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RESULTS OF ANALYSIS OF THE FRESHWATER MUSSEL FAUNA IN THE ALABAMA RIVER DOWNSTREAM OF CLAIBORNE, MILLERS FERRY, AND ROBERT F. HENRY LOCKS AND DAMS, 2006-08

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ABSTRACT

During the summers of 2006, 2007, and 2008, the authors documented the current status of three federally listed mussel species—*Pleurobema decisum*, *Pleurobema taitianum*, and *Potamilus inflatus*—and other species in the Alabama River downstream of Claiborne, Millers Ferry, and Robert F. Henry Locks and Dams. About 39 hours of bottom time were logged—about 14.4 hours downstream of Claiborne, 10 hours downstream of Millers Ferry, and 15 hours downstream of Robert F. Henry. The Claiborne reach yielded 3,054 mussels live or fresh dead among 19 species, with a catch per unit effort of 212.1 mussels per hour; the Millers Ferry reach yielded 4,490 mussels among 17 species, with a catch per unit effort of 449.0 mussels per hour; and the Robert F. Henry reach yielded 4,546 mussels among 20 species, with a catch per unit effort of 303.1 mussels per hour. One live individual of *Pleurobema taitianum* was found downstream of Robert F. Henry. Several live individuals of one species of highest conservation priority in Alabama, *Elliptio arctata*, were collected in the Claiborne reach, and individuals of two species of moderate conservation priority, *Quadrula metanevra* and *Truncilla donaciformis*, were collected in all reaches.

INTRODUCTION

In Alabama the diversity of the freshwater mussel fauna of the Mobile River basin is second only to that of the Tennessee River. The pre-impoundment fauna in the Mobile Basin included more than 40 species and was noteworthy for numerous endemic species. Such diversity is attributed to the presence of numerous aquatic habitats related to variations in physiography, the geological antiquity of the basin providing ample time for speciation, and the abundance of fresh water in the basin (Williams, 1982; McCullagh and others, 2001). However, significant changes have occurred in the quality of water and habitat in the basin, resulting from human activity. The changes include impoundment,

eutrophication, sedimentation, pollution, and channel modifications, and they have contributed to a drastic decline in the mussel fauna (Hartfield, 1994; Mott and Hartfield, 1994).

In 2006, 2007, and 2008, the Geological Survey of Alabama was contracted by the Alabama Department of Conservation and Natural Resources to assess the current mussel fauna in the main river channel downstream of Claiborne, Millers Ferry, and Robert F. Henry Locks and Dams on the Alabama River, and to evaluate the current populations of federally listed species and species of conservation priority in Alabama per Mirarchi (2004). Sampling effort during the first year emphasized the reach downstream of Claiborne (McGregor and Garner, 2006), the second year emphasized the reach downstream of Millers Ferry (McGregor and Garner, 2007), and the current sampling season emphasized the reach downstream of Robert F. Henry. This report summarizes results of field efforts.

ACKNOWLEDGMENTS

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STUDY AREA

The Alabama River drains 6,023 square miles of the Mobile River basin and has three dams on the main stem, Claiborne, Millers Ferry, and Robert F. Henry (fig. 1) (Mettee and others, 1996). During the 2006 field season, sampling effort was concentrated downstream of Claiborne from about Alabama River mile (ARM) 38.0 upstream to about ARM 71.0 (fig. 1, table 1). During the 2007 field season, sampling effort was concentrated downstream of Millers Ferry from about ARM 105.4 upstream to about ARM 131.7 (fig. 1, table 1). During the current field season (2008), effort was concentrated downstream of Robert F. Henry from the vicinity of Selma in Dallas County (ARM 203.9) upstream to about ARM 237.0 (fig. 1, table 1).

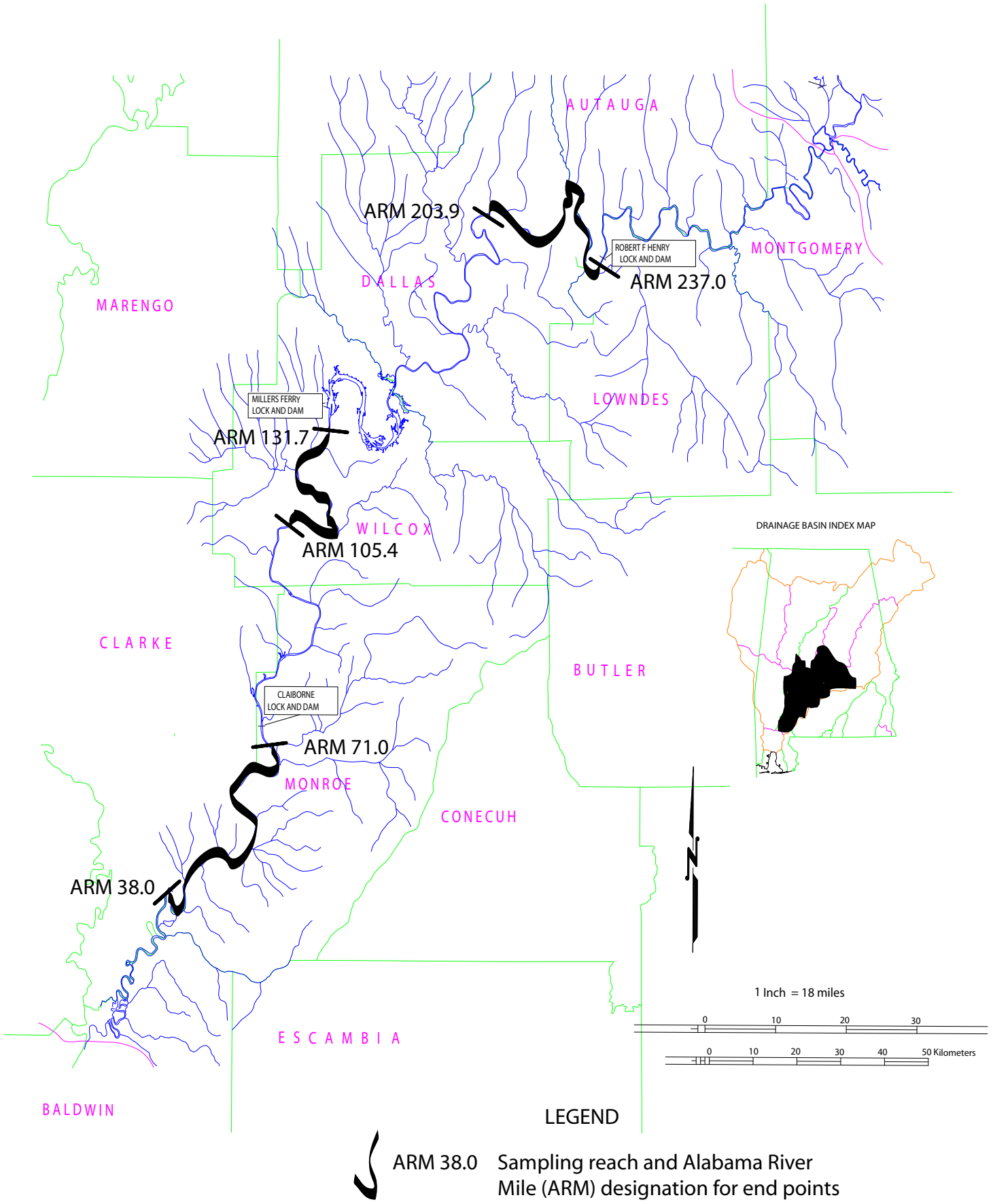

Figure 1. Map of the Alabama River showing downstream and upstream limits of the study area.

