

**GEOLOGICAL SURVEY OF ALABAMA**

Berry H. (Nick) Tew, Jr.  
State Geologist

**Water Investigations Program**

Patrick E. O'Neil  
Director

**SURVEY OF THE BEAR CREEK SYSTEM  
FOR FISH SPECIES OF MODERATE TO  
HIGHEST CONSERVATION CONCERN:  
REPORT OF RESULTS FOR 2007-08**

**OPEN-FILE REPORT 0901**

by

Thomas E. Shepard, Stuart W. McGregor, Patrick E. O'Neil,  
Maurice F. Mettee, J. Brett Smith, Cal C. Johnson, and Josh H. Hunter

Prepared in cooperation with the Alabama Department of  
Conservation and Natural Resources

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## **ABSTRACT**

In 2007-08, 36 fish samples were collected at 32 stations in the Bear Creek system to determine the present distribution and abundance of ten fish species of moderate to highest conservation concern known from the system. Ninety-two species were collected including five of the ten species of conservation concern. Species of conservation concern that were found included: the brindled madtom (*Noturus miurus*), the bandfin darter (*Etheostoma zonistium*), the blueface darter (*E. sp. cf. zonistium*), the gilt darter (*Percina evides*), and the highland shiner (*Notropis micropteryx*). Two nonnative species, which have probably invaded the Tennessee River basin from the Tombigbee River system via the Tennessee-Tombigbee Waterway, were also found in the system. These were the weed shiner (*Notropis texanus*), and the blacktail shiner (*Cyprinella venusta*).

## **ACKNOWLEDGMENTS**

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## **INTRODUCTION**

The Bear Creek system in northwest Alabama is home to a unique assemblage of fishes. The total of 104 species of freshwater fishes known from the system is higher

than for any other Tennessee River tributary system in Alabama (Mettee and others, 2002). Ten of these species are considered to be of moderate to highest conservation concern in Alabama (Mirarchi and others, 2004; Mettee, 2004a). The slenderhead darter (*Percina phoxocephala*) is the only species of highest conservation concern (P1) in the system. Five species of high conservation concern (P2) are found there. These are the suckermouth minnow (*Phenacobius mirabilis*), the brindled madtom (*Noturus miurus*), the bandfin darter (*Etheostoma zonistium*), the undescribed “blueface darter” (*E. sp. cf. zonisteum*), and the gilt darter (*Percina evides*). Four species of moderate conservation concern (P3) occur in the system: the American brook lamprey (*Lampetra appendix*), the skipjack herring (*Alosa chrysochloris*), the highland shiner (*Notropis micropteryx*), and the blue sucker (*Cycleptus elongatus*).

Three of these species are at the peripheries of their ranges in the Bear Creek system and are not found in any other tributary system in Alabama. These are the slenderhead darter, the suckermouth minnow, and the brindled madtom. These species are more widespread and common in other parts of their ranges but are restricted to the Bear Creek system within Alabama. A unique feature of the Bear Creek fish fauna is the presence of eight species that do not occur in other Tennessee River tributaries and are typical of the fish fauna of the Mobile Basin. These are the pretty shiner (*Lythrurus bellus*), the bluehead chub (*Nocomis leptcephalus*), the rough shiner (*Notropis baileyi*), the silverstripe shiner (*N. stilbius*), the Dixie chub (*Semotilus thoreauianus*), the black madtom (*Noturus funebris*), the tadpole madtom (*N. gyrinus*), and the speckled darter (*Etheostoma stigmaeum*). Two other species, the weed shiner (*Notropis texanus*) and the blacktail shiner (*Notropis venustus*) are Coastal Plain species that have apparently invaded the Bear Creek system from the upper Tombigbee River system through a connection formed by the Tennessee-Tombigbee Waterway, which was completed in 1985. Neither of these species was found in the Tennessee River system prior to completion of the canal, but both began to appear in fish collections from the Bear Creek system and nearby tributaries in the early 1990s.

The first intensive fish survey dedicated to the Bear Creek system was conducted from 1965 through 1967 by Benjamin R. Wall, Jr., who was a graduate

student at the University of Alabama at the time (Wall, 1968). Wall made 94 collections at 81 stations in the system and included a few additional collections from other sources in his study. The survey yielded 80 species including two new species records for the state of Mississippi, two new records for the state of Alabama, and five new records for the Tennessee River drainage. The new records for the Tennessee River system were the pretty shiner, the rough shiner, the bluehead chub, the black madtom, and the speckled darter. The southern subspecies of the striped shiner (*Luxilus chrysocephalus isolepis*) and intergrades between it and the northern subspecies (*L. chrysocephalus chrysocephalus*) were also identified for the first time in the system in Wall's study. Wall theorized that stream capture of the upper reaches of the Buttahatchee River system by the Bear Creek system was responsible for the transfer of these forms between the drainages and presented biological and geologic evidence to support the theory.

Phillips and Johnston (2004a) made fish collections at 44 stations throughout the Bear Creek system from 1998 through 2000, including 42 stations previously sampled by Wall (1968) in his survey of the system. The objective of their study was to evaluate changes in the fish assemblage of the system since Wall's (1968) survey. Of particular interest were the impacts of the construction of four major impoundments, a floodway channel, and changes in land use in the intervening years. They found that average species richness was lower in their study compared to Wall's and commented that changes in species composition were likely the result of construction of the four impoundments in the system. Evidence of negative impacts of impoundments on fish assemblages and patterns of recovery downstream of nonhydroelectric dams was investigated in the Bear Creek system by Phillips and Johnston (2004b). They found that their recent collections were most dissimilar to Wall's historical, mid-1960s collections immediately downstream of impoundments but increasingly similar at distances of 16 to 32 miles downstream, suggesting that negative impacts increased closer to the dams.

Recently, digital information for the Bear Creek watershed was developed by McGregor and others (2006) in a CD-ROM format. This very useful CD contains an

ArcReader project presenting watershed features such as streams, roads, land use, and biological information as well as a compilation of PDF documents presenting the results of environmental studies related to the Bear Creek system.

The present study was partially funded by ADCNR. The objectives were (1) to thoroughly survey the Bear Creek system to determine the present distribution and abundance of fish species of conservation concern using appropriate sampling techniques, and (2) to evaluate biological and habitat conditions throughout the watershed.

## **STUDY AREA**

Bear Creek is a major tributary of the Tennessee River located in northwest Alabama and northeast Mississippi (fig. 1). The Bear Creek watershed has a drainage area of about 946 square miles. Major tributaries are Cedar Creek with a drainage area of 330 square miles, Little Bear Creek (a tributary of Cedar Creek) with a drainage area of 91 square miles, and Buzzard Roost Creek with a drainage area of 70 square miles.

Most of the downstream section of the watershed is in the Warrior Basin district of the Cumberland Plateau physiographic section. The channel flows through Mississippian limestone and alluvial deposits of gravel and sand. Ridges in the downstream part of the Bear Creek watershed are in the Fall Line Hills district of the East Gulf Coastal Plain physiographic section (Sapp and Emplainscourt, 1975) and are composed of sand and gravel deposits of the Cretaceous Eutaw, Gordo, and Coker Formations (Osborne and others, 1989). To the southeast, the more upstream sections of the system flow over Pennsylvanian sandstone and shale (Osborne and others, 1989). Most of the lower section of the watershed is located in the Transition Hills (65j) level IV ecoregion with some more upstream sections in the Fall Line Hills (65i), the Dissected Plateau (68e), and a small part in the Eastern Highland Rim (71g) (Griffith and others, 2001).

Impoundments are a major feature of the Bear Creek system. The lower section of Bear Creek is impounded from the mouth upstream for about 20 river miles as part of Pickwick Lake formed by Pickwick Dam. The dam, located on the Tennessee River near the Mississippi-Alabama-Tennessee border, is a Tennessee Valley Authority

