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New Distributional Records of Lampreys from Arkansas

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Lampreys (Petromyzontidae) are members of an ancient group of fishes which are unique among the vertebrates in being jawless. Four species of lampreys occur in Arkansas; the least brook lamprey, *Lampetra aepyptera* (Abbott); the American brook lamprey, *L. appendix* (DeKay); the chestnut lamprey, *Ichthyomyzon castaneus* Girard, and the southern brook lamprey, *I. gagei* Hubbs and Trautman. Lampreys are generally difficult to collect unless during spawning and therefore are not represented in museum collections as often as other species of fishes. Recent collecting in Arkansas since the publication of Robison and Buchanan (1988) has revealed a number of new locality records for each of the 4 Arkansas lampreys. This effort consolidates and updates records of lampreys collected since 1988 and adds additional natural history data on Arkansas lampreys.

Museum numbers are provided where appropriate as are locality, date, collector, number of individuals, and any other pertinent aspects dealing with the biology of the species. Museums where collections are housed and their respective abbreviations are listed as follows: Henderson State University (HSU), University of Louisiana - Monroe (NLU), and Southern Arkansas University (SAU).

***Lampetra aepyptera* (Abbott). Least brook lamprey.** Robison and Buchanan (1988) reported only 10 localities in Arkansas for *L. aepyptera*, only one of which was in the White River system. Harp and Matthews (1975) reported the first White River system records of *L. aepyptera* from Piney Creek in Fulton County, Arkansas. On 8 May 2003 2 specimens of *L. aepyptera* were collected from Mill Branch near Mt. Hershey, Newton County, Arkansas (Table 1); (Petersen and Justis 2005). These represent the first record of this species in the Buffalo River system and only the second record in the entire White River system in Arkansas. In addition, 2 records are documented from Spring River (HSU 2047) and Piney Creek (HSU 2423), respectively (Table 1). The new Piney Creek collection (HSU 2423) consisted of 3 adult specimens and represents only the second collection from Piney Creek and the fourth collection made from the White River system.

***Lampetra appendix* (DeKay). American brook lamprey.** Only 7 records of *L. appendix* were reported by Robison and Buchanan (1988) for Arkansas. All *L. appendix* records were from the White River system until Tumlison and Tumlison (1999) discovered this species in the Ouachita River system in

Clark County in southern Arkansas. Adults are also known from L'Eau Frais Creek in Clark and Hot Spring counties. A total of 15 specimens collected since 1988 taken in 8 additional collections are documented in Table 1. Twelve of the 15 specimens were collected from L'Eau Frais Creek, whereas 3 specimens (HSU 2798) were taken from Piney Creek (White River system) in northern Arkansas (Table 1).

***Ichthyomyzon castaneus* Girard. Chestnut lamprey.** The chestnut lamprey is the most widely distributed lamprey species in Arkansas. Robison and Buchanan (1988) reported 54 localities for this parasitic lamprey within the state. We document an additional 22 localities for this species and 33 individuals in Arkansas including 12 specimens, which were spawning, collected from the lower Caddo River at the I-30 bridge at Caddo Valley, Arkansas (Sec. 31, T6S, R19W) (SAU collection) in Clark County on 16 April 1996 which were spawning. These adults were spawning in an excavated gravel nest approximately 1 m from shore in 45.7 cm of water. The water temperature was 16.7 °C. Chestnut lampreys were also observed (JCP) spawning in the Buffalo River near Hasty, Arkansas on 24 April 2003.

***Ichthyomyzon gagei* Hubbs and Trautman. Southern brook lamprey.** Robison and Buchanan (1988) reported 50 localities for this non-parasitic lamprey in Arkansas. Since 1988, 12 additional adult specimens and 3 identified ammocoetes were collected from 11 Arkansas localities in Clark, Franklin, Johnson, Hot Spring, Saline, and Stone counties (Table 1).

Unidentified Ammocoetes. Collections of unidentified ammocoetes taken since 1988 are provided in Table 1 from Clark, Carroll, Fulton, Madison, Marion, Newton, and Searcy counties to account for known records of lampreys at specific sites.

Table 1. Lamprey collections in Arkansas, 1988-2005.