Table 1.—Summary information for mussel sampling stations in the Alabama River, 2006-08

Sampling station[1]	Map coordinates	County	Date
ARM 38.0 at upstream end of bluff along left descending bank	N 31˚ 20.351' W 87˚ 43.474'	Clarke/Monroe	9/07/06
ARM 38.7 downstream of Eureka Landing along left descending bank	N 31˚ 21.562' W 87˚ 43.267'	Clarke/Monroe	9/07/06
ARM 43.1 upstream of Eureka Landing along right descending bank	N 31˚ 25.074' W 87˚ 40.478'	Clarke/Monroe	9/07/06
ARM 46.0 near Gainestown along bluff on right descending bank opposite large sand bank	N 31˚ 25.243' W 87˚ 38.712'	Clarke/Monroe	9/07/06
ARM 48.0 off gravel bank on left descending bank opposite training dikes	N 31˚ 24.892' W 87˚ 37.843'	Clarke/Monroe	9/07/06
ARM 49.5 along stone shore of left descending bank downstream of training dikes	N 31˚ 24.655' W 87˚ 35.966'	Clarke/Monroe	9/07/06
ARM 50.0 along right descending bank off large gravel bar with three training dikes	N 31˚ 25.239' W 87˚ 35.578'	Clarke/Monroe	9/06/06
ARM 51.5 along gravel bar on left descending bank	N 31˚ 26.145' W 87˚ 34.367'	Clarke/Monroe	9/06/06
ARM 54.6 at Marshalls Bluff along left descending bank	N 31˚ 28.404' W 87˚ 33.722'	Clarke/Monroe	9/06/06
ARM 57.5 along bluff along right descending bank	N 31˚ 29.880' W 87˚ 36.141'	Clarke/Monroe	9/06/06
ARM 59.7 along right descending bank	N 31˚ 31.174' W 87˚ 37.233'	Clarke/Monroe	9/06/06
ARM 60.4 on left descending bank downstream of U.S. Highway 84 bridge	N 31˚ 31.558' W 87˚ 36.085'	Clarke/Monroe	9/05/06
ARM 64.3 near Strode Landing on right descending bank	N 31˚ 33.355' W 87˚ 33.663'	Monroe	8/01/06
ARM 66.5 near U.S. Highway 82 bridge along left descending bank	N 31˚ 32.693' W 87˚ 31.099'	Monroe	8/01/06
ARM 70.0 at bluff on right descending bank downstream of Claiborne Lock and Dam	N 31˚ 35.307' W 87˚ 32.214'	Monroe	8/03/06
ARM 70.3 at bluff on right descending bank downstream of Claiborne Lock and Dam	N 31˚ 35.532' W 87˚ 32.569'	Monroe	8/03/06
ARM 70.5 at bluff on right descending bank downstream of Claiborne Lock and Dam	N 31˚ 35.232' W 87˚ 32.066'	Monroe	8/02/06
ARM 70.75 at bluff on right descending bank downstream of Claiborne Lock and Dam	N 31˚ 35.537' W 87˚ 32.560'	Monroe	8/01/06
ARM 71.0 at bluff on right descending bank downstream of Claiborne Lock and Dam	N 31˚ 35.390' W 87˚ 32.346'	Monroe	8/03/06

Table 1.—Summary information for mussel sampling stations in the Alabama River, 2006-08—continued

ARM 105.4 just upstream of Burlington Northern Railroad bridge along right descending bank	N 31˚ 55.717' W 87˚ 29.160'	Wilcox	7/12/07
ARM 107.5 at unnamed bar about one mile downstream of Rose Landing along right descending bank	N 31˚ 55.881' W 87˚ 27.158'	Wilcox	7/12/07
ARM 108.4 near Rose Landing along right descending bank	N 31˚ 55.303' W 87˚ 26.633'	Wilcox	7/12/07
ARM 111.0 along Blacks Bluff along left descending bank	N 31˚ 54.307' W 87˚ 24.355'	Wilcox	7/12/07
ARM 112.9 just upstream of mouth of Pursley Creek along right descending bank	N 31˚ 54.825' W 87˚ 22.812'	Wilcox	7/12/07
ARM 116.9 at upstream end of Yellowjacket Bar along right descending bank	N 31˚ 54.049' W 87˚ 23.639'	Wilcox	7/12/07
ARM 118.4 just upstream of Alabama Highway 10 bridge along left descending bank	N 31˚ 58.191' W 87˚ 24.890'	Wilcox	7/10/07
ARM 123.3 along bluff just downstream of mouth of Beaver Creek along right descending bank	N 31˚ 59.911' W 87˚ 28.389'	Wilcox	7/10/07
ARM 124.8 just downstream of Clifton Ferry Boat Ramp along right descending bank	N 32˚ 1.046' W 87˚ 28.151'	Wilcox	7/10/07
ARM 126.3 just downstream of mouth of Dixon Creek along right descending bank	N 32˚ 1.951' W 87˚ 26.792'	Wilcox	7/11/07
ARM 127.5 at bluff colloquially known as "Biscuit Rocks" along left descending bank	N 32˚ 1.821' W 87˚ 25.705'	Wilcox	7/26/07
ARM 128.6 just upstream of mouth of Rockwest Creek along left descending bank	N 32˚ 2.457' W 87˚ 24.707'	Wilcox	7/11/07
ARM 129.0 along right descending bank	N 32˚ 3.640' W 87˚ 24.235'	Wilcox	7/24/07
ARM 130.6 opposite Cobbs Landing Boat Ramp along right descending bank	N 32˚ 4.002' W 87˚ 24.172'	Wilcox	7/11/07
ARM 131.7 beneath power transmission line downstream of Millers Ferry Lock and Dam along right descending bank	N 32˚ 4.883' W 87˚ 24.169'	Wilcox	7/11/07
ARM 203.9 at Selma Marina along left descending bank	N 32˚ 23.699' W 87˚ 02.506'	Dallas	8/5/08
ARM 205.3 downstream of U.S. Highway 80 bridge near Selma along left descending bank	N 32˚ 24.347' W 87˚ 01.162'	Dallas	8/14/2008
ARM 205.7 downstream of railroad bridge near Selma along left descending bank	N 32˚ 24.300' W 87˚ 00.705'	Dallas	8/14/08

Table 1.—Summary information for mussel sampling stations in the Alabama River, 2006-08—continued