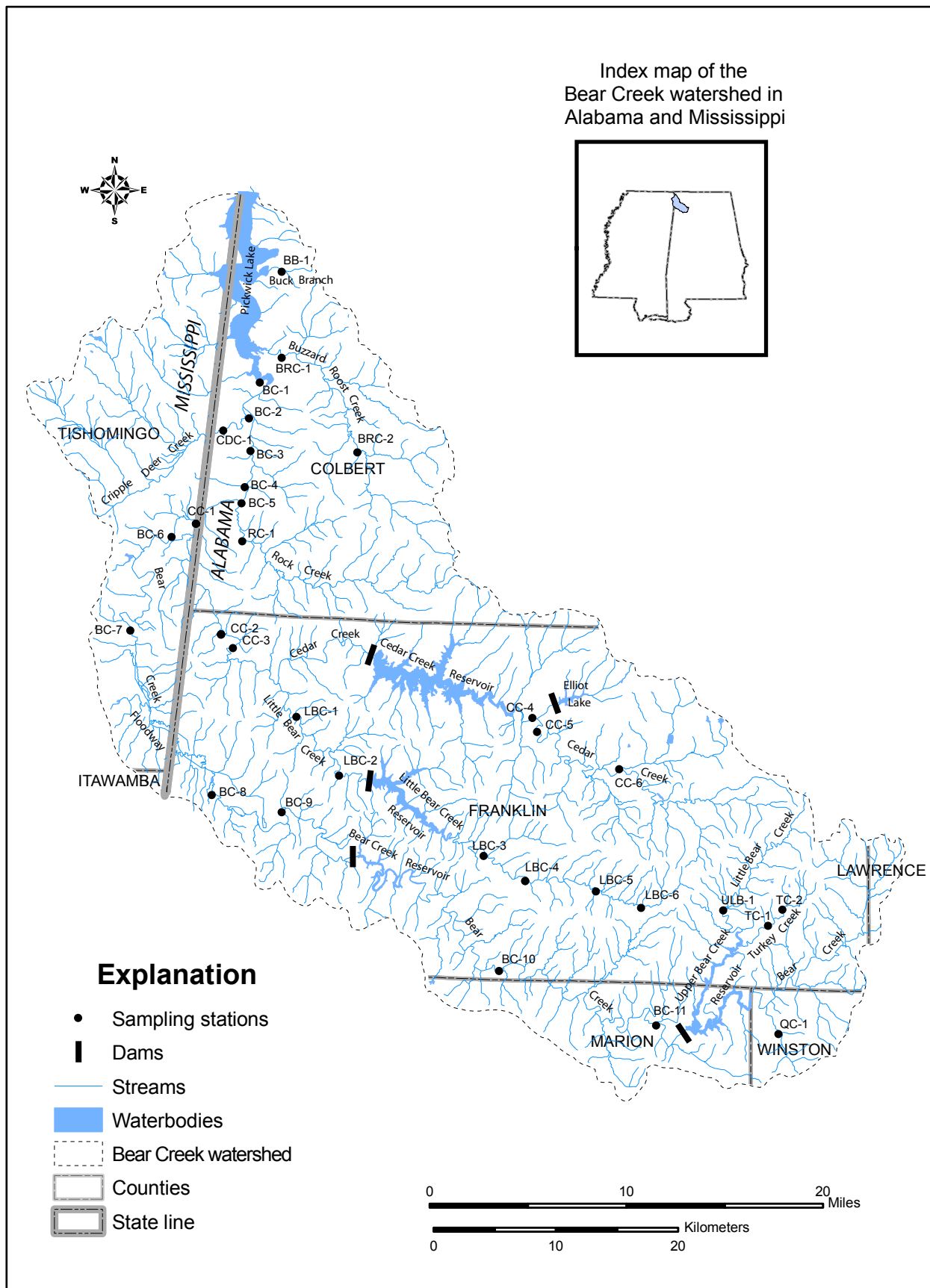


Figure 1. Sampling stations in the Bear Creek system, 2007-08.

(TVA) facility and was completed in 1938. The dam impounds the river for 53 miles upstream with a surface area of 43,100 acres. There are four other major impoundments in the Bear Creek system which were constructed by TVA for flood control and recreation. These are Bear Creek Reservoir, Upper Bear Creek Reservoir, Little Bear Creek Reservoir, and Cedar Creek Reservoir (fig. 1). Bear Creek Dam was completed in 1969 at Bear Creek river mile 74.8 and impounds the stream for 12 river miles upstream of the dam. Little Bear Creek Dam was completed in 1975 at river mile 11.5 on Little Bear Creek and impounds the stream for eight river miles upstream of the dam. Upper Bear Creek Dam was completed in 1978 at Bear Creek river mile 114.8 and impounds the stream for 14 river miles upstream of the dam. Cedar Creek Reservoir was the last impoundment completed in the Bear Creek system. The dam was completed in 1979 at Cedar Creek river mile 22.75 and impounds the stream for 9 miles upstream of the dam. Another notable feature of the system is a 9-mile-long floodway canal that was completed along an 18-mile reach of Bear Creek from river mile 41.6 to river mile 59.6 in 1973 by TVA. The floodway was constructed with the intent of reducing bottomland flooding. The bottom elevation of the canal is 2 to 8 feet higher than normal stream levels so that it only carries flow from Bear Creek during high water events (Taylor and Hall, 1974).

Land use in the Bear Creek watershed is predominantly forest. Pasture, row crops, and poultry production are most common in the southeastern part of the watershed and along the Bear, Little Bear, and Cedar Creek valleys. Urban areas in the watershed include the towns of Red Bay, Haleyville, Phil Campbell, Hackleburg, and Russellville in Alabama and the towns of Belmont and Golden in Mississippi.

## **METHODS**

Thirty-seven fish samples were collected at 32 stations in the Bear Creek system in 2007-08 (table 1, fig. 1, app.). Eleven stations were sampled in the main stem of Bear Creek, six in Cedar Creek, six in Little Bear Creek, and nine in other tributaries. Stations were sampled primarily to determine the present distribution and relative abundance of fish species of conservation concern in the system. A secondary objective was to use the fish samples to calculate Index of Biotic Integrity (IBI) scores at



Table 1. Summary information on sampling stations in the Bear Creek system, 2007-08.

Station	Location	County	State	Coordinates	TRS	Date	Time	Gear Type
BC-1	Bear Creek @ river mile 16	Colbert	Ala.	34.74918°N. -88.07683°W.	sec. 2, T. 4 S., R. 15 W.	19-Oct-07	1500-1530	Electrofishing boat
BC-2	Bear Creek about 2 mi. upstream of Co. Hwy. 4, river mile 20	Colbert	Ala.	34.72241°N. -88.08595°W.	sec. 14, T. 4 S., R. 15 W.	19-Nov-07	1330-1430	Electrofishing boat
BC-3	Bear Creek @ river mile 22.25	Colbert	Ala.	34.69842°N. -88.084639°W.	sec. 23, T. 4 S., R. 15 W.	22-May-08	1200-1330	Electrofishing boat
BC-4	Bear Creek @ Natchez Trace picnic area, river mile 24.5	Colbert	Ala.	34.67158°N. -88.08936°W.	sec. 34, T. 4 S., R. 15 W.	22-May-08	0930-1100	Electrofishing boat
BC-5	Bear Creek @ Natchez Trace, river mile 25.5	Colbert	Ala.	34.6597°N. -88.0921°W.	sec. 3, T. 5 S., R. 15 W.	1-Aug-08	0950-1035	BP shocker <sup>1</sup> -seine
BC-6	Bear Creek @ Mississippi Hwy. 30	Tishomingo	Miss.	34.63422°N. -88.154134°W.	sec. 20, T. 5 S., R. 11 E.	19-Aug-08	1218-1335	BP shocker-seine
BC-7	Bear Creek @ Co. Hwy. 86	Tishomingo	Miss.	34.564917°N. -88.19006°W.	sec. 13, T. 6 S., R. 10 E.	19-Aug-08	0925-1050	BP shocker-seine
BC-8	Bear Creek @ Alabama Hwy. 24 near Red Bay	Franklin	Ala.	34.4441°N. -88.1157°W.	sec. 21, T. 7 S., R. 15 W.	11-Sep-08	0925-1050	BP shocker-seine
BC-9	Bear Creek @ farm road off Co. Hwy. 25, river mile 67.75	Franklin	Ala.	34.43198°N. -88.05330°W.	sec. 30, T. 7 S., R. 14 W.	5-Aug-08	1335-1520	BP shocker-seine
BC-10	Bear Creek @ Military Bridge (Co. Hwy. 57), river mile 95.5	Franklin	Ala.	34.31636°N. -87.85851°W.	sec. 36, T. 8 S., R. 13 W.	5-Aug-08	0955-1145	BP shocker-seine
BC-11	Bear Creek @ Ala. Hwy. 241	Marion	Ala.	34.27704°N. -87.7187°W.	sec. 17, T. 9 S., R. 11 W.	30-Jul-08	0930-1125	BP shocker-seine
BB-1	Buck Branch @ Co. Hwy. 1	Colbert	Ala.	34.8309°N. -88.0584°W.	sec. 1, T. 3 S., R. 15 W.	9-Sep-08	1505-1705	BP shocker-seine
BRC-1	Buzzard Roost Creek near U.S. Hwy. 72	Colbert	Ala.	34.76744°N. -88.05739°W.	sec. 25, T. 3 S., R. 15 W.	22-May-08	1555-1630	Seine, boat electrofisher
BRC-2	Buzzard Roost Creek @ Co. Hwy. 21	Colbert	Ala.	34.69812°N. -87.98901°W.	sec. 22, T. 4 S., R. 14 W.	6-Aug-08	1415-1515	BP shocker-seine
CDC-1	Cripple Deer Creek @ Co. Hwy. 1	Colbert	Ala.	34.71316°N. -88.10924°W.	sec. 16, T. 4 S., R. 15 W.	19-Aug-08	1515-1625	BP shocker-seine

Table 1. Summary information on sampling stations in the Bear Creek system, 2007-08.

Station	Location	County	State	Coordinates	TRS	Date	Time	Gear Type
RC-1	Rock Creek @ Co. Hwy. 1	Colbert	Ala.	34.63180°N. -88.09098°W.	sec. 15, T. 5 S., R. 15 W.	6-Aug-08	1115-1250	BP shocker-seine
CC-1a	Cedar Creek @ Natchez Trace	Colbert	Ala.	34.6444°N. -88.1325°W.	sec. 8, T. 5 S., R. 15 W.	1-Aug-08	1130-1250	BP shocker-seine
CC-1b						10-Sep-08	1330-1500	BP shocker-seine
CC-2a	Cedar Creek @ Pogo	Franklin	Ala.	34.5628°N. -88.1091°W.	sec. 9, T. 6 S., R. 15 W.	31-Jul-08	1540-1655	BP shocker-seine
CC-2b						6-Aug-08	0810-0930	BP shocker-seine
CC-2c						6-Aug-08	0935-1005	BP shocker-seine
CC-2d						9-Sep-08	1135-1315	BP shocker-seine
CC-3	Cedar Creek @ Co. Hwy. 90 @ Pogo	Franklin	Ala.	34.55286°N. -88.0983°W.	sec. 10, T. 6 S., R. 15 W.	10-Sep-08	1030-1200	BP shocker-seine
CC-4	Cedar Creek upstream of Co. Hwy. 73	Franklin	Ala.	34.50324°N. -87.83084°W.	sec. 30, T. 6 S., R. 12 W.	23-May-08	0840-1045	BP shocker-seine
CC-5	Cedar Creek @ Co. Hwy 524 (abandoned bridge)	Franklin	Ala.	34.49035°N -87.84312°W	sec. 31, T. 6 S., R. 12 W.	7-Aug-08	0810-1000	BP shocker-seine
CC-6	Cedar Creek @ U.S. Hwy. 43	Franklin	Ala.	34.4659°N. -87.753°W.	sec. 12, T. 7 S., R. 12 W.	31-Jul-08	1140-1338	BP shocker-seine
LBC-1	Little Bear Creek @ Co. Hwy. 23	Franklin	Ala.	34.50241°N. -88.04104°W.	sec. 31, T. 6 S., R. 14 W.	5-Aug-08	1615-1735	BP shocker-seine
LBC-2	Little Bear Creek @ Alabama Hwy. 24 (Jordans Mill)	Franklin	Ala.	34.45931°N. -88.00260°W.	sec. 15, T. 7 S., R. 14 W.	31-Jul-08	0805-1000	BP shocker-seine
LBC-3	Little Bear Creek @ Alabama Hwy. 187	Franklin	Ala.	34.40119°N. -87.87331°W.	sec. 35, T. 7 S., R. 13 W.	21-Nov-08	1230-1300	6 ft seine

Table 1. Summary information on sampling stations in the Bear Creek system, 2007-08.