Date	Collector	Locality, Section, Township, Range, Sample Size (parentheses), HSU Museum Number
<i>Lampetra aepyptera</i> Abbott		
8 May 2003	J. C. Petersen	Newton Co.: Mill Branch downstream from Mitch Hill Spring near Mt. Hershey (SE ¼ of NW1/4 of Sec. 25, T16, R19 (n = 2).
18 Apr 1997	J. Thompson	Fulton Co.: Spring River, 6 mi. E of Mammoth Spring @ Hwy 63 (Sec. 16, T21N, R5W) (n = 1) HSU 2047.
20 Feb 1999	B. Fluker	Izard Co.: Piney Creek @ access road (Sec. 5, 16N, R10W) (n = 3) HSU 2423.
<i>Lampetra appendix</i> (DeKay)		
24 Feb 1996	R. Tumilson	Clark Co.: L'Eau Frais Creek, 6 mi. SE of Arkadelphia, Hwy 7 (Sec. 1, T8S, R19W) (n = 2) HSU 1398.
31 Jan 1997	R. Tumilson	Clark Co.: L'Eau Frais Creek 9 km SE of Arkadelphia, Hwy 7 (Sec. 1, T8S, R19W) (n = 2) HSU 2189.
2 Mar 1996	R. Tumilson	Clark Co.: L'Eau Frais Creek 1 mi. SE of Joan (Sec. 22, T7S, R18W) (n = 2) HSU 1401.
25 Feb 1995	R. Tumilson	Clark Co.: L'Eau Frais Creek, 6 mi SE of Arkadelphia at St. Hwy. 7 (Sec. 1, T8S, R19W) (n = 1) HSU 1400.
19 Feb 1994	J. Rutherford	Clark Co.: L'Eau Frais Creek at St. Hwy 7 near Manchester (Sec. 1, T8S, R18W) (n = 1) HSU 672.
2 Mar 1996	R. Tumilson	Clark Co.: L'Eau Frais Creek 6 mi SE Arkadelphia at St. Hwy. 7 (Sec. 1, T8S, R19W) (n = 1) HSU 1399.
22 Feb 1997	R. Tumilson	Hot Spring Co.: L'Eau Frais Creek 8 km E Donaldson at St. Hwy. 222 (Sec. 15, T6S, R17W) (n = 3) HSU 2191.
20 Feb 1999	D. Fendley and B. Fluker	Izard Co.: Piney Creek (Sec. 5, T16N, R10W) (n = 3) HSU 2798.
<i>Ichthyomyzon castaneus</i> Girard		
16 Apr 1996	H. W. Robison	Clark Co.: Caddo River at I-30 bridge at Caddo Valley, AR (Sec. 31, T6S, R19W) (n = 12) SAU Collection.
4 May 1999	R. Tumilson D. Fendley J. Hardage	Clark Co.: Tupelo Creek at St. Hwy. 7 (Sec.35, T7S, R19W) (n = 1) HSU 2752.
6 Apr 1994	J. Nix	Clark Co.: Caddo River at St. Hwy. 84 (Sec.24,T5S, R23W) (n = 1) HSU 978.
Apr 1991	R. Tumilson B. Hesington	Clark Co.: Lower dam DeGray Lake, Caddo River (Sec. 35, T6S, R20W) (n = 1) HSU 295.
19 Apr 1994	K. Bailey	Clark Co.: Brushy Creek at DeGray Lake (Sec.8, T6S, R21W) (n = 1) HSU 856.
20 Apr 1994	M. Major C. Petty	Clark Co.: L'Eau Frais Creek, 4 mi from Manchester, Hwy 7 at 2 nd bridge (NE ¼, Sec.1, T8S, R19W) (n = 1) HSU 412.
25 Mar 1994	J. Russell	Clark Co.: L'Eau Frais Creek on Hwy 7, 5.6 mi. S jct Hwys 51 & 7 (Sec.1, T8S, R19W) (n = 1) HSU 542.
4 May 1994	M. Withers	Clark Co.: L'Eau Frais Creek near Manchester (Sec. 1, T8S, R18W) (n =1) HSU 842.
17 Feb 1996	R. Tumilson	Clark Co.: L'Eau Frais Creek 9 km SE Arkadelphia, at St.Hwy. 7 (Sec.1, T8S, R19W) (n = 2) HSU 2188.
22 May 1997	G. W. Gaddis	Clark Co.: Caddo River (Sec.26, T5S, R22W) (n = 1) HSU 2135.
6 Mar 1997	D. Rowland	Garland Co.: Lake Hamilton (Sec.18, T2S, R20W) (n = 1) HSU 2139.
20 Mar 1999	D. Dyer	Garland Co.: Lake Hamilton at St. Hwy. 192 (T3S, R20W) (n = 1) HSU 2276.
4 Mar 1997	J. Thompson	Hot Spring Co. L'Eau Frais Creek 6 mi. E Donaldson at St. Hwy. 222 (Sec. 10, T6S, R17W) (n = 1) HSU 1605.
20 Feb 1999	D. Fendley	Izard Co.: Piney Creek at access road (Sec.5, T16N, R10W) (n = 1) HSU 2414.
3 Apr 1999	B. Crump	Pike Co.: Caddo River at Glenwood (Sec.10, T5S, R24W) (n = 1) HSU 2799.
25 Mar 1997	W. Daggett	Newton Co.: Buffalo River (Sec. 19, T16N, R20W) (n = 1) HSU 1924.
12 Apr 1997	D. Dunlap	Pike Co.: Caddo River at U.S. Hwy 70 (Sec.10, T5S, R24W) (n = 1) HSU 1704.

Table 1. Lamprey collections in Arkansas, 1988-2005. (cont.)