ARM 207.0 near U.S. Highway 80 bridge in downtown Selma along right descending bank	N 32˚ 24.320' W 87˚ 01.187'	Dallas	8/5/08
ARM 207.0 downstream of U.S Highway 80 bridge along right descending bank	N 32˚ 23.403' W 87˚ 00.158'	Dallas	8/14/08
ARM 208.0 upstream of Alabama Highway 41 bridge along left descending bank	N 32˚ 23.500' W 86˚ 50.072'	Dallas	8/6/08
ARM 213.5 downstream of mouth of Soapstone Creek along left descending bank	N 32˚ 21.665' W 86˚ 54.485'	Dallas	8/6/08
ARM 215.5 downstream of Cunningham Bluff along right descending bank	N 32˚ 22.634' W 86˚ 53.023'	Dallas	8/6/08
ARM 221.7 at Gardiner Island along left descending bank	N 32˚ 26.143' W 86˚ 51.251'	Dallas	8/6/08
ARM 224.1 along steep bluff along right descending bank at Durant Bend	N 32˚ 25.325' W 86˚ 49.506'	Dallas	8/7/08
ARM 226.1 along left descending bank upstream of Durant Bend	N 32˚ 24.375' W 86˚ 50.774'	Autauga/Dallas	8/7/08
ARM 227.2 upstream of small island along right descending bank	N 32˚ 23.500' W 86˚ 50.072'	Autauga/Dallas	8/7/08
ARM 228.3 about 2 miles downstream of Woods Landing along right descending bank	N 32.38003˚ W 86.82934˚	Autauga/Dallas	9/24/08
ARM 230.4 along 'bluff' just upstream of Woods Landing along right descending bank	N 32.35600˚ W 86.80764˚	Autauga/Dallas	9/25/08
ARM 231.7 downstream of lower transmission lines downstream of Benton Boat Ramp along left descending bank	N 32.33865˚ W 86.881912˚	Autauga/Lowndes	9/25/08
ARM 233.0 near upper transmission lines downstream of Benton Boat Ramp along left descending bank	N 32.32266˚ W 86.82209˚	Autauga/Lowndes	9/25/08
ARM 237.0 just upstream of Benton Boat Ramp along chalk bluff on left descending bank	N 32.30698˚ W 86.80724˚	Autauga/Lowndes	9/25/08

[1] ARM=Alabama River mile

METHODS

Mussels were collected by hand while diving with the aid of a surface air source. Due to the nature of the project and limited sampling time and resources, a generally qualitative sampling protocol (timed search) was employed, with emphasis on sampling habitats favored by target species (Strayer and Smith, 2003). Sampling time was dictated by the habitat or fauna encountered at each station. If a meager fauna or poor quality habitat was encountered, we terminated our efforts at that station and moved to another sampling station. Stations where the potential for finding target species was highest (generally stable substrate with mixed sand, gravel, cobble, or boulders) received more attention; therefore, species that might occupy other habitat types are likely underrepresented.

Total search time (in hours) was used as the basis for comparison of catch per unit effort (CPUE). Some quantitative data using 0.25 square meter (m^2) quadrats, employing 10 replicates randomly placed, were collected and results were incorporated into the qualitative data set. While dives were made at numerous stations, each reach was treated as one habitat unit due to the lack of natural or artificial barriers to physical movement of mussels or their hosts and to gene flow. Therefore, sampling results discussed herein are presented as an aggregate for each reach and no comparisons are made among individual stations.

During qualitative sampling dives, numbers of mussels that occurred in high densities were estimated, while those that were encountered in lower numbers were collected, taken aboard the boat, identified to species, tallied, and returned to the river bed. If a species was not represented by live individuals at a given site, fresh dead shells were tallied. During quantitative sampling all mussels from replicate quadrats were collected, taken aboard the boat, identified, tallied, and returned to the river bed. Condition (live, fresh dead, weathered dead, or relic) of all specimens collected during each dive was recorded on a field data sheet along with sampling time, habitat conditions, and location data. Sampling stations were referenced to nearby landmarks, and river miles were determined with the aid of U.S. Army Corps of Engineers river mile markers and river charts. Station locations were georeferenced with a hand-held Global Positioning System (GPS) unit.

Live individuals were returned to the substrate and some fresh dead specimens were retained as voucher material. Voucher specimens will be archived in the North Carolina Museum of Natural Science collection. Weathered dead and relic material was discarded. Taxonomy follows Williams and others (2008). Data collected in the field were subsequently transferred into an Excel database at the Geological Survey of Alabama for permanent storage and future reference. Status of conservation priority in Alabama follows Mirarchi (2004) with the following designated rankings of conservation priority (P): P1-Highest Conservation Concern, P2-High Conservation Concern, P3-Moderate Conservation Concern, P4-Low Conservation Concern, and P5-Lowest Conservation Concern.

RESULTS AND DISCUSSION

Sampling was performed in the riverine reaches downstream of Claiborne Lock and Dam during August and September 2006, downstream of Millers Ferry Lock and Dam during July 2007, and downstream of Robert F. Henry Lock and Dam during August and September 2008 (fig. 1, table 1, appendix). Most collections were qualitative, but some quantitative data were gathered downstream of Millers Ferry Dam and are included in abundance totals. Time and resource constraints dictated that total individuals of a species at given stations were often estimated, and an aggregate total of 12,089 mussels were found either live or represented by fresh dead shells.

Downstream of Claiborne, 14.4 hours of sampling time yielded 3,054 mussels representing 19 species, for a CPUE of 212.1 mussels per hour (table 2). The fauna in that reach was dominated by the ebonyshell, *Fusconaia ebena*, followed by the Alabama orb, *Quadrula asperata*, the elephantear, *Elliptio crassidens*, and the bankclimber, *Plectomerus dombeyanus*. No federally listed endangered or threatened species were encountered during that field effort. However, species of highest (P1) and moderate (P3) conservation concern in Alabama were collected, including the delicate spike, *Elliptio arctata* (P1), the monkeyface, *Quadrula metanevra* (P3), and the fawnsfoot, *Truncilla donaciformis* (P3). *Elliptio arctata* was considered a P1 species by Mirarchi (2004), because its limited distribution, rarity, and specialized habitat requirements render it vulnerable to extinction. *Quadrula metanevra* and *T. donaciformis* were considered P3

Table 2.—Comparison of distribution of freshwater mussel species collected live or fresh dead from selected reaches of the Alabama River, 2006-08.

Species	Conservation Priority[1]	Distribution[2]					
		Claiborne		Millers Ferry		Robert. F. Henry	
		N	CPUE	N	CPUE	N	CPUE
Ellipsaria lineolata	P4	12	0.8	81	8.1	28	1.9
Elliptio arctata	P1	37	2.6	--	--	--	--
Elliptio crassidens	P5	462	32.1	78	7.8	686	45.7
Fusconaia cerina	P5	5	0.3	34	3.4	265	17.7
Fusconaia ebena	P5	884	61.4	2,608	260.8	1,731	115.4
Lampsilis ornate	P2	--	--	--	--	3	0.2
Lampsilis straminea	P4	3	0.2	2	0.2	--	--
Lampsilis teres	P5	10	0.7	4	0.4	5	0.3
Leptodea fragilis	P5	67	4.7	2	0.2	4	0.3
Megalonaias nervosa	P5	204	14.2	25	2.5	46	3.1
Obliquaria reflexa	P5	264	18.3	243	24.3	225	15.0
Plectomerus dombeyanus	P5	404	28.1	290	29.0	337	22.5
Pleurobema taitianum	E, P1	--	--	--	--	1	0.1
Potamilus purpuratus	P5	116	8.1	8	0.8	3	0.2
Quadrula apiculata	P5	74	5.1	197	19.7	447	29.8
Quadrula asperata	P5	494	34.3	892	89.2	714	47.6
Quadrula metanevra	P3	2	0.1	11	1.1	17	1.1
Quadrula nobilis	[3]	5	0.3	10	1.0	22	1.5
Quadrula rumphiana	P4	1	<0.1	4	0.4	1	0.1
Truncilla donaciformis	P3	7	0.5	1	0.1	9	0.6
Utterbackia imbecillis	P5	3	0.2	--	--	1	0.1
Villosa lienosa	P5	--	--	--	--	1	0.1
Total		3,054	212.1	4,490	449.0	4,546	303.1

[1] E=Endangered, P1=Priority 1 (Highest Conservation Concern), P3=Priority 3 (Moderate Conservation Concern), P4=Priority 4 (Low Conservation Concern), P5=Priority 5 (Lowest Conservation Concern).