Station	Location	County	State	Coordinates	TRS	Date	Time	Gear Type
LBC-4a	Little Bear Creek @ Lawler Cemetery Road (Co. Hwy. 122)	Franklin	Ala.	34.38275°N. -87.83597°W.	sec. 7, T. 8 S., R. 12 W.	21-Nov-07	1140-1220	6 ft seine
LBC-4b						30-Jul-08	1330-1530	BP shocker-seine
LBC-5	Little Bear Creek @ Co. Hwy. 59	Franklin	Ala.	34.37570°N. -87.77303°W.	sec. 11, T. 8 S., R. 12 W.	18-Aug-08	1125-1325	BP shocker-seine
LBC-6	Little Bear Creek about 1 mi. W. of Phil Campell	Franklin	Ala.	34.36384°N. -87.73264°W.	sec. 18, T. 8 S., R. 11 W.	21-Nov-07	1340-1355	6 ft seine
ULB-1	Little Bear Creek about 2.3 mi. ENE Phil Campbell	Franklin	Ala.	34.36222°N. -87.65964°W.	sec. 14, T. 8 S., R. 11 W.	21-May-08	1330-1530	Electrofishing boat
TC-1	Turkey Creek upstream of Upper Bear Creek Reservoir	Franklin	Ala.	34.35111°N. -87.61964°W.	sec. 18, T. 8 S., R. 10 W.	21-May-08	1140-1235	Electrofishing boat
TC-2	Turkey Creek @ Alabama Hwy. 243	Franklin	Ala.	34.36308°N. -87.60698°W.	sec. 17, T. 7 S., R. 10 W.	18-Aug-08	1506-1530	8 ft seine
QC-1	Quarter Creek off of George Ave., Haleyville	Winston	Ala.	34.27115°N. -87.60985°W.	sec. 17, T. 9 S., R. 10 W.	20-Aug-08	1015-1140	BP shocker-seine

<sup>1</sup>BP shocker-Backpack shocker

most stations in the study in order to assess biological conditions in the watershed. In the interest of collecting samples adequate for calculating reliable IBI scores, most stations were sampled using the “30+2” method developed by O’Neil and others (2006). The method involves performing ten standardized sampling efforts in each of the three principal stream habitats of riffles, runs, and pools as well as collecting two 150-foot-long shoreline samples.

Fish samples at most stations were collected using an 8- or 10-foot, 3/16- inch mesh seine in conjunction with a Smith-Root Model 12-B backpack electrofisher. Techniques in riffles and runs were almost identical. In these habitats, the seine was used to block an area of the shoal by stretching it perpendicular to the flow with the lead line in contact with the bottom of the stream. The person operating the electrofisher would then begin shocking the stream bed and water column 15 to 20 feet directly upstream of the seine and then work back to the net while maneuvering the electrodes so as to shock the entire area upstream of the seine. When possible, an additional person would work with the electrofisher operator upstream of the seine by kicking the substrate and dislodging any stunned fishes that had become lodged in rocks and debris on the bottom so that the current could sweep them into the seine. The additional person would also use a dip net to catch stunned fishes that did not appear to be headed toward the seine. In some cases, slower, deeper runs were sampled by using seine hauls beginning upstream and hauling the seine downstream for 15 to 20 feet. In some cases, the backpack electrofisher was used to shock around obstructions in pools such as snags or boulders and stunned fish were netted by one or two crew members with dip nets. Shorelines were sampled for a distance of about 150 feet as measured with a hip chain or estimated by pacing off the distance. The person operating the electrofisher shocked within 2 feet of the shore while working upstream as one or two crew members with dip nets retrieved and identified stunned fish.

At stations that were too deep to collect with a backpack shocker and seine, fish samples were collected using a 14-foot electro-fishing boat. Sampling was standardized by shocking for 10-minute periods (actual shocking or “peddle down” time) with shocking effort divided between the two shorelines. Specimens collected during this

period were identified, counted, and released outside of the sampling area. Sampling was then conducted for additional 10-minute periods until no new species were being collected at the station.

In some instances only qualitative fish samples were collected. In these cases the full 30+2 method was not employed and either only a seine without the backpack electrofisher or less sampling effort was used than in the full technique. These samples are valuable in determining the presence or absence of target species but are not adequate for calculating IBI scores.

Fish collection data were recorded in the field on paper forms. Data were later entered into a digital database for analysis. Most fishes were released after they had been identified and recorded. If there was any question as to the identity of an individual, it was fixed in a ten percent formalin solution and returned to the lab for verification. Retained specimens were placed in the GSA comparative fish collection for permanent storage.

## **RESULTS AND DISCUSSION**

Sampling in 2007-08 produced 93 fish species and one darter hybrid (table 2). Collection efforts produced five of the ten species of moderate to highest conservation concern known to occur in the Bear Creek system. The five species which were encountered were the brindled madtom, the bandfin darter, the blueface darter, the gilt darter and the highland shiner. The following are brief accounts for the species of moderate to highest conservation concern known from the Bear Creek system.

**SLENDERHEAD DARTER**, *Percina phoxocephala*, highest conservation concern. We did not collect any slenderhead darters in our sampling in the Bear Creek system in 2007-08. There are historical records in the system from Bear Creek proper, Cedar Creek, and Cripple Deer Creek (Wall, 1968; Mettee and others, 1996; Boschung and Mayden, 2004; O'Neil, 2004). Within Alabama, the slenderhead darter is only known from the Bear Creek system, which is at the southern periphery of its range (Mettee and others, 1996). The species was never common in collections in Alabama (Wall, 1968; O'Neil, 2004) and has become even less so in recent years as is evidenced by our failure to collect it in this year's sampling. Our most recent GSA

Table 2. Fish species collected in the Bear Creek system, 2007-08.

Scientific name	Common Name	Number of specimens	Percent of total catch
Petromyzontidae			
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	3	0.02
Lepisosteidae			0.00
<i>Lepisosteus oculatus</i>	spotted gar	2	0.01
<i>Lepisosteus osseus</i>	longnose gar	23	0.14
Clupeidae			0.00
<i>Dorosoma cepedianum</i>	gizzard shad	589	3.54
<i>Dorosoma petenense</i>	threadfin shad	571	3.43
Cyprinidae			0.00
<i>Campostoma oligolepis</i>	largescale stoneroller	4,501	27.08
<i>Clinostomus funduloides</i>	rosyside dace	88	0.53
<i>Cyprinella galactura</i>	whitetail shiner	106	0.64
<i>Cyprinella spiloptera</i>	spotfin shiner	635	3.82
<i>Cyprinella venusta</i>	blacktail shiner	2	0.01
<i>Cyprinella whipplei</i>	steelcolor shiner	7	0.04
<i>Cyprinus carpio</i>	common carp	35	0.21
<i>Hybopsis amblops</i>	bigeye chub	75	0.45
<i>Luxilus chrysocephalus</i>	striped shiner	1,356	8.16
<i>Lythrurus bellus</i>	pretty shiner	69	0.42
<i>Lythrurus fasciolaris</i>	scarlet shiner	188	1.13
<i>Lythrurus fumeus</i>	ribbon shiner	5	0.03
<i>Nocomis leptcephalus</i>	bluehead chub	75	0.45
<i>Nocomis micropogon</i>	river chub	1	0.01
<i>Notropis baileyi</i>	rough shiner	347	2.09
<i>Notropis boops</i>	bigeye shiner	65	0.39
<i>Notropis micropteryx</i>	highland shiner	49	0.29
<i>Notropis texanus</i>	weed shiner	163	0.98
<i>Notropis volucellus</i>	mimic shiner	261	1.57
<i>Phoxinus erythrogaster</i>	southern redbelly dace	14	0.08
<i>Pimephales notatus</i>	bluntnose minnow	129	0.78
<i>Pimephales vigilax</i>	bullhead minnow	93	0.56
<i>Semotilus atromaculatus</i>	creek chub	18	0.11
<i>Semotilus thoreauianus</i>	Dixie chub	100	0.60
Catostomidae			0.00
<i>Carpionodes carpio</i>	river carpsucker	15	0.09
<i>Erismyzon oblongus</i>	creek chubsucker	29	0.17
<i>Hypentelium nigricans</i>	northern hog sucker	353	2.12
<i>Ictiobus bubalus</i>	smallmouth buffalo	57	0.34
<i>Ictiobus niger</i>	black buffalo	4	0.02
<i>Minytrema melanops</i>	spotted sucker	27	0.16
<i>Moxostoma anisurum</i>	silver redhorse	3	0.02
<i>Moxostoma breviceps</i>	smallmouth redhorse	14	0.08
<i>Moxostoma carinatum</i>	river redhorse	11	0.07
<i>Moxostoma duquesnei</i>	black redhorse	22	0.13
<i>Moxostoma erythrurum</i>	golden redhorse	38	0.23

Table 2. Fish species collected in the Bear Creek system, 2007-08.

