mi.) W of Crossett (Sec. 13, T18S, R17W), Ashley County, AR, on 10 October 2000 by HWR. Also collected in Union County was a single specimen of *E. asprigene* taken from Calion Lake at Calion, AR (Sec. 22, T16S, R19W), on 18 June 1987, by HWR.

Etheostoma fusiforme (Girard) – Swamp Darter. This Coastal Plain darter is rarely collected in Arkansas (Robison and Buchanan 1988). The following represent additional records of this species. One female was collected from backwaters of Calion Lake in Calion (Sec. 22, T16S, R14W), Union County, AR, on 3 July 2001 by HWR. Another specimen (HSU 2132) was collected from Norris Creek, at the NE corner of Strong, Union County, AR (Sec. 33, T18S, R12W) on 22 March 1997.

An additional specimen of this lowland darter was taken from Bayou Bodcau, 1.6 km (1 mi.) N of Lewisville, Lafayette County, AR (Sec. 7, T15S, R23W) on 22 July 2001 by HWR. This represents the westernmost record of this darter in Arkansas.

Percina sciera (Swain) – Dusky Darter. Robison and Buchanan (1988) presented the distribution of this darter in Arkansas. The following represent additional records of this species. One specimen was collected in Big Brushy Creek, ca. 9.7 km (6 mi.) NW of Crossett, AR (Sec. 6, T18S, R9W), Ashley County, AR, on 15 September 1996, by HWR. Also collected in Union County were 2 specimens of *P. sciera* from Three Creeks at AR St. Hwy. 15 (Sec. 20, T19S, R17W) on 21 June 1995 by HWR. This darter is also herein reported from Lafayette County for the first time as a single specimen was taken from Bayou Bodcau at Sunray Rd. (Sec. 14, T15S, R24W) on 11 May 1997 by HWR.

Class Aves:

Petrochelidon pyrrhonota (Vieillot) – Cliff Swallow. Cliff Swallows historically bred in northwestern Arkansas (Howell, 1911, Baerg 1951), but the known breeding range expanded through the Ozarks by the 1960s and into central and southwestern Arkansas by the early 1980s (James and Neal 1986). Construction of concrete bridges during the mid-1900s created extralimital nesting habitat (Erskine 1979), that allowed the expansion and southern shift in breeding distribution. A recent survey of bridges for the durable, gourd-shaped nests revealed that nesting range had expanded eastward through most of southern Arkansas (Tumlison 2007), and observations of breeding birds supported the notion that the breeding population continued to use the nesting sites (Tumlison 2009). The absence of nests in 2006 but their presence in 2007 at the Saline River bridge on U.S. Hwy 278 documented the continuing eastward expansion of nesting into Bradley County (Tumlison, 2009).

During both earlier studies in southern Arkansas, the most southeastern observations of birds or nests were in Bradley County and on the Ouachita River bridge on U.S. Hwy 82 between Union and Ashley Counties. Searches had been conducted, however, through eastern Ashley County as well as Chicot County and up to the Mississippi River, with no evidence of cliff swallows being located until a few deteriorating nests were discovered on a bridge on Lake Chicot (Tumlison and Robison, 2010).

The old bridge connecting Lake Village, AR, and Greenville, MS was largely of steel construction, and recently was replaced by a new structure. The new bridge includes a long ramp over land, composed primarily of concrete, which is replaced by steel over the Mississippi River. On 2 July 2010, the bridge

(which had not yet opened for traffic) was examined for the presence of nests. Nests were not present on the steel portions of the bridge, but were present under the concrete structure, with most nests having been built closest to the river on the first concrete sections. At that time, about 75 cliff swallows were observed foraging over the field and levee, sometimes returning to the nests.

On 28 August 2010, the bridge had been opened to traffic and the site was revisited. The breeding season was over, but cliff swallows still were occupying some of the nests, likely just as roosting sites, and small flocks of them were foraging over the fields and levee. House Sparrows (*Passer domesticus*) occupied three of the nests, which is common for this non-native bird (James and Neal 1986).

Counts of nests were made at this time. The concrete ramp portion of the bridge consisted of 10 supported sections, but only the first four (nearest the river) were used for nests: the first section had 126 nests, the second 21, the third 0, and the fourth 27. No nests were constructed along the outer portions of the bridge. The concrete architecture underneath the bridge formed box-like rectangles of concrete, and most nests were built in the corners of those boxes. Corners provide two surfaces upon which the mud construction of a nest can be adhered, and given the humidity of the area, apparently provided the best foundation for nests given their common use.