[2] Number of live mussels and fresh dead shells among all stations sampled; N=number of individuals; CPUE=catch per unit effort in hours within each reach: Claiborne, 14.4 hours, Millers Ferry, 10 hours, and Robert F. Henry, 15 hours sample time.

[3] *Quadrula nobilis* was not recognized by Mirarchi (2004).

species due to decreasing population trends and habitat vulnerability. They are all known to occupy riverine habitats with at least moderate current.

Downstream of Millers Ferry, 10 hours of bottom sampling time yielded 4,490 mussels representing 17 species, for a CPUE of 449 mussels per hour (table 2). Again, *Fusconaia ebena* was the dominant species collected, followed by *Quadrula asperata*, *Plectomerus dombeyanus*, and the threehorn wartyback, *Obliquaria reflexa* (table 2). No federally listed endangered or threatened species or species of highest (P1) or high (P2) conservation priority in Alabama were encountered. However, individuals of *Quadrula metanevra* and *Truncilla donaciformis* (P3) were again collected (table 2).

Downstream of Robert F. Henry, 15 hours of bottom sampling yielded 4,546 mussels representing 20 species, for a CPUE of 303.1 mussels per hour (table 2). One live individual of the heavy pigtoe, *Pleurobema taitianum* (P1), was found at ARM 207 near Selma. No other federally protected species or species of highest or high conservation concern were collected. Live individuals of *Quadrula metanevra* and *Truncilla donaciformis* (P3) were again collected. Two species not collected from the Claiborne or Millers Ferry reaches were collected downstream of Robert F. Henry, the Southern pocketbook, *Lampsilis ornata* (P4), and the little spectaclecase, *Villosa lienosa* (P5) (table 2).

A comparison of the sampling results among reaches indicates that they have similar faunal assemblages with similar numerically dominant species (table 2). Table 2 also provides CPUE data for comparative purposes. In the Claiborne tailwater, there was an aggregate CPUE of 212.1 mussels per hour, while in the Millers Ferry tailwater the CPUE was more than twice that value, at 449 mussels per hour. However, two species were collected in the Claiborne tailwater that were not collected in the Millers Ferry tailwater. The CPUE in the R.F. Henry tailwater was intermediate between those of Claiborne and Millers Ferry tailwaters, with 303 mussels per hour. These differences may be the result of several factors. Downstream of Claiborne, there are areas with boulders scattered about the bottom of the river, a habitat type generally lacking in the reach downstream of Millers Ferry. A large percentage of time was devoted to searching under and around those rocks, as they provide a specific niche preferred by some mussels and/or their host fishes. Two species found downstream of Claiborne and not downstream of

Millers Ferry, *Elliptio arctata* (P1) and the paper pondshell, *Utterbackia imbecillis* (P5), and two found in considerably higher abundance downstream of Claiborne than downstream of Millers Ferry, the fragile papershell, *Leptodea fragilis* (P5) and the bleufer, *Potamilus purpuratus* (P5), are known to prefer that habitat type. Conversely, a species found in higher abundance in the Millers Ferry tailwater, the butterfly, *Ellipsaria lineolata* (P4), is known to burrow deeply into softer substrates such as those found downstream of Millers Ferry, and some quantitative 0.25 m^2 quadrat sampling in that reach involved deep excavation of those quadrats, resulting in more *Ellipsaria* found.

The reach downstream of Robert F. Henry yielded three species not found in the Claiborne or Millers Ferry reaches: *Lampsilis ornata*, *Pleurobema taitianum,* and *Villosa lienosa*. These collections represent the only known extant population of *P. taitianum* in the Alabama River. The only other known population is one that is unconfirmed in the Tombigbee River. The *V. lienosa* encountered from the Robert F. Henry tailwater in 2008 is apparently the only specimen collected from the Alabama River proper since its impoundment in the mid-20th century.

RECOMMENDATIONS

Based on the results of recent sampling downstream of Claiborne, Millers Ferry, and Robert F. Henry Locks and Dams, including the discovery of a robust population of *Elliptio arctata* downstream of Millers Ferry and a single *Pleurobema taitianum* downstream of Robert F. Henry, we make the following recommendations:

- More effort should be expended to further define the range limits and abundance of the extant mussel fauna in the Alabama River. Emphasis on the more diverse mussel beds would increase the likelihood of finding additional species of conservation concern.
- Observations of potential limiting factors to habitat quality and other aspects of mussel life history should be noted. Upon determination of possible limiting factors, efforts should be made to reverse or minimize those factors.
- Quantitative assessment of the mussel fauna at selected stations should be determined as a benchmark for comparison in the event of possible future deleterious impacts to the fauna, such as a mussel die-off or chemical spill, or to document increases in population distribution and abundance.

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APPENDIX

Summary of field notes for mussel sampling stations in the Alabama River downstream of Claiborne, Millers Ferry, and Robert F. Henry Locks and Dams, Alabama, 2006-08

ARM 38.0 at upstream end of bluff, left descending bank
N31° 20.351' W87° 43.474'
Clarke/Monroe Counties, Alabama
September 7, 2006
Poor, loose substrate; 10 minutes bottom time
Obliquaria reflexa – 1 live
Fusconaia ebena – 2 weathered dead

ARM 38.7 downstream of Eureka Landing, left descending bank
N31° 21.562' W87° 43.267'
Clarke/Monroe Counties, Alabama
September 7, 2006
Poor substrate of soupy mud; 5 minutes bottom time
No mussels

ARM 43.1 upstream of Eureka Landing, right descending bank
N31° 25.074' W87° 40.478'
Clarke/Monroe Counties, Alabama
September 7, 2006
Poor substrate of muddy sand; 5 minutes bottom time
No mussels

ARM 46.0 upstream of Gainestown Landing on bedrock (probably limestone) bluff, right descending bank
N31° 25.243' W87° 38.712'
Clarke/Monroe Counties, Alabama
September 7, 2006
Soft, cobble-sized stone (limestone?) with interstitial gravel/sand/silt in channel; stone on slope; 65 minutes bottom time
Fusconaia ebena – 2 live
Plectomerus dombeyanus – 3 live
Potamilus purpuratus – 3 live
Quadrula nobilis – 1 live
Elliptio crassidens – 1 live
Quadrula asperata – 1 live
Corbicula sp. – present

ARM 48.0 along gravel shore opposite training dikes, left descending bank
N31° 24.892' W87° 37.843'
Clarke/Monroe Counties, Alabama
September 7, 2006
Poor substrate of unstable gravel; 5 minutes bottom time
No mussels

ARM 49.5 along stone shore downstream of training dikes, left descending bank
N31° 24.655' W87° 35.966'
Clarke/Monroe Counties, Alabama
September 7, 2006
Poor substrate of bedrock; 10 minutes bottom time
Quadrula asperata – weathered dead fragments
Fusconaia ebena – weathered dead fragments
Obliquaria reflexa – weathered dead fragments
Corbicula sp. – present

ARM 50.0 along large gravel bar with three training dikes, right descending bank
N31° 25.239' W87° 35.578'
Clarke/Monroe Counties, Alabama
September 6, 2006
Poor substrate of mud; 5 minutes bottom time
No mussels