Scientific name	Common Name	Number of specimens	Percent of total catch
Ictaluridae			0.00
<i>Ameiurus natalis</i>	yellow bullhead	15	0.09
<i>Ictalurus punctatus</i>	channel catfish	24	0.14
<i>Noturus exilis</i>	slender madtom	17	0.10
<i>Noturus funebris</i>	black madtom	12	0.07
<i>Noturus gyrinus</i>	tadpole madtom	3	0.02
<i>Noturus miurus</i>	brindled madtom	7	0.04
<i>Noturus nocturnus</i>	freckled madtom	2	0.01
<i>Pylodictis olivaris</i>	flathead catfish	10	0.06
Esocidae			0.00
<i>Esox americanus</i>	redfin pickerel	2	0.01
<i>Esox niger</i>	chain pickerel	3	0.02
Aphredoderidae			0.00
<i>Aphredoderus sayanus</i>	pirate perch	5	0.03
Atherinopsidae			0.00
<i>Labidesthes sicculus</i>	brook silverside	63	0.38
Belonidae			0.00
<i>Strongylura marina</i>	Atlantic needlefish	7	0.04
Fundulidae			0.00
<i>Fundulus catenatus</i>	northern studfish	110	0.66
<i>Fundulus olivaceus</i>	blackspotted topminnow	213	1.28
Poeciliidae			0.00
<i>Gambusia affinis</i>	western mosquitofish	92	0.55
Cottidae			0.00
<i>Cottus carolinae</i>	banded sculpin	199	1.20
Moronidae			0.00
<i>Morone chrysops</i>	white bass	1	0.01
<i>Morone mississippiensis</i>	yellow bass	160	0.96
<i>Morone saxatilis</i>	striped bass	10	0.06
Centrarchidae			0.00
<i>Ambloplites rupestris</i>	rock bass	59	0.35
<i>Lepomis auritus</i>	redbreast sunfish	1	0.01
<i>Lepomis cyanellus</i>	green sunfish	105	0.63
<i>Lepomis gulosus</i>	warmouth	6	0.04
<i>Lepomis macrochirus</i>	bluegill	319	1.92
<i>Lepomis megalotis</i>	longear sunfish	1,034	6.22
<i>Lepomis microlophus</i>	redeer sunfish	36	0.22
<i>Lepomis miniatus</i>	redspotted sunfish	6	0.04
<i>Micropterus dolomieu</i>	smallmouth bass	3	0.02
<i>Micropterus punctulatus</i>	spotted bass	148	0.89
<i>Micropterus salmoides</i>	largemouth bass	89	0.54
<i>Pomoxis annularis</i>	white crappie	1	0.01
<i>Pomoxis nigromaculatus</i>	black crappie	4	0.02

Table 2. Fish species collected in the Bear Creek system, 2007-08.

Scientific name	Common Name	Number of specimens	Percent of total catch
Percidae			0.00
<i>Etheostoma blennioides</i>	greenside darter	248	1.49
<i>Etheostoma caeruleum</i>	rainbow darter	264	1.59
<i>Etheostoma duryi</i>	black darter	125	0.75
<i>Etheostoma histrio</i>	harlequin darter	8	0.05
<i>Etheostoma jessiae</i>	blueside darter	26	0.16
<i>Etheostoma kennicotti</i>	stripetail darter	4	0.02
<i>Etheostoma nigripinne</i>	blackfin darter	22	0.13
<i>Etheostoma nigrum</i>	johnny darter	2	0.01
<i>Etheostoma parvipinne</i>	goldstripe darter	3	0.02
<i>Etheostoma rufilineatum</i>	redline darter	2,219	13.35
<i>Etheostoma tennesseense</i>	Tennessee darter	446	2.68
<i>Etheostoma stigmaeum</i>	speckled darter	19	0.11
<i>Etheostoma zonistium</i>	bandfin darter	25	0.15
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	2	0.01
<i>Perca flavescens</i>	yellow perch	2	0.01
<i>Percina caprodes</i>	logperch	211	1.27
<i>Percina evides</i>	gilt darter	55	0.33
<i>Percina sciera</i>	dusky darter	25	0.15
<i>Percina shumardi</i>	river darter	1	0.01
hybrid percidae	hybrid darter	1	0.01
Sciaenidae			0.00
<i>Aplodinotus grunniens</i>	freshwater drum	8	0.05
Total species		93	
Total individuals		16,625	100



record is of one specimen collected in Cripple Deer Creek in 2005. Overall, the slenderhead darter has a wide distribution in the upper and middle Mississippi River basin from Ohio to Minnesota and south from Oklahoma to Alabama (O'Neil, 2004).

**SUCKERMOUTH MINNOW**, *Phenacobius mirabilis*, high conservation concern. None were collected in this study in 2007-08. Wall (1968) reported suckermouth minnows from two localities in Bear Creek. The last reported collection in Alabama was in 1993 in Cedar Creek at the town of Pogo in a night collection by GSA (Mettee, 2004b). The last collection in the Bear Creek system in Mississippi was in 1985 (Ross, 2001). Suckermouth minnows were never common in collections from the Bear Creek system (Wall, 1968; Mettee and others, 1996; Ross, 2001; Boschung and Mayden, 2004). The species is at the periphery of its range in Bear Creek. Its range, overall, includes Lake Erie tributaries, the upper and central Mississippi River basin, and several western Gulf Coast drainages (Mettee, 2004).

**BRINDLED MADTOM**, *Noturus miurus*, high conservation concern. Brindled madtoms were collected at five stations in 2007-08. They were found at stations BC-5 and BC-9 in the main stem of Bear Creek, stations CC-1 and CC-2 in Cedar Creek, and station LBC-1 in Little Bear Creek (fig. 2, table 3, app.). The species was not common with only one or two specimens per collection. The species is at the upstream extent of its range in the Tennessee River system in Alabama (Warren, 2004). In addition to the Bear Creek system, Boschung and Mayden (2004) cite a historical (1891) collection of the species in Cypress Creek and a possible recent (1996) record in Cotaco Creek. The species is widespread in the Mississippi River Basin in the Coastal Plain, extending into upland areas in the Cumberland, Tennessee, and Ohio River systems (Etnier and Starnes, 1993). The range includes the White, Arkansas, and Ouachita River systems, southern Great Lakes tributaries, and the Pearl and Lake Ponchartrain systems of the Gulf Coast (Etnier and Starnes, 1993).

**BANDFIN DARTER**, *Etheostoma zonistium*, high conservation concern. Bandfin darters were collected at two stations in 2007-08, CDC-1 (10 specimens) in Cripple Deer Creek, and BB-1 (15 specimens) in Buck Branch (fig. 3, table 3, app.). The species is also known from Pennywinkle Creek and a now impounded site on lower



Table 3. Fish species of moderate to highest conservation concern collected in the Bear Creek system, 2007-08

Conservation concern status	Scientific name	Common name	No. of stations where found	Total specimens collected
Highest (P1)	<i>Percina phoxocephala</i>	slenderhead darter	0	0
High (P2)	<i>Phenacobius mirabilis</i>	suckermouth minnow	0	0
High (P2)	<i>Noturus miurus</i>	brindled madtom	5	7
High (P2)	<i>Etheostoma zonistium</i>	bandfin darter	2	25
High (P2)	<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface shiner	1	2
High (P2)	<i>Percina evides</i>	gilt darter	11	55
Moderate (P3)	<i>Lampetra appendix</i>	American brook lamprey	0	0
Moderate (P3)	<i>Alosa chrysochloris</i>	skipjack herring	0	0
Moderate (P3)	<i>Notropis micropteryx</i>	highland shiner	5	49
Moderate (P3)	<i>Cycleptus elongatus</i>	blue sucker	0	0