With the documentation of nesting at this site, the eastward expansion of the breeding range of cliff swallows now is known to include all of southern Arkansas from western to eastern border.

Tyrannus forficatus (Gmelin) – Scissor-tailed Flycatcher. The scissor-tailed flycatcher is a summer resident of western and central Arkansas, but it is present only in small numbers in the eastern lowlands - although by the 1970s there were May and June reports reaching the Mississippi River of southeastern Arkansas (James and Neal 1986). Records from Arkansas indicate that nesting begins in May and June, and fledglings are seen by late July (James and Neal 1986).

A search of more recent records of these birds, maintained in the Arkansas Audubon Society database (<http://www.arbirds.org/searchspecies.asp>), revealed that scissor-tails have been reported 10 times in the extreme southeastern counties of Drew, Desha, and Chicot. The Drew County observation of a single bird occurred in June 1996, during the breeding season, with the observer noting the bird was “uncommon this

far east”. Farther east, in Desha County, scissor-tails were reported first in October 2004 (a single bird), then a pair was seen in April 2006 (with a note expressing a hope that nesting might occur). In June of 2007, nesting pairs were reported at the towns of Back Gate and Dumas, and in 2009 spring and fall migrants were reported in March and October.

In Chicot County, a scissor-tail was reported in October 1991, then 2 sightings were made in October 1993 – both were considered to be of transients. Two other reports documented the presumed return of a single bird observed in July, 2008, then August 2009.

In southeastern Arkansas, breeding bird surveys (available from the Patuxent Wildlife Research Center, <http://www.mbr-pwrc.usgs.gov/bbs/bbs.html>) are conducted yearly along the Old Milo route in western Ashley County and the Eudora route in eastern Chicot County. Analysis of surveys from 1966 – 2007 (Sauer et al. 2008) revealed no observations of Scissor-tails in Ashley County, and single occurrences in Chicot County in 1975 and 1977.

On 11 July 2010, 4 scissor-tailed flycatchers were observed at the intersection of AR St. Hwy. 133S and the truck route on the southern side of Crossett, Ashley County, AR. The birds moved and foraged among the scattered trees near businesses along the truck route. This observation is the first report for Ashley County, and the fact that 2 of the birds were fledglings provides the first evidence of breeding in Ashley County, and represents the southeastern-most documented case for Arkansas.

Class Mammalia:

Scalopus aquaticus (Bangs) – Eastern mole. Searcy County: vic. Mull: This adult male was hand captured by MBC 3 km S Junction Ramblewood Trail/AR St. Hwy. 14, 13 August 2010, (ASUMZ 28642). Sealander and Heidt (1990) reported the Eastern mole from Searcy County, but this is the first museum record for this county.

Marmota monax (Linnaeus) – Woodchuck. Marion County: Mull: This adult male was found as a recent roadkill by MBC on AR St. Hwy. 14, 18 July 2010, (ASUMZ 28641). Both Sealander and Heidt (1990) and Tumilson et al. (2007) reported that woodchucks had been seen in Marion County, but this is the first museum record.

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Geomys breviceps Baird – Baird's pocket gopher.

As part of a larger ecological study, 4 specimens were collected by MBC in an area within a linear distance of ~100 m in Jefferson County near Pine Bluff off Exit 37 on Interstate 530 on 10 April 2010. Two of the individuals displayed the normal pelage whereas the other 2 (adult scrotal male [ASUMZ 28632] and adult female [ASUMZ 28633]) displayed unique color mutations of the pelage (Fig. 1). The pelage of the male exhibited very prevalent white hairs on the posterior half of its dorsum whereas the female exhibited very dominant white hairs on the median third of its dorsum. As part of the same ecological study, 2 specimens (adult scrotal male [ASUMZ 28599] and adult female [ASUMZ 28598]) were collected by MBC in an area within a linear distance of ~50 m in Columbia County within the city limits of Magnolia at the Junction of AR St. Hwys. 79 and 82 on 29 October 2010. These 2 individuals exhibited a charcoal gray pelage over the entirety of the body, which is usually brown in color.