ARM 51.5 along large gravel bar, left descending bank
N31° 26.145' W87°34.367'
Clarke/Monroe Counties, Alabama
September 6, 2006
Bedrock slope, very loose coarse sand on channel floor; 5 minutes bottom time
Elliptio crassidens – 5 live
Fusconaia ebena – 28 live
Leptodea fragilis – 1 weathered dead
Megalonaias nervosa – 2 live
Obliquaria reflexa – 7 live
Plectomerus dombeyanus – 1 live
Potamilus purpuratus – 1 live
Quadrula asperata – 6 live
Corbicula sp. – present

ARM 54.6 at Marshalls Bluff near left descending bank among boulders
N31° 28.404' W87°33.722'
Clarke/Monroe Counties, Alabama
September 6, 2006
Flat bedrock with many pockmarks and scour holes; 30 minutes bottom time
Lampsilis teres – 2 live
Plectomerus dombeyanus – 1 live
Corbicula sp. – present

ARM 57.5 along bluff downstream of sand and gravel banks, right descending bank
N31° 29.880' W87°36.141'
Clarke/Monroe Counties, Alabama
September 6, 2006
Loose sand/gravel in channel, stable at foot of slope among rocks; 40 minutes bottom time
Elliptio crassidens – 5 live
Fusconaia ebena – 2 live
Leptodea fragilis – 1 live
Megalonaias nervosa – 15 live
Obliquaria reflexa – 15 live
Plectomerus dombeyanus – 15 live
Potamilus purpuratus – 1 live
Quadrula apiculata – 2 live
Corbicula sp. – present

ARM 59.7 downstream of Pigeon Creek, along right descending bank
N31° 31.174' W87°37.233'
Clarke/Monroe Counties, Alabama
September 6, 2006
Stable gravel and sand on channel floor, slope with sandy mud over gravel; 80 minutes bottom time
Ellipsaria lineolata – 1 live
Elliptio crassidens – 1 live
Fusconaia cerina – 1 live
Fusconaia ebena – 300 live
Lampsilis teres – 1 weathered dead
Leptodea fragilis – 1 weathered dead
Megalonaias nervosa – 1 live (subadult)
Obliquaria reflexa – 75 live
Plectomerus dombeyanus – 1 live
Potamilus purpuratus – 1 live
Quadrula apiculata – 12 live
Quadrula asperata – 125 live
Truncilla donaciformis – 2 live
Corbicula sp. – present

ARM 60.4 downstream of Nancy Hill Landing, near left descending bank
N31° 31.558' W 87°36.085'
Clarke/Monroe Counties, Alabama
September 5, 2006
Slope with bedrock outcrops, cobble and boulders, and a heavy coating of silty sand; channel floor with silty sand; 60 minutes bottom time
Ellipsaria lineolata – 1 weathered dead
Elliptio crassidens – 1 weathered dead
Fusconaia ebena – 18 live
Lampsilis teres – 2 weathered dead
Leptodea fragilis – 1 live
Megalonaias nervosa – 1 relic
Obliquaria reflexa – 4 live
Plectomerus dombeyanus – 3 live
Potamilus purpuratus – 1 live
Quadrula apiculata – 2 relic
Quadrula asperata – 6 live
Corbicula sp. – present

ARM 64.3 at Strode Landing, near right descending bank
N31° 33.355' W 87° 33.663'
Clarke/Monroe Counties, Alabama
August 1, 2006
Slope with cobble and boulders, bedrock at base of slope, channel floor with silt and gravel, unstable; 60 minutes bottom time
Elliptio crassidens – 25 live
Fusconaia cerina – 1 live
Fusconaia ebena – 150 live (including 21 subadults)
Lampsilis teres – 1 live
Leptodea fragilis – 2 live
Megalonaias nervosa – 5 live
Obliquaria reflexa – 60 live
Plectomerus dombeyanus – 40 live
Potamilus purpuratus – 10 live
Quadrula apiculata – 20 live
Quadrula asperata – 120 live
Quadrula metanevra – 1 live
Truncilla donaciformis – 1 weathered dead
Corbicula sp. – present

ARM 66.5 downstream of U.S. Highway 84 bridge, along left descending bank
N31° 32.693' W 87° 31.099'
Monroe County, Alabama
August 1, 2006
Slope with cobble and boulders, bedrock at base of slope, channel floor with silt and gravel, unstable; 60 minutes bottom time
Ellipsaria lineolata – 4 live
Elliptio crassidens – 25 live
Fusconaia cerina – 1 live
Fusconaia ebena – 100 live (including 21 subadults)
Lampsilis teres – 1 live
Megalonaias nervosa – 5 live
Obliquaria reflexa – 40 live
Plectomerus dombeyanus – 40 live
Potamilus purpuratus – 5 live
Quadrula apiculata – 10 live
Quadrula asperata – 80 live (including 7 subadults)
Quadrula metanevra – 1 live
Truncilla donaciformis – 1 weathered dead
Corbicula sp. – present

ARM 70.0 at downstream end of bluff downstream of Claiborne Lock and Dam, along right descending bank
N31° 35.307' W 87° 32.214'
Monroe County, Alabama
August 3, 2006
Slope cobble and boulders with bedrock outcrops with gravel/mud/sand pockets, channel floor sand and gravel; 80 minutes bottom time
Ellipsaria lineolata – 1 live
Elliptio arctata – 17 live
Elliptio crassidens – 50 live
Fusconaia ebena – 30 live
Leptodea fragilis – 30 live (mostly subadults)
Megalonaias nervosa – 30 live
Obliquaria reflexa – 10 live
Plectomerus dombeyanus – 50 live
Potamilus purpuratus – 30 live
Quadrula apiculata – 5 live
Quadrula asperata – 25 live
Truncilla donaciformis – 2 live
Corbicula sp. – present

ARM 70.3 along bluff downstream of Claiborne Lock and Dam, along right descending bank
N31° 35.532' W 87° 32.569'
Monroe County, Alabama
August 3, 2006
Slope cobble and boulders with bedrock outcrops with gravel/mud/sand pockets, channel floor sand and gravel; 40 minutes bottom time
Elliptio arctata – 1 live
Elliptio crassidens – 70 live
Fusconaia ebena – 10 live
Lampsilis teres – 1 weathered dead
Leptodea fragilis – 3 live
Megalonaias nervosa – 20 live
Obliquaria reflexa- 5 live
Plectomerus dombeyanus – 30 live
Potamilus purpuratus – 2 live
Quadrula apiculata – 1 live
Quadrula asperata – 10 live
Corbicula sp. – present

ARM 70.5 along bluff downstream of Claiborne Lock and Dam, right descending bank
N31° 35.232' W 87° 32.066'
Monroe County, Alabama
August 2, 2006
Slope cobble and boulders with bedrock outcrops with gravel/mud/sand pockets, channel floor sand and gravel; 160 minutes bottom time
Ellipsaria lineolata – 1 live
Elliptio arctata – 6 live
Elliptio crassidens – 105 live
Fusconaia ebena – 200 live
Lampsilis straminea – 1 live
Lampsilis teres – 3 live (including 1 subadult)
Leptodea fragilis – 25 live (mostly subadults)
Megalonaias nervosa – 51 live
Obliquaria reflexa- 35 live
Plectomerus dombeyanus – 80 live (including 2 subadults)
Potamilus purpuratus – 20 live (including 2 subadults)
Quadrula apiculata – 15 live
Quadrula asperata – 75 live
Quadrula nobilis – 2 live
Quadrula rumphiana – 2 weathered dead
Truncilla donaciformis – 1 live
Utterbackia imbecillis – 2 live (including 1 subadult)
Corbicula sp. – present