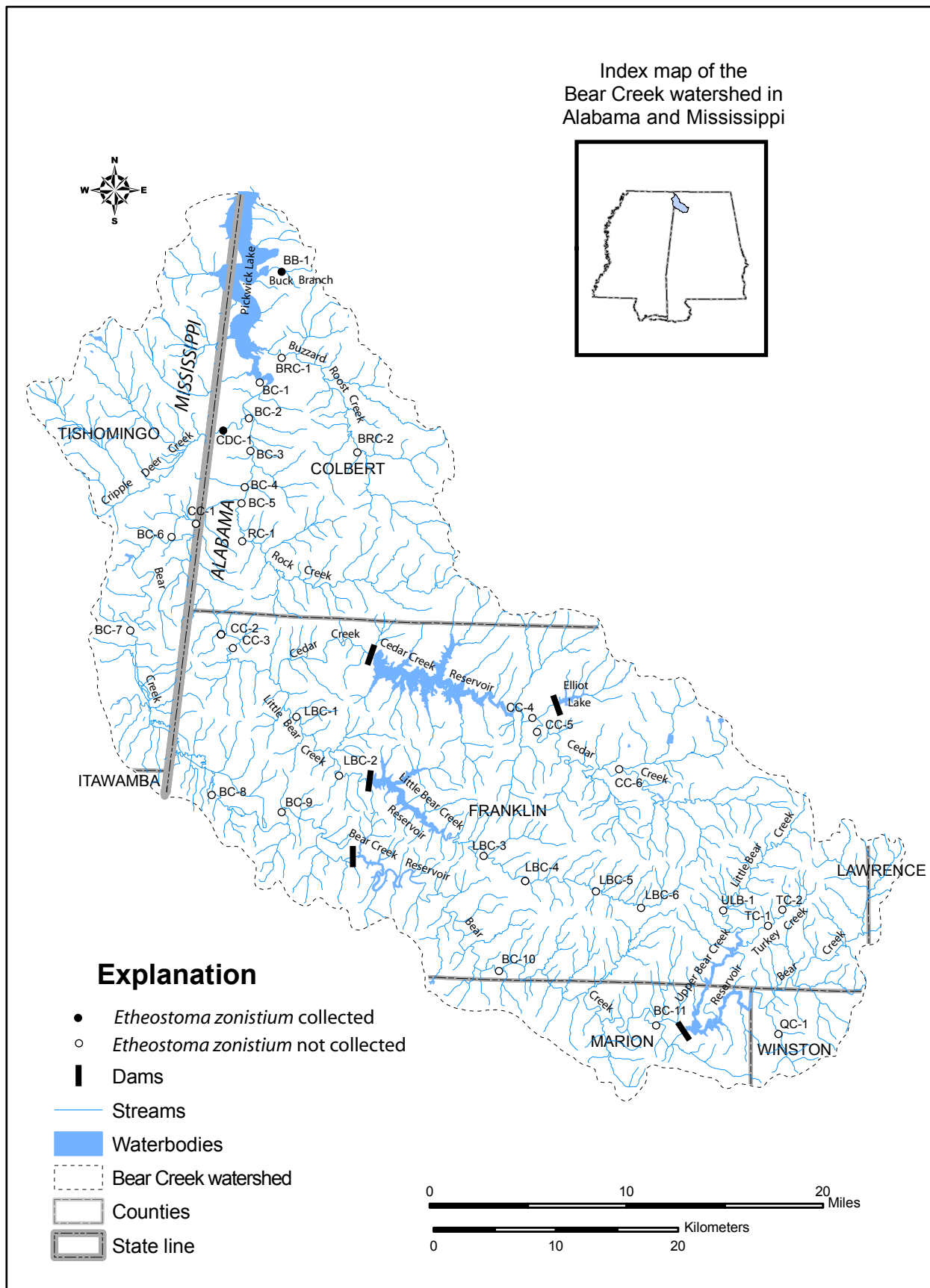


Figure 3. Sampling stations where the bandfin darter, *Etheostoma zonistum*, was collected in the Bear Creek system, 2007-08.

Bear Creek (Kuhajda, 2004a). Pennywinkle Creek was not sampled this year, but it will be included in next year's sampling. In addition to the Bear Creek system, there is a population in Panther Creek, a small direct tributary of the Tennessee River. Overall distribution is in the Coastal Plain in tributaries of the Tennessee River from Pickwick Reservoir north in mostly western tributaries of the Tennessee River to southern Kentucky. It is also found in the Hatchie River system of the Mississippi River basin (Etnier and Starnes, 1993).

**BLUEFACE DARTER**, *Etheostoma* sp. cf. *zonistium*, high conservation concern. Two juveniles of the blueface darter were collected in Turkey Creek at station TC-2 (fig. 4, table 3, app.). Tributaries that could harbor this species were not extensively sampled in 2007-08. These will, however, be targeted in 2008-09. This undescribed species is an Alabama endemic and restricted to upland streams of the Cumberland Plateau in the upper Bear Creek system and the Hubbard Creek system of the Black Warrior River drainage (Kuhajda, 2004b). It has been extirpated from much of its former range in the Bear Creek system by Upper Bear Creek Reservoir (Kuhajda, 2004b).

**GILT DARTER**, *Percina evides*, high conservation concern. Gilt darters were collected at 11 stations in 15 collections in 2007-08 (fig.5, table 3, app.). They were collected in the main stem of Bear Creek from station BC-4 just upstream of the embayment of Pickwick Lake upstream to station BC-9 (fig. 5). In Cedar Creek, they were collected at stations CC-1, CC-2, and CC-3. In Little Bear Creek, they were collected at stations LBC-1 and LBC-2. The largest collection in 2007-08 was 11 individuals in Little Bear Creek at station LBC-1 (app.). Collections at other stations produced from one to six individuals. Notably, gilt darters were not collected at any stations upstream of Cedar Creek, Little Bear Creek, or Bear Creek Reservoirs. Also interesting is that Wall (1968) reported only one collection of the gilt darter in the entire Bear Creek system (collected by Walter M. Tatum of ADCNR using the poison cresol). Mettee and others (2002) cited eight collections of the gilt darter including several collections by GSA as well as recent TVA collections. Gilt darters are also known from the Shoal and Elk River systems in Alabama (O'Neil, 2004). The species is widely distributed in the Mississippi River Basin from New York to Minnesota and south to the



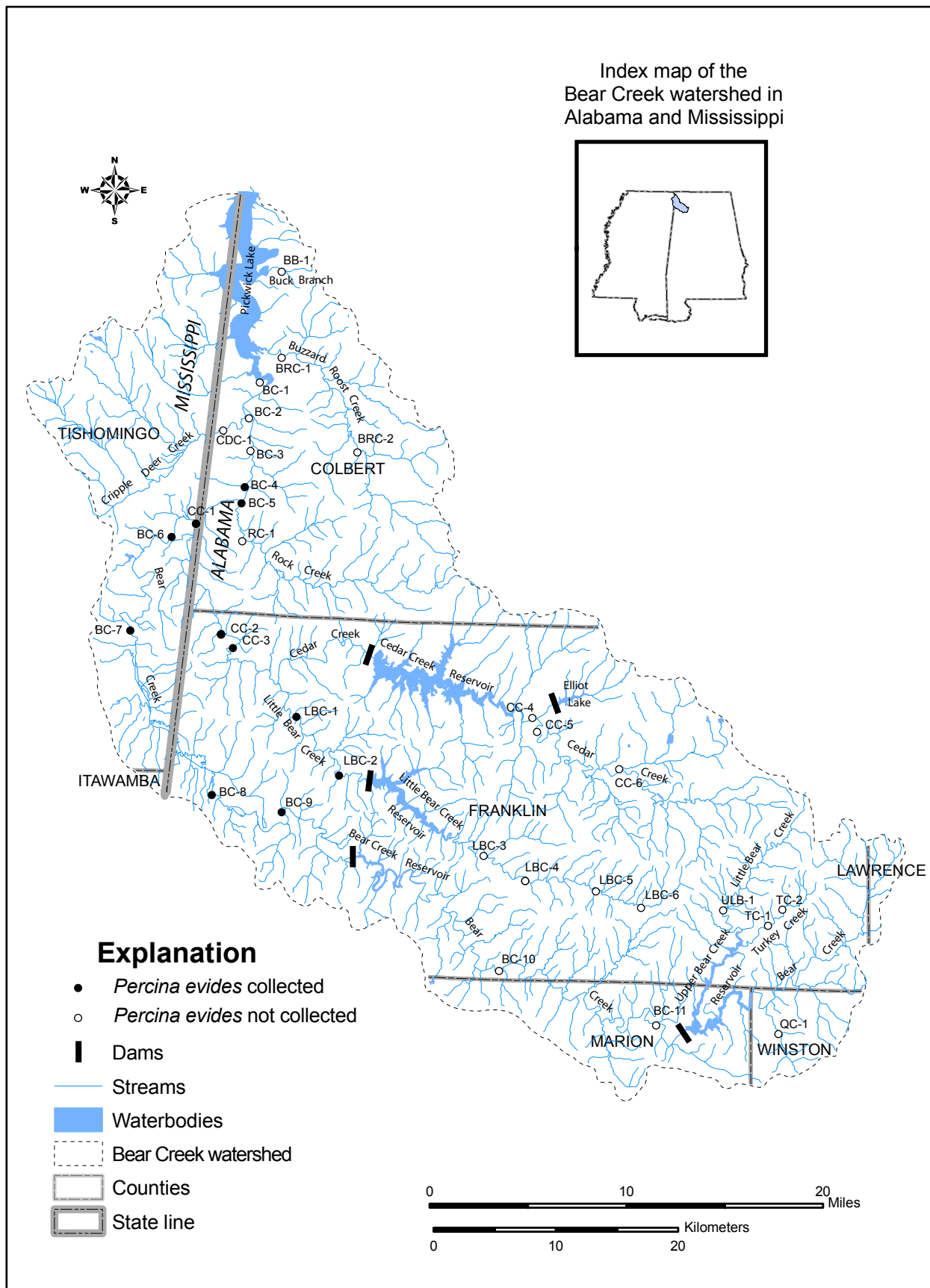


Figure 5. Sampling stations where the gilt darter, *Percina evides*, was collected in the Bear Creek system, 2007-08.

White River system in Arkansas and the Tennessee River system (Etnier and Starnes, 1993).

**AMERICAN BROOK LAMPREY**, *Lampetra appendix*, moderate conservation concern. The American brook lamprey was not collected in 2007-08. A spawning aggregation of the species was found downstream of the Jordans Mill Dam in Little Bear Creek (station LBC-2) in 1966 by Wall (1968). Mettee and others (1996) also reported collections in Little Bear Creek and in Cedar Creek at Pogo (CC-2) in 1993. Elsewhere in Alabama, Mettee and others (1996) also reported a collection of the species from a tributary to Piney Creek in Limestone County. The overall distribution of the American brook lamprey is Great Lakes tributaries, the upper Mississippi River basin, Atlantic Coast drainages from Roanoke River of Virginia to New England, the White River in Arkansas and Missouri, and the Tennessee River (Etnier and Starnes, 1993; Boschung and Mayden, 2004).

**SKIPJACK HERRING**, *Alosa chrysochloris*, moderate conservation concern. No skipjacks were collected in the Bear Creek system in 2007-08. Neither Wall (1968), Mettee and others (1996), nor Boschung and Mayden (2004) reported skipjack herring from the system. Mettee and others (1996) indicate collections from throughout the main channel of the Tennessee River system as well as in several major tributaries. Mettee and others (2002) reported two localities for skipjacks in the lower Bear Creek system. The species is found in almost every major river system in Alabama and most Gulf Coastal drainages including the Mississippi River basin (Mettee and others, 1996); it has, however, been extirpated in much of the upper Mississippi River system due to locks and dams that have blocked upstream migrations (Mettee and O'Neil, 2003). The skipjack herring is reported to be generally common in large rivers and main channel reservoirs in Tennessee (Etnier and Starnes, 1993). Populations in Mississippi and Alabama are also reported to be stable (Ross, 2001; Boschung and Mayden, 2004). Continued effort will be dedicated to locating skipjack herring in the Bear Creek system in the following year.