Date	Collector	Locality, Section, Township, Range, Sample Size (parentheses), HSU Museum Number
<i>Ichthyomyzon castaneus</i> Girard (cont.)		
12 Apr 1994	R. Fisher	Stone Co.: White River at St. Hwy. 9 (Sec.12, T15N, R11W) (n = 1) HSU 836.
16 Jul 2002	J.C. Petersen	Searcy Co.: Buffalo River near Woolum (Sec. 4, T15N, R18W) (n = 1).
24 Apr 2003	J.C. Petersen	Newton Co.: Buffalo River near Hasty (Sec. 34, T16N, R20W) (n = 1).
19 Mar 2003	J.C. Petersen	Marion Co.: Buffalo River near mouth (Sec. 36, T18N, R14W) (n = 1).
5 Apr 2005	D. Thompson	Clark Co.: DeGray Lake near Brushy Landing (Sec. 8, T6S, R21W) (n = 1) HSU 3154.
<i>Ichthyomyzon gagei</i> Hubbs and Trautman		
30 Apr 2003	H. Runyan	Clark Co.: Caddo River (Sec.7, T7S, R19W) (n = 1) HSU 2888.
4 May 1999	J. Patterson	Clark Co.: L'Eau Frais Creek at St. Hwy 7 (Sec.1, T8S, R19W) (n = 1) HSU 2361 (ammocoete).
11 Feb 1999	J. Hardage	Clark Co.: Bradshaw Creek at St. Hwy. 51 (Sec.1, T8S, R21W) (n = 1) HSU 2503.
4 May 1999	D. Fendley and J. Hardage	Clark Co. Tupelo Creek at St. Hwy. 7 (Sec. 35, T7S, R19W) (n = 1) HSU 2753.
22 Mar 1997	R. Tumilson	Hot Spring Co.: L'Eau Frais Creek, 7.5 mi. E. Donaldson (Sec. 1, T6S, R17W) (n = 4) HSU 1489 (1 adult, 3 ammocoetes).
27 Feb 1999	S. Ryders	Saline Co.: Caney Creek at U. S. Hwy. 70 near I-30 bridge (Sec. 20, T2S, R16W) (n = 1) HSU 2462.
8 Mar 2002	H. W. Robison	Stone Co.: East Livingston Creek (Sylamore Creek Dr.) (Sec. 23, T16N, R11W) (n = 2) SAU Fish Collection.
20 Mar 1995	G. Leeds	Franklin Co.: Mulberry River (Sec. 34, T12N, R27W) (n = 1) SAU Fish Collection.
20 Feb 1999	H. W. Robison	Johnson Co.: Little Piney Creek (Sec. 26, T11N, R22W) (n = 1) SAU Fish Collection.
31 Oct 1996	R. Tumilson	Clark Co.: Caddo River at St. Hwy 7 (Sec. 31, T6S, R19W) (n = 1) HSU 1386.
20 Apr 1994	M. Major and C. Petty	Clark Co.: L'Eau Frais Creek, 4 mi. from Manchester at Hwy. 7 (NE ¼, Sec. 1, T8S, R19W) (n = 1) HSU 3155.
Unidentified Ammocoetes		
31 Jul 2001	J.C. Petersen	Newton Co.: Buffalo River near Boxley (Sec. 22, T15N, R23W) (n = 1).
27 Jun 2002	J.C. Petersen	Newton Co.: Buffalo River near Pruitt (Sec. 7, T16N, R20W) (n = 1).
31 Jul 2001	J.C. Petersen	Newton Co.: Buffalo River near Hasty (Sec. 34, T16N, R20W) (n=1).
18 Jul 2001	J.C. Petersen	Searcy Co.: Buffalo River near Woolum (Sec. 4, T15N, R18W) (n=1).
18 Jul 2001	J.C. Petersen	Searcy Co.: Buffalo River at Shine Eye near Gilbert (Sec. 36, T16N, R17W) (n=1).
13 Sep 2002	J.C. Petersen	Marion Co.: Buffalo River at Highway 14 near Harriet (Sec. 34, T17N, R15W) (n=1).
2 Aug 2001	J.C. Petersen	Newton Co.: Little Buffalo River near mouth near Pruitt (Sec. 20, T16N, R20W) (n=1).
14 Aug 2001	J.C. Petersen	Madison Co.: Kings River near Kingston (Sec. 29, T16N, R24W) (n=1).
20 Aug 2002	J.C. Petersen	Carroll Co.: Osage Creek near Berryville (Sec. 12, T19N, R25W) (n=1).
10 Sep 2002	J.C. Petersen	Carroll Co.: Long Creek near Denver (Sec. 16, T20N, R22W) (n=1).
17 Sep 2002	J.C. Petersen	Marion Co.: Hampton Creek near Eros (Sec. 21, T18N, R17W) (n=1).
8 May 1999	A. Westin	Clark Co.: L'Eau Frais Creek at St. Hwy. 7 (Sec. 1, T8S, R19W) (n = 1) HSU 2332.
3 Mar 2005	S. Townsend	Clark Co.: L'Eau Frais Creek at St. 28 (Sec. 22, T7S, R18W) (n = 1) HSU 3022.
10 Apr 2005	S. Townsend	Fulton Co.: Spring River (Sec. 21, T21N, R5W) (n = 1) HSU 3066.

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