ARM 70.75 along bluff downstream of Claiborne Lock and Dam, right descending bank
N31° 35.537' W 87° 32.560'
Monroe County, Alabama
August 1, 2006
Slope cobble and boulders with bedrock outcrops containing gravel/mud/sand pockets, channel floor sand and gravel; 60 minutes bottom time
Ellipsaria lineolata – 4 live
Elliptio arctata – 2 live
Elliptio crassidens – 100 live
Fusconaia cerina – 2 live
Fusconaia ebena – 40 live
Lampsilis straminea – 2 live
Lampsilis teres – 1 live
Leptodea fragilis – 3 weathered dead
Megalonaias nervosa – 50 live
Obliquaria reflexa – 11 live
Plectomerus dombeyanus – 100 live
Potamilus purpuratus – 20 live
Quadrula apiculata – 5 live
Quadrula asperata – 40 live
Quadrula nobilis – 2 live
Quadrula rumphiana – 1 live
Truncilla donaciformis – 2 fresh dead
Corbicula sp. – present

ARM 71.0 along bluff downstream of Claiborne Lock and Dam, right descending bank
N31° 35.390' W 87° 32.346'
Monroe County, Alabama
August 3, 2006
Slope cobble and boulders with bedrock outcrops containing gravel/mud/sand pockets, channel floor sand and gravel; 45 minutes bottom time
Elliptio arctata – 11 live
Elliptio crassidens – 75 live
Fusconaia ebena – 5 live
Lampsilis teres – 2 live
Leptodea fragilis – 5 live (all subadults)
Megalonaias nervosa – 15 live
Obliquaria reflexa – 1 live
Plectomerus dombeyanus – 40 live (1 subadult)
Potamilus purpuratus – 20 live
Quadrula apiculata – 2 live
Quadrula asperata – 5 live
Utterbackia imbecillis – 1 live
Corbicula sp. – present

ARM 105.4, just upstream of Burlington Northern Railroad Bridge, right descending bank
N31° 55.717' W87° 29.160'
Wilcox County, Alabama
July 12, 2007
Bedrock with layer of silt, no current, minimal visibility; 20 minutes bottom time
Obliquaria reflexa – 1 fresh dead
Quadrula asperata – 1 fresh dead
Corbicula sp. – present

ARM 107.5, at unnamed gravel bar one mile downstream of Rose Landing, right descending bank
N31° 55.881' W87° 27.158'
Wilcox County, Alabama
July 12, 2007
Mud bottom, no current, minimal visibility; 3 minutes bottom time
No mussels

ARM 108.4, near Rose Landing, right descending bank
N31° 55.303' W87° 26.633'
Wilcox County, Alabama
July 12, 2007
Loose gravel and sand in channel, slope more stable, each with a layer of silty mud; 20 minutes bottom time
Fusconaia cerina – 2 live
Fusconaia ebena – 6 live
Plectomerus dombeyanus – 10 live
Quadrula apiculata – 1 live
Quadrula asperata – 4 live
Obliquaria reflexa – 4 live

ARM 111.0 at upstream end of Blacks Bluff, left descending bank
N31° 54.307' W87° 24.355'
Wilcox County, Alabama
July 12, 2007
Moderately stable gravel and sand with a fine layer of silt; 30 minutes bottom time
Ellipsaria lineolata – 2 live
Elliptio crassidens – 5 live
Fusconaia ebena – 23 live
Obliquaria reflexa – 1 live
Quadrula apiculata – 1 live
Quadrula metanevra – 1 live
Corbicula sp. – present

ARM 112.9 just upstream of mouth of Pursley Creek, right descending bank
N31° 54.825' W87° 22.812'

Wilcox County, Alabama
July 12, 2007
Bedrock with a brittle surface, firmer beneath; bottom time 10 minutes
Lampsilis straminea – 1 live
Obliquaria reflexa – 1 live, 1 fresh dead
Elliptio crassidens – 1 weathered dead
Corbicula fluminea – present

ARM 116.9 at upstream end of Yellowjacket Bar, right descending bank
N31° 54.049' W87° 23.639'
Wilcox County, Alabama
July 12, 2007
Bedrock terraces on slope, channel bottom with boulders scattered among gravel and sand; bottom time 30 minutes
Fusconaia cerina – 1 live, 3 fresh dead
Fusconaia ebena – 100 live
Plectomerus dombeyanus – 30 live
Potamilus purpuratus – 3 live
Quadrula apiculata – 5 live
Elliptio crassidens – 5 live
Quadrula asperata – 50 live
Obliquaria reflexa – 15 live
Corbicula sp. – present

ARM 118.4 about 100 m upstream of boat ramp at Alabama Highway 10 Bridge, left descending bank; dive abbreviated by severe thunderstorm
N31° 58.191' W87° 24.890'
Wilcox County, Alabama
July 10, 2007
Stable sand and gravel on channel bottom, mud with soupy silt on channel slope, strong current; 30 minutes bottom time
Ellipsaria lineolata – 8 live
Elliptio crassidens – 5 live
Fusconaia cerina – 3 live
Fusconaia ebena – 200 live
Lampsilis straminea – 1 weathered dead
Megalonaias nervosa – 10 live
Obliquaria reflexa – 20 live
Plectomerus dombeyanus – 5 live
Quadrula apiculata – 20 live
Quadrula asperata – 100 live

ARM 123.3 downstream of the mouth of Beaver Creek, right descending bank
N31° 59.911' W87° 28.389'
Wilcox County, Alabama
July 10, 2007

Sand and gravel on channel bottom, slope of soft bedrock with breakdown along base and a fine layer of silt on most surfaces; bottom time 60 minutes
Fusconaia ebena – 120 live
Lampsilis teres – 1 live
Obliquaria reflexa – 10 live
Plectomerus dombeyanus – 25 live
Quadrula apiculata – 5 live
Quadrula asperata – 40 live
Corbicula fluminea – present

ARM 124.8 about 0.2 mile downstream of Clifton Ferry Boat Ramp, right descending bank
N32° 01.046' W87° 28.151'
Wilcox County, Alabama
July 10, 2007
Channel bottom sand and gravel with silt layer, bedrock slope with breakdown common; bottom time 120 minutes
Ellipsaria lineolata – 11 live, 3 weathered dead
Elliptio crassidens – 15 live
Fusconaia cerina – 9 live
Fusconaia ebena – 550 live
Lampsilis teres – 1 weathered dead
Leptodea fragilis – 1 weathered dead
Megalonaias nervosa – 10 live
Plectomerus dombeyanus – 75 live
Potamilus purpuratus – 3 live
Obliquaria reflexa – 35 live
Quadrula asperata – 170 live
Quadrula apiculata – 50 live
Quadrula metanevra – 6 live
Quadrula nobilis – 2 live
Truncilla donaciformis – 1 live

ARM 126.3 along low fossiliferous shelf just downstream of mouth of Dixon Creek, right descending bank
N32° 01.951' W87° 26.792'
Wilcox County, Alabama
July 11, 2007
Channel bottom bedrock with gentle slope, both with fine layer of silt; 35 minutes bottom time
Lampsilis teres – 1 relic
Obliquaria reflexa – 1 fresh dead
Quadrula asperata – 1 fresh dead
Corbicula fluminea – present

ARM 127.5 at bluff colloquially known as “Biscuit Rocks,” left descending bank

N32° 01.821' W87° 25.705'
Wilcox County, Alabama
July 26, 2007
Gravel with interstitial sand with a fine silt layer on most surfaces, no current; 17 minutes bottom time
Elliptio crassidens – 15 live
Fusconaia ebena – 2 live
Leptodea fragilis – 1 live
Obliquaria reflexa – 3 live
Plectomerus dombeyanus – 50 live
Potamilus purpuratus – 2 live
Quadrula apiculata – 3 live
Quadrula asperata – 5 live