**HIGHLAND SHINER**, *Notropis micropteryx*, moderate conservation concern. Highland shiners were collected at stations BC-6 and BC-7 in lower Bear Creek, station

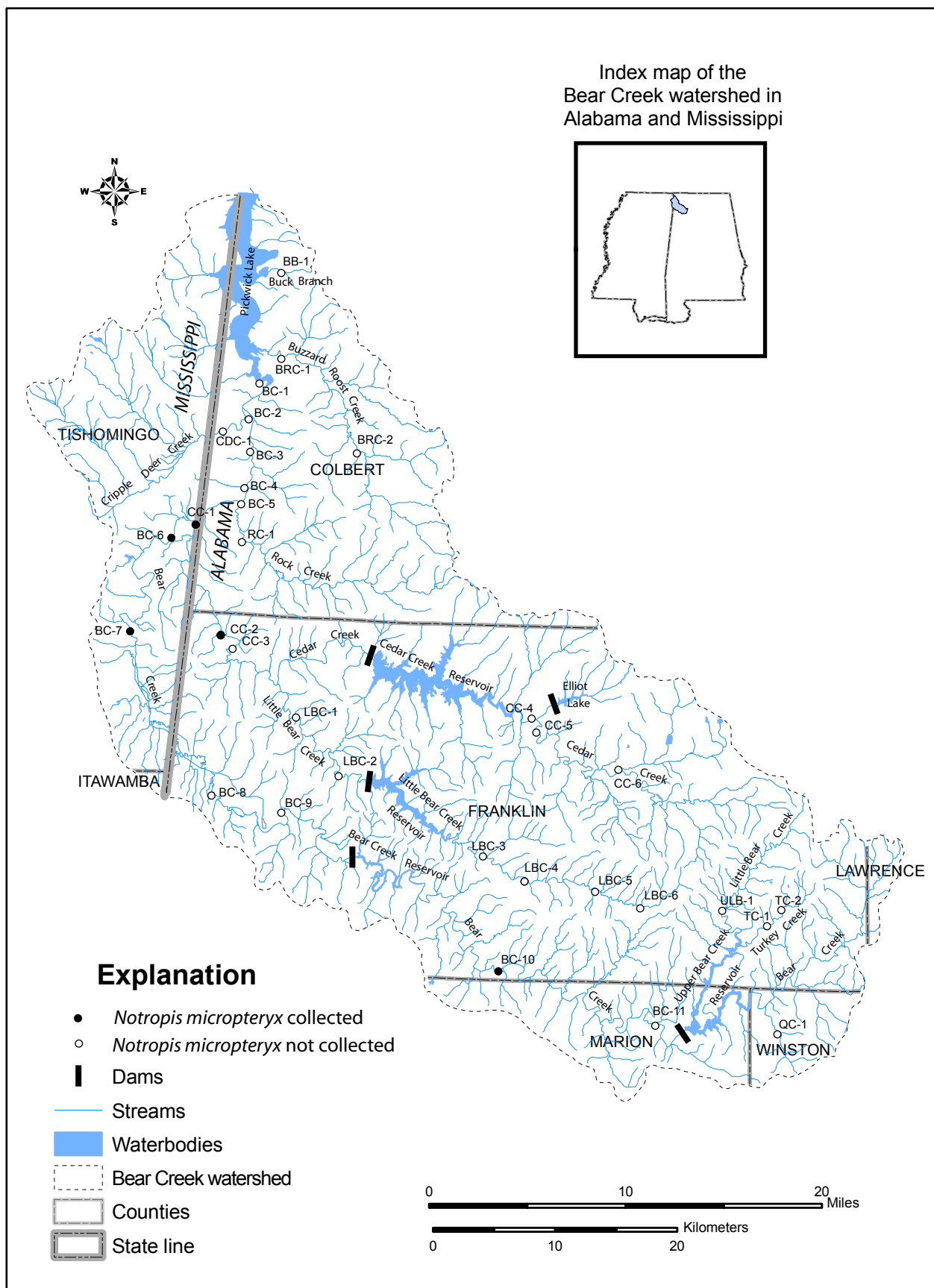


BC-10 at Military Bridge in upper Bear Creek, and stations CC-1 and CC-2 in lower Cedar Creek (fig. 6, table 3, app.). Twenty-five individuals were collected at station BC-7. From two to seven individuals were collected at other stations in the study. Wall (1968) reported collections at four stations in the system in Bear Creek and Cedar Creek. Mettee and others (2002) reported three collections of the species in Bear Creek and one in Cedar Creek from 1993-98. In addition to the Bear Creek system, the highland shiner is also found in the Elk River system in Alabama (Mettee and others, 1996). Their overall distribution encompasses the Cumberland and Tennessee River systems (Boschung and Mayden, 2004).

**BLUE SUCKER**, *Cycleptus elongatus*, moderate conservation concern. No blue suckers were collected in this study in 2007-08. The species of *Cycleptus* occurring in the Mobile Basin and in the Pascagoula and Pearl Rivers was formerly included as *C. elongatus* but was later described as *C. meridionalis*, the southeastern blue sucker, by Burr and Mayden (1999). The remaining range of the blue sucker, *C. elongatus*, in Alabama is thus limited to the Tennessee River basin where there are only three recent collections (Mettee and others, 2002; Boschung and others, 2004). One was collected in 1997 in Bear Creek near the Natchez Trace (station BC-5) with a boat electrofisher by biologists with GSA and TVA (Mettee and others, 2002). The others were taken in 1992 and 1993 by TVA biologists below Wilson Dam on the Tennessee River (Mettee and others, 2002). Boschung and Mayden (2004) also report a historical record in 1939 from the Tennessee River. The species has a widespread distribution in the Mississippi River Basin and large Gulf coastal drainages west to the Rio Grande (Boschung and Mayden, 2004).

**OTHER SPECIES**. Three species were encountered during sampling in 2007-08 which, while not of moderate to highest conservation concern, are noteworthy as new distributional records. These are the weed shiner (*Notropis texanus*), the blacktail shiner (*Cyprinella venusta*), and the river carpsucker (*Carpiodes carpio*).

The weed shiner was collected at 12 stations in the system in 2007-08 (fig. 7, app.). The species is not native to the Tennessee River system and was not collected there until the early 1990s. Our largest collection was 67 individuals at station BC-8.



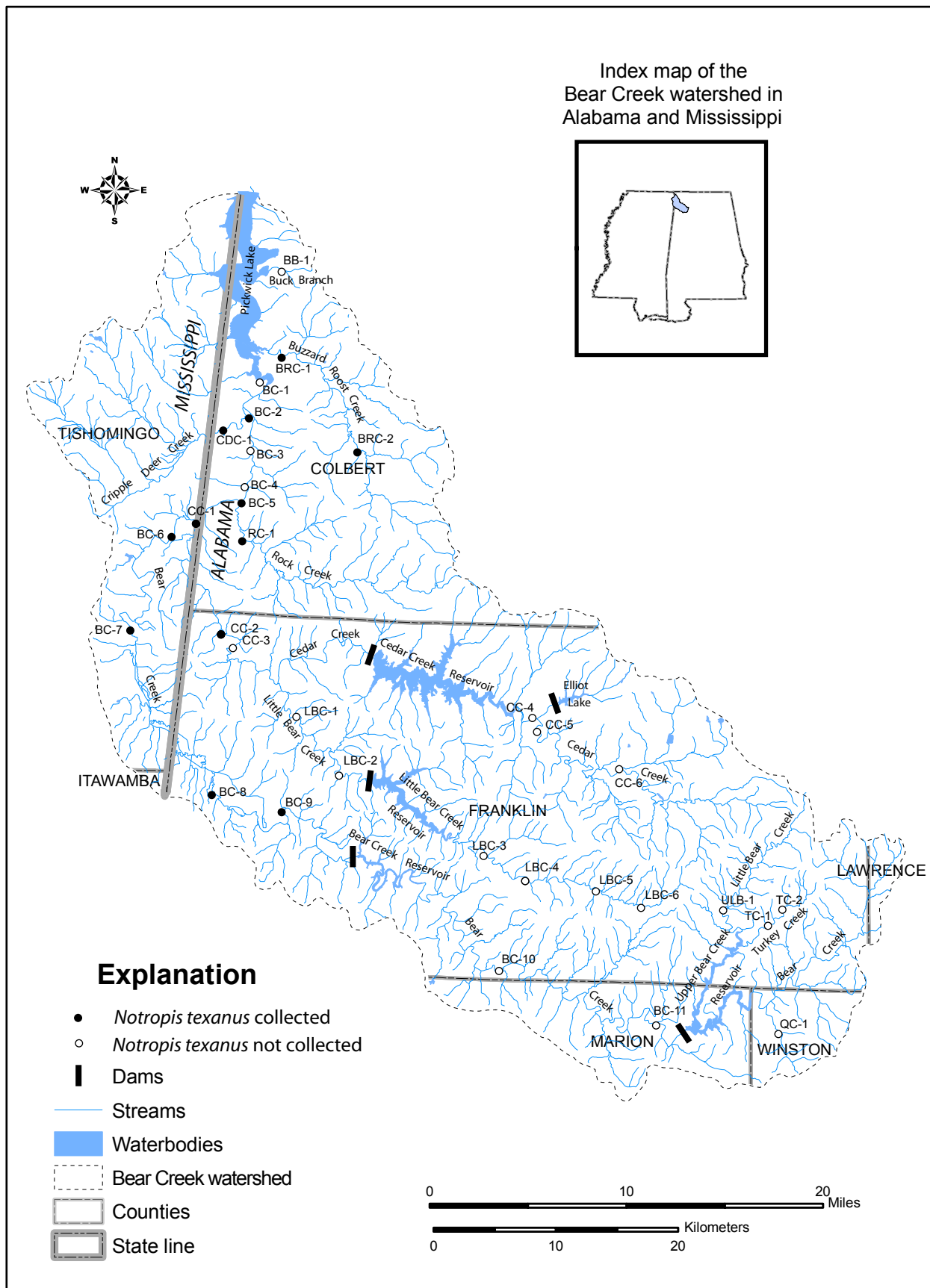


Figure 7. Sampling stations where the weed shiner, *Notropis texanus*, was collected in the Bear Creek system, 2007-08.