The pelage of pocket gophers generally matches the color of the inhabited soil (e.g. *Geomys bursarius*, Krupa and Geluso 2000) possibly to minimize predation. Baird's pocket gophers have pelage that is typically brown, but ranges from pale brown to black (Sulentich et al. 1991). Some individuals express complete pelage deviations, such as albinism. Yet, a small percentage of pocket gophers display aberrant pelage that occurs on a small percentage of its overall body. Examples of these pelage abnormalities generally are expressed as spotting or grizzling (McCarley 1951). The individuals that MBC collected did not exhibit the typical pelage of brown or the usual aberrant pelages that are reported.

Peromyscus maniculatus (Wagner) – Deer mouse.

An adult specimen was trapped by MBC in a pitfall trap set (25 April - 9 May 2009) in a Baird's pocket gopher burrow system ~2 km E of Mansfield, 0.5 km S on Harp Rd. in Scott County. This deer mouse was a non-target species captured in a pitfall trap targeting pocket gopher insect inquilines, which was set in a burrow and completely sealed off from the surface. Other vertebrates (*i.e.*, reptiles [Connior et al. 2008]) have been captured in pocket gopher burrows and mounds in Arkansas, but this is the first documented record of a mammal being captured inside a pocket gopher burrow in Arkansas. Deer mice have been captured and are known to use burrows of other species of pocket gophers as retreats (Howard and Childs 1959, Vaughan 1961).



Figure 1. Unique color mutations of the pelage of Baird's pocket gopher (*Geomys breviceps*) collected from Pine Bluff, Jefferson County, Arkansas on 10 April 2010.

Connior (2010) provided updated distribution records of mammals in Arkansas based on original distributions from Sealander and Heidt (1990). Recently, Tumilson and Robison (2010) provided additional distributional records from Southern Arkansas. An examination of specimens of mammals housed in the teaching collections at South Arkansas Community College (El Dorado, Arkansas) and mammal divisions of institutional museums produced

the following list of specimen localities that represent new county records.

Scalopus aquaticus (Bangs) – Eastern mole. Union County: Mt. Holly City Limits, 18 February 1988. This specimen was located in the teaching collection at South Arkansas Community College and was subsequently deposited in the Arkansas State University Museum of Zoology (ASUMZ 28597). Yell County: Mount Nebo State Park, 8 May 1962, (UCM 10983). Sealander and Heidt (1990) reported the Eastern mole from Union county, but these are the first museum records for these counties.

Oryzomys palustris (Harlan) – Marsh rice rat. Crawford County: Ft. Chaffee, Land Condition Trend Analysis (LCTA) Plot 33, 16.9 km (10.5 mi) N Greenwood, 1989, (OMNH 19559). Franklin County: Fort Chaffee Maneuvers Training Center, LCTA #122, UTM 15, 403149E, 3895420N, 2000, (OMNH 32865). Sebastian County: Fort Chaffee Maneuvers Training Center, LCTA #517, UTM 15 S, 396653E, 3903543N, 2000, (OMNH 32866). These are new county records (Sealander and Heidt 1990).

Reithrodontomys humulis (Audubon and Bachman) – Eastern harvest mouse. Sevier County: 6.5 km (4 mi.) W Dequeen, US Hwy 70, 0.4 km (0.25 mi) E Rolling Fork, 22 December 1965, (MSB 22487). This record is only the sixth county that this species has been collected from in Arkansas (Sealander and Heidt 1990).

Mus musculus (Linnaeus) – House mouse. Crawford County: Ft. Chaffee, LCTA Plot 33, 16.9 km (10.5 mi) N Greenwood, 1989, (OMNH 36290). Conway County: 11 km (6.8 mi) E Mather Lodge, Petit Jean St. Park, 1970, (OMNH 10455). Sebastian County: Ft. Chaffee Maneuver Training Center, LCTA Site A12, UTM 15S, 384155E, 3909801N, 2000, (OMNH 35960). Sevier County: 3.2 km (2 mi.) NW Dequeen, 27 December 1965, Museum of Southwestern Biology (MSB 22488). Union County: NE 1/4, NE 1/4, sec 18, T18S R16W, 17 January 1991, ASUMZ 28596. This specimen was located in the teaching collection at South Arkansas Community College and was subsequently deposited in the Arkansas State University Museum of Zoology. These are new county records (Sealander and Heidt 1990).

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