ARM 128.6 just upstream of mouth of Rockwest Creek, left descending bank
N32° 02.457' W87° 24.707'
Wilcox County, Alabama
July 11, 2007
Gravel and sand over firm clay with a fine silt layer on most surfaces, no current; 30 minutes bottom time
Ellipsaria lineolata – 3 live
Fusconaia cerina – 4 live
Fusconaia ebena – 200 live
Lampsilis teres – 1 weathered dead
Megalonaias nervosa – 1 live
Obliquaria reflexa – 20 live
Plectomerus dombeyanus – 15 live
Quadrula apiculata – 25 live
Quadrula asperata – 75 live
Quadrula nobilis – 2 live

ARM 129.0 downstream of Millers Ferry Lock and Dam, right descending bank
N32° 03.640' W87° 24.235'
Wilcox County, Alabama
July 24, 2007
Bedrock with scattered boulders and gravel patches where mussels were found; 35 minutes bottom time
Ellipsaria lineolata – 17 live
Elliptio crassidens – 1 live
Fusconaia cerina – 2 live
Fusconaia ebena – 166 live
Megalonaias nervosa – 1 live
Obliquaria reflexa – 11 live
Plectomerus dombeyanus – 2 live
Quadrula apiculata – 1 live
Quadrula asperata – 23 live

Quadrula metanevra – 1 live

ARM 130.6 opposite Cobbs Landing Boat Ramp, right descending bank
N32° 04.002' W87° 24.172'
Wilcox County, Alabama
July 11, 2007
Sand and gravel substrate with fine layer of silt on most surfaces, no current; bottom time 60 minutes
Ellipsaria lineolata – 24 live
Elliptio crassidens – 14 live
Fusconaia cerina – 7 live
Fusconaia ebena – 741 live
Lampsilis straminea – 1 relic
Megalonaias nervosa – 1 live
Obliquaria reflexa – 42 live
Plectomerus dombeyanus – 29 live
Quadrula apiculata – 36 live
Quadrula asperata – 187 live
Quadrula nobilis – 1 live
Quadrula rumphiana – 4 live

ARM 131.7 beneath power transmission lines downstream of Millers Ferry Lock and Dam, right descending bank
N32° 04.883' W87° 24.172'
Wilcox County
July 11, 2007
Elliptio crassidens – 3 live
Fusconaia cerina – 1 live
Fusconaia ebena – 100 live
Lampsilis teres – 1 relic
Leptodea fragilis – 1 fresh dead
Obliquaria reflexa – 30 live
Plectomerus dombeyanus – 40 live
Potamilus purpuratus – 2 live
Quadrula apiculata – 10 live
Quadrula asperata – 30 live
Corbicula fluminea – present

ARM 203.9 opposite boat ramp near Selma, along left descending bank
N32° 23.699' W87° 02.506'
Dallas County, Alabama
August 5, 2008
25 feet deep, no current, little visibility; substrate chalky bedrock on slope; sand, gravel, and mud on channel floor; 25 minutes bottom time
Elliptio crassidens – 1 weathered dead
Fusconaia ebena – 1 live

Leptodea fragilis – 1 weathered dead
Obliquaria reflexa – 1 live, 4 fresh dead
Quadrula apiculata – 2 live
Quadrula asperata – 3 live
Corbicula sp. – present

ARM 205.3 downstream of U.S. Highway 80 bridge near Selma
N32° 24.347' W87° 01.162'
Dallas County, Alabama
August 14, 2008
130 minutes bottom time
Ellipsaria lineolata – 1 weathered dead
Elliptio crassidens – 62 live
Fusconaia cerina – 2 weathered dead
Fusconaia ebena – 78 live
Lampsilis ornata – 1 weathered dead
Lampsilis teres – 1 live
Leptodea fragilis – 3 live
Megalonaias nervosa – 6 live
Obliquaria reflexa – 24 live
Plectomerus dombeyanus – 38 live
Potamilus purpuratus – 2 live, 1 weathered dead
Quadrula apiculata – 88 live
Quadrula asperata – 36 live
Quadrula nobilis – 2 live
Truncilla donaciformis – 1 weathered dead
Utterbackia imbecillis – 1 live

ARM 205.7 downstream of railroad bridge near Selma
N32° 24.300' W87° 00.705'
Dallas County, Alabama
August 14, 2008
61 minutes bottom time
Elliptio crassidens – 25 live
Fusconaia cerina – 1 weathered dead
Obliquaria reflexa – 3 live, 1 weathered dead
Plectomerus dombeyanus – 20 live
Potamilus purpuratus – 2 live, 1 weathered dead
Quadrula apiculata – 14 live
Quadrula asperata – 1 live

ARM 207.0 near U.S. Highway 80 Bridge in downtown Selma
N32° 24.320' W87° 01.187'
Dallas County, Alabama
August 5, 2008

Near right descending bank; about 25 feet deep; along high chalk bluff; estimated totals; 90 minutes bottom time
Ellipsaria lineolata – 1 weathered dead
Elliptio crassidens – 100 live
Fusconaia cerina – 1 fresh dead
Fusconaia ebena – 50 live
Lampsilis teres – 5 weathered dead
Leptodea fragilis – 2 fresh dead
Megalonaias nervosa – 2 live
Obliquaria reflexa – 25 live
Plectomerus dombeyanus – 100 live
Potamilus purpuratus – 1 fresh dead
Quadrula apiculata – 50 live
Quadrula asperata – 100 live
Quadrula nobilis – 5 live
Quadrula rumphiana – 1 live
Truncilla donaciformis – 1 fresh dead
Corbicula sp. – present

ARM 207 near U.S. Highway 80 Bridge in downtown Selma
N32° 23.403' W87° 00.158'
Dallas County, Alabama
August 14, 2008
76 minutes bottom time
Ellipsaria lineolata – 2 live
Elliptio crassidens – 115 live
Fusconaia cerina 1 live
Fusconaia ebena – 151 live
Lampsilis teres – 1 weathered dead
Leptodea fragilis – 1 weathered dead
Megalonaias nervosa –11 live
Obliquaria reflexa – 1 weathered dead
Plectomerus dombeyanus – 5 live
Pleurobema taitianum – 1 live
Quadrula apiculata – 26 live
Quadrula asperata – 22 live
Quadrula nobilis – 2 live
Corbicula sp. – present

ARM 208 upstream of Alabama Highway 41 Bridge
N32° 23.500' W86° 50.072'
Dallas County, Alabama
August 6, 2008
Along chalk bluff on right descending bank; some numbers estimated; 80 minutes bottom time
Ellipsaria lineolata – 1 live

Elliptio crassidens – 75 live
Fusconaia cerina 4 live
Fusconaia ebena – 200
Lampsilis teres – 1 live
Leptodea fragilis – 1 weathered dead
Megalonaias nervosa – 8 live
Obliquaria reflexa – 50 live
Plectomerus dombeyanus – 75
Potamilus purpuratus – 1 weathered dead
Quadrula apiculata – 200 live
Quadrula asperata – 100 live
Quadrula nobilis – 10 live
Truncilla donaciformis – 1 weathered dead
Corbicula sp. – present