Collections at other stations yielded from one to 18 individuals (app.). Wall (1968), Mettee and others (1996), and Boschung and Mayden (2004) did not report weed shiners in the Bear Creek system, although the latter two did note the appearance of weed shiners in the Tennessee River Basin after completion of the Tennessee-Tombigbee Waterway in 1985. The native range of weed shiners encompasses lowlands of the Mississippi River Valley and Gulf coastal drainages from the Suwannee River in Florida and Georgia west to the Nueces River in Texas (Boschung and Mayden, 2004).

Like the weed shiner, the blacktail shiner has apparently invaded the Tennessee River system from the Mobile Basin via the Tennessee-Tombigbee waterway. We collected two specimens at station BC-4 in a boat electrofishing collection in lower Bear Creek (fig. 8, app.). The native distribution of the blacktail shiner is in coastal drainages from the Rio Grande Basin in Texas east to the Suwannee River and in the Mississippi River Basin north to the junction with the Ohio River (Mettee and others, 1996).

River carpsuckers have been uncommonly collected in Alabama in recent years. Mettee and others (2002) reported six recent records in the Tennessee River system in Alabama including one collection in the lower Bear Creek system in 1999. In this study, we collected 15 individuals in a boat electrofishing collection at station CC-4 (fig. 9, app.). The collection is especially interesting because the station is upstream of Cedar Creek Reservoir which was completed in 1979. The range of the river carpsucker includes the Mississippi River Basin, the Great Lakes, eastern Gulf coastal drainage, and some middle Atlantic drainages (Etnier and Starnes, 1993).

### **STUDY PLAN FOR 2009**

In the 2008-09 sampling period, sampling will continue at historical and potential new localities for species of conservation concern. In addition to stations sampled in the previous year's study, emphasis will be placed on sampling new and less accessible localities such as those that can be reached most readily by floating sections of the system. Next year's work will also involve more sampling earlier in the spring when some target species such as American brook lampreys and blue suckers may be

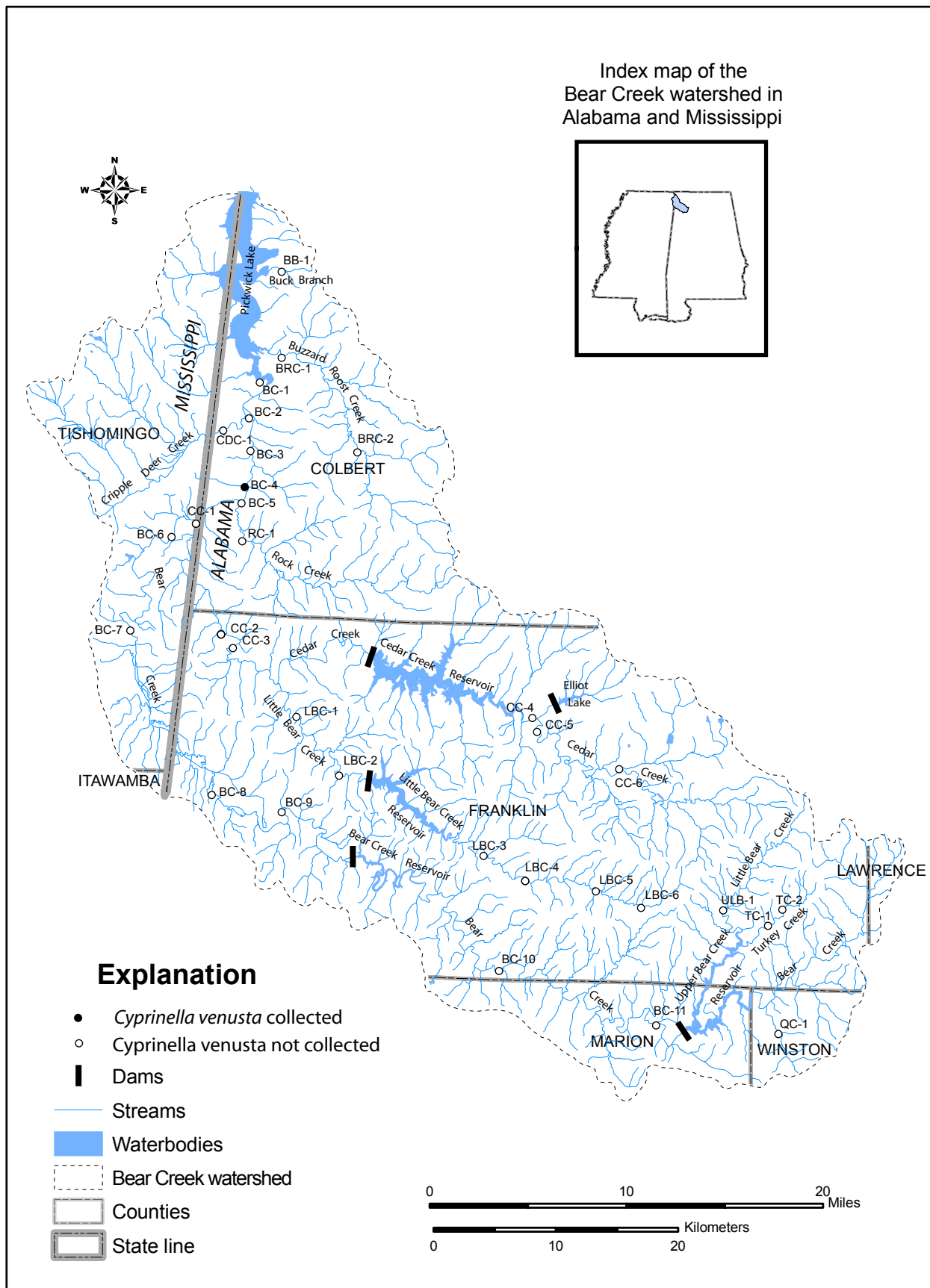


Figure 8. Sampling station where the blacktail shiner, *Cyprinella venusta*, was collected in the Bear Creek system, 2007-08.



congregating to spawn. Increased emphasis will also be placed on sampling potential habitat for bandfin and blueface darters in small tributaries.

Collection results will be used to calculate IBI scores and evaluate biological conditions from throughout the system in the following year. Habitat scores, water quality measurements, and digital information from a GIS project by McGregor and others (2006) will be incorporated into the assessment.

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## **APPENDIX**

Collection results for fish samples in the Bear Creek system, 2007-08.

Station numbers reference table 1 and figure 1.

Scientific name	Common Name	Station					
		BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
Petromyzontidae							
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--	--	1	1	--	--
	ammocoetes	--	--	2	--	--	1
Lepisosteidae							
<i>Lepisosteus oculatus</i>	spotted gar	--	--	1	--	--	--
<i>Lepisosteus osseus</i>	longnose gar	--	--	3	17	--	--
Clupeidae							
<i>Dorosoma cepedianum</i>	gizzard shad	15	25	92	252	--	--
<i>Dorosoma petenense</i>	threadfin shad	--	--	100	457	--	--
Cyprinidae							
<i>Campostoma oligolepis</i>	largescale stoneroller	--	--	--	5	80	61
<i>Clinostomus funduloides</i>	rosyside dace	--	--	--	--	--	--
<i>Cyprinella galactura</i>	whitetail shiner	--	--	--	--	--	--
<i>Cyprinella spiloptera</i>	spotfin shiner	--	--	10	12	13	17
<i>Cyprinella venusta</i>	blacktail shiner	--	--	--	2	--	--
<i>Cyprinella whipplei</i>	steelcolor shiner	--	--	1	5	--	--
<i>Cyprinus carpio</i>	common carp	11	--	--	--	--	--
<i>Hybopsis amblops</i>	bigeye chub	--	--	--	--	--	--
<i>Luxilus chrysocephalus</i>	striped shiner	--	--	--	--	6	5
<i>Lythrurus bellus</i>	pretty shiner	--	--	--	--	--	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	--	--	--	1	--	--
<i>Lythrurus fumeus</i>	ribbon shiner	--	--	--	--	--	--
<i>Nocomis leptocephalus</i>	bluehead chub	--	--	--	--	--	--
<i>Nocomis micropogon</i>	river chub	--	--	--	--	--	--
<i>Notropis baileyi</i>	rough shiner	--	--	--	--	--	--
<i>Notropis boops</i>	bigeye shiner	--	--	--	--	--	--
<i>Notropis micropteryx</i>	highland shiner	--	--	--	--	--	3
<i>Notropis texanus</i>	weed shiner	--	2	--	--	10	3
<i>Notropis volucellus</i>	mimic shiner	--	--	68	15	42	7
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--	--	--	--	--	--
<i>Pimephales notatus</i>	bluntnose minnow	1	--	1	1	3	--
<i>Pimephales vigilax</i>	bullhead minnow	--	--	--	19	--	2
<i>Semotilus atromaculatus</i>	creek chub	--	--	--	--	--	1
<i>Semotilus thoreauianus</i>	Dixie chub	--	--	--	--	--	--
Catostomidae							
<i>Carpiodes carpio</i>	river carpsucker	--	--	--	--	--	--
<i>Erimyzon oblongus</i>	creek chubsucker	--	--	--	--	--	--
<i>Hypentelium nigricans</i>	northern hog sucker	--	--	--	4	33	8
<i>Ictiobus bubalus</i>	smallmouth buffalo	--	7	20	30	--	--
<i>Ictiobus niger</i>	black buffalo	1	--	--	3	--	--
<i>Minytrema melanops</i>	spotted sucker	1	9	4	--	--	--
<i>Moxostoma anisurum</i>	silver redhorse	--	--	1	2	--	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--	--	1	3	--	--
<i>Moxostoma carinatum</i>	river redhorse	--	1	3	6	--	--
<i>Moxostoma duquesnei</i>	black redhorse	--	--	1	2	--	--
<i>Moxostoma erythrurum</i>	golden redhorse	--	--	3	5	1	2