ARM 213.5 along steep clay/chalk bluff downstream of mouth of Soapstone Creek
N32° 21.665' W86° 54.485'
Dallas County, Alabama
August 6, 2008
At foot of steep bluff on left descending bank; 25 feet deep, with minimal current; 23 minutes bottom time
Elliptio crassidens – 2 live
Fusconaia ebena – 3 live
Lampsilis ornata – 1 weathered dead
Leptodea fragilis – 1 weathered dead
Obliquaria reflexa – 3 live
Plectomerus dombeyanus – 1 live
Quadrula apiculata – 3 live
Quadrula asperata – 2 live
Utterbackia imbecillis – 1 fresh dead
Corbicula sp. – present

ARM 215.5 downstream of Cunningham Bluff
N32° 22.634' W86° 53.023'
Dallas County, Alabama
August 6, 2008
15 feet deep; 45 minutes bottom time
Arcidens confragosus – 1 weathered dead
Ellipsaria lineolata – 1 alive
Elliptio crassidens – 24 live
Fusconaia cerina – 1 live, 1 weathered dead
Fusconaia ebena – 96 live
Megalonaias nervosa – 3 live
Obliquaria reflexa – 7 live
Plectomerus dombeyanus – 1 live
Quadrula apiculata – 13 live

Quadrula asperata – 24 live
Truncilla donaciformis – 1 fresh dead
Corbicula sp. – present

ARM 221.7 at Gardiner Island
N32° 26.143' W86° 51.251'
Dallas County, Alabama
August 6, 2008
Along left descending bank in primary channel; 15’ deep with gravel and sand on slope, channel floor with unstable sand and large woody debris with minimal silt; 21 minutes bottom time
Fusconaia ebena – 1 live
Plectomerus dombeyanus – 1 live
Quadrula asperata – 5 live
Truncilla donaciformis – 1 live

ARM 224.1 along steep bluff at Durant Bend
N32° 25.325' W86° 49.506'
Dallas County, Alabama
August 7, 2008
At foot of bluff on right descending bank; 20 minutes bottom time
Lampsilis ornata – 1 weathered dead
Leptodea fragilis – 2 live
Obliquaria reflexa – 1 live, 6 fresh dead
Plectomerus dombeyanus – 1 live
Quadrula apiculata – 1 live
Corbicula sp. – present

ARM 226.1 in Durant Bend
N32° 24.375' W86° 50.774'
Dallas/Autauga counties, Alabama
August 7, 2008
60 minutes bottom time
Ellipsaria lineolata – 3 live, 3 weathered dead
Elliptio crassidens – 100 live
Fusconaia cerina – 7 live
Fusconaia ebena – 250 live
Lampsilis ornata – 2 weathered dead
Leptodea fragilis – 1 live
Megalonaias nervosa – 10 live
Obliquaria reflexa – 40 live
Plectomerus dombeyanus – 50 live
Quadrula apiculata – 40 live
Quadrula asperata – 75 live
Quadrula metanevra – 6 live, 3 weathered dead
Truncilla donaciformis – 2 weathered dead

Corbicula sp. – present

ARM 227.2 upstream of small island
N32° 23.500' W86° 50.072'
Dallas County, Alabama
August 7, 2008
Along right descending bank, with gravel sloping gently from bank to 15 feet deep; some areas of pure sand around logs, with some gravel/sand mixed on channel bottom, with minimal silt layer; 53 minutes bottom time
Ellipsaria lineolata – 5 live, 3 weathered dead
Elliptio crassidens – 200 live
Fusconaia cerina – 1 weathered dead
Fusconaia ebena – 200 live
Lampsilis ornata – 1 weathered dead
Lampsilis teres – 1 live, 1 weathered dead
Leptodea fragilis – 1 weathered dead
Megalonaias nervosa – 10 live
Obliquaria reflexa – 30 live
Plectomerus dombeyanus – 25 live
Potamilus purpuratus – 1 live, 2 weathered dead
Quadrula apiculata – 25 live
Quadrula asperata – 100 live
Quadrula metanevra – 6 live
Quadrula nobilis – 2 live
Truncilla donaciformis – 1 live
Corbicula sp. – present

ARM 228.3 about 2 miles downstream of Woods Landing
N32.38003° W86.82934°
Autauga/Dallas Counties, Alabama
September 24, 2008
Along right descending bank, 20 feet deep; substrate gravel and sand around scattered boulders and bedrock outcrops, with minimal silt; current very swift due to release from dam upstream; 75 minutes bottom time; numbers of some species estimated
Ellipsaria lineolata – 15 live
Elliptio crassidens – 30 live
Fusconaia cerina – 6 live
Fusconaia ebena – 300 live
Lampsilis ornata – 3 fresh dead
Lampsilis teres – 1 fresh dead, 5 weathered dead
Leptodea fragilis – 1 live, 2 weathered dead
Megalonaias nervosa – 10 live
Obliquaria reflexa – 50 live
Plectomerus dombeyanus – 40 live
Potamilus purpuratus – 1 live, 1 weathered dead
Quadrula apiculata – 100 live

Quadrula asperata – 75 live
Quadrula metanevra – 5 live
Quadrula nobilis – 5 live
Truncilla donaciformis – 4 live
Villosa lienosa – 1 live
Corbicula sp. – present

ARM 230.4 along low 'bluff' just upstream of Woods Landing
N32.35600° W86.80764°
Autauga/Dallas Counties, Alabama
September 25, 2008
Along right descending bank, with bedrock sloping to the river floor where it is mixed with gravel and sand and a minimal silt layer; 1 hour bottom time; numbers of some species estimated
Elliptio crassidens – 50 live
Plectomerus dombeyanus – 10 live
Fusconaia ebena – 5 live
Quadrula apiculata – 5 live
Quadrula asperata – 5 live
Ellipsaria lineolata – 1 live
Fusconaia cerina – 1 live
Obliquaria reflexa – 5 live
Corbicula sp. – present but uncommon

ARM 231.7 downstream of lowermost transmission lines near Benton Boat Ramp
N32.33865° W86.81912°
Autauga/Lowndes Counties, Alabama
September 25, 2008
Along left descending bank along low chalk 'bluff', numbers of some species estimated; 40 minutes bottom time
Truncilla donaciformis – 1 live
Elliptio crassidens – 75 live
Fusconaia ebena – 20 live
Quadrula asperata – 20 live
Megalonaias nervosa – 3 live
Obliquaria reflexa– 15 live
Plectomerus dombeyanus – 20 live
Quadrula apiculata – 5 live
Fusconaia cerina – 2 live
Ellipsaria lineolata – 2 live
Corbicula sp. – present but uncommon

ARM 233.0 near uppermost transmission lines just downstream of Benton Boat Ramp
N32.32266° W86.82209°
Autauga/Lowndes Counties, Alabama
September 25, 2008

Along left descending bank downstream of first set of transmission lines downstream of Benton Boat Ramp; 10 feet deep; stable gravel/cobble substrate with areas of firm mud and minimal silt; numbers of some species estimated; 30 minutes bottom time; current very swift due to power generation at dam
Elliptio crassidens – 30 live
Fusconaia ebena – 5 live
Quadrula asperata – 5 live
Obliquaria reflexa– 8 live
Plectomerus dombeyanus – 10 live
Quadrula apiculata – 3 live
Pleurobema decisum – 1 weathered dead

ARM 237.0 just upstream of Benton Boat Ramp
N32.30698° W86.80724°
Autauga/Lowndes Counties, Alabama
September 25, 2008
Along chalk bluff on left descending bank; clay substrate; 15 minutes bottom time; dive aborted because current was too swift to effectively sample

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