Scientific name	Common Name	Station					
		BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
Ictaluridae							
<i>Ameiurus natalis</i>	yellow bullhead	--	--	--	--	1	--
<i>Ictalurus punctatus</i>	channel catfish	1	2	2	3	2	--
<i>Noturus exilis</i>	slender madtom	--	--	--	--	--	--
<i>Noturus funebris</i>	black madtom	--	--	--	--	--	3
<i>Noturus gyrinus</i>	tadpole madtom	--	--	--	--	--	--
<i>Noturus miurus</i>	brindled madtom	--	--	--	--	1	--
<i>Noturus nocturnus</i>	freckled madtom	--	--	--	--	--	--
<i>Pylodictis olivaris</i>	flathead catfish	--	--	--	1	--	--
Esocidae							
<i>Esox americanus</i>	redfin pickerel	--	--	--	--	--	--
<i>Esox niger</i>	chain pickerel	--	--	--	2	--	--
Aphredoderidae							
<i>Aphredoderus sayanus</i>	pirate perch	--	--	--	--	--	--
Atherinopsidae							
<i>Labidesthes sicculus</i>	brook silverside	--	--	--	--	--	--
Belonidae							
<i>Strongylura marina</i>	Atlantic needlefish	--	--	2	4	--	1
Fundulidae							
<i>Fundulus catenatus</i>	northern studfish	--	--	--	14	21	1
<i>Fundulus olivaceus</i>	blackspotted topminnow	--	--	2	1	4	7
Poeciliidae							
<i>Gambusia affinis</i>	western mosquitofish	--	--	--	--	27	--
Cottidae							
<i>Cottus caroliniae</i>	banded sculpin	--	--	--	--	25	3
Moronidae							
<i>Morone chrysops</i>	white bass	--	--	--	--	--	--
<i>Morone mississippiensis</i>	yellow bass	--	--	6	81	--	--
<i>Morone saxatilis</i>	striped bass	--	--	--	10	--	--
Centrarchidae							
<i>Ambloplites rupestris</i>	rock bass	--	--	--	1	--	--
<i>Lepomis auritus</i>	redbreast sunfish	--	--	--	--	--	--
<i>Lepomis cyanellus</i>	green sunfish	--	--	--	2	2	2
<i>Lepomis gulosus</i>	warmouth	--	--	--	--	--	--
<i>Lepomis macrochirus</i>	bluegill	8	3	22	14	6	3
<i>Lepomis megalotis</i>	longear sunfish	8	18	14	23	105	13
<i>Lepomis microlophus</i>	reardear sunfish	5	4	2	3	--	1
<i>Lepomis miniatus</i>	redspotted sunfish	1	--	--	--	--	--
<i>Micropterus dolomieu</i>	smallmouth bass	--	--	--	2	--	--
<i>Micropterus punctulatus</i>	spotted bass	5	6	5	5	6	2
<i>Micropterus salmoides</i>	largemouth bass	--	1	11	1	3	--
<i>Pomoxis annularis</i>	white crappie	1	--	--	--	--	--
<i>Pomoxis nigromaculatus</i>	black crappie	2	--	1	1	--	--

Scientific name	Common Name	Station					
		BC-1	BC-2	BC-3	BC-4	BC-5	BC-6
Percidae							
<i>Etheostoma blennioides</i>	greenside darter	--	--	--	--	6	3
<i>Etheostoma caeruleum</i>	rainbow darter	--	--	--	--	--	--
<i>Etheostoma duryi</i>	black darter	--	--	--	--	1	1
<i>Etheostoma histrio</i>	harlequin darter	--	--	1	--	--	1
<i>Etheostoma jessiae</i>	blueside darter	--	--	--	--	2	--
<i>Etheostoma kennicotti</i>	stripetail darter	--	--	--	--	--	--
<i>Etheostoma nigripinne</i>	blackfin darter	--	--	--	--	--	--
<i>Etheostoma nigrum</i>	johnny darter	--	--	--	--	--	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--	--	--	--	--	--
<i>Etheostoma rufilineatum</i>	redline darter	--	--	--	2	121	233
<i>Etheostoma tennesseense</i>	Tennessee darter	--	--	--	--	2	1
<i>Etheostoma stigmaeum</i>	speckled darter	--	--	--	--	--	--
<i>Etheostoma zonistium</i>	bandfin darter	--	--	--	--	--	--
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--	--	--	--	--	--
<i>Perca flavescens</i>	yellow perch	--	--	--	--	--	--
<i>Percina caprodes</i>	logperch	--	--	1	2	27	7
<i>Percina evides</i>	gilt darter	--	--	--	2	6	6
<i>Percina sciera</i>	dusky darter	--	--	--	3	--	1
<i>Percina shumardi</i>	river darter	--	--	--	--	--	--
hybrid percidae	hybrid darter	--	--	--	--	--	--
Sciaenidae							
<i>Aplodinotus grunniens</i>	freshwater drum	1	1	1	1	--	--

Scientific name	Common Name	Station					
		BC-7	BC-8	BC-9	BC-10	BC-11	BB-1
Petromyzontidae							
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--	--	--	--	--	--
	ammocoetes	1	1	--	1	--	--
Lepisosteidae							
<i>Lepisosteus oculatus</i>	spotted gar	--	--	--	--	--	--
<i>Lepisosteus osseus</i>	longnose gar	--	--	--	--	--	--
Clupeidae							
<i>Dorosoma cepedianum</i>	gizzard shad	--	--	--	--	--	--
<i>Dorosoma petenense</i>	threadfin shad	--	--	--	--	--	--
Cyprinidae							
<i>Campostoma oligolepis</i>	largescale stoneroller	77	26	112	241	466	17
<i>Clinostomus funduloides</i>	rosyside dace	--	--	--	--	--	88
<i>Cyprinella galactura</i>	whitetail shiner	--	--	--	--	25	--
<i>Cyprinella spiloptera</i>	spotfin shiner	3	42	32	206	--	--
<i>Cyprinella venusta</i>	blacktail shiner	--	--	--	--	--	--
<i>Cyprinella whipplei</i>	steelcolor shiner	1	--	--	--	--	--
<i>Cyprinus carpio</i>	common carp	--	--	--	--	--	--
<i>Hybopsis amblops</i>	bigeye chub	--	--	--	--	--	--
<i>Luxilus chrysocephalus</i>	striped shiner	17	24	34	44	--	6
<i>Lythrurus bellus</i>	pretty shiner	--	--	--	--	16	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	--	4	--	8	--	--
<i>Lythrurus fumeus</i>	ribbon shiner	--	--	1	--	--	--
<i>Nocomis leptocephalus</i>	bluehead chub	--	--	--	--	--	62
<i>Nocomis micropogon</i>	river chub	--	--	--	1	--	--
<i>Notropis baileyi</i>	rough shiner	--	--	--	--	--	241
<i>Notropis boops</i>	bigeye shiner	--	--	5	--	--	--
<i>Notropis micropteryx</i>	highland shiner	25	--	--	2	--	--
<i>Notropis texanus</i>	weed shiner	9	67	3	--	--	--
<i>Notropis volucellus</i>	mimic shiner	--	2	--	--	--	--
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--	--	--	--	--	14
<i>Pimephales notatus</i>	bluntnose minnow	--	--	--	--	--	--
<i>Pimephales vigilax</i>	bullhead minnow	1	--	68	1	--	--
<i>Semotilus atromaculatus</i>	creek chub	--	--	1	--	--	--
<i>Semotilus thoreauianus</i>	Dixie chub	--	--	--	--	--	100
Catostomidae							
<i>Carpiodes carpio</i>	river carpsucker	--	--	--	--	--	--
<i>Erimyzon oblongus</i>	creek chubsucker	1	--	--	--	--	21
<i>Hypentelium nigricans</i>	northern hog sucker	17	2	6	33	7	--
<i>Ictiobus bubalus</i>	smallmouth buffalo	--	--	--	--	--	--
<i>Ictiobus niger</i>	black buffalo	--	--	--	--	--	--
<i>Minytrema melanops</i>	spotted sucker	--	--	--	--	--	--
<i>Moxostoma anisurum</i>	silver redhorse	--	--	--	--	--	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--	--	--	--	--	--
<i>Moxostoma carinatum</i>	river redhorse	--	--	--	--	--	--
<i>Moxostoma duquesnei</i>	black redhorse	--	--	--	3	--	--
<i>Moxostoma erythrurum</i>	golden redhorse	--	--	1	--	--	--

Scientific name	Common Name	Station					
		BC-7	BC-8	BC-9	BC-10	BC-11	BB-1
Ictaluridae							
<i>Ameiurus natalis</i>	yellow bullhead	--	--	--	--	--	1
<i>Ictalurus punctatus</i>	channel catfish	3	--	2	1	--	--
<i>Noturus exilis</i>	slender madtom	--	--	--	--	--	--
<i>Noturus funebris</i>	black madtom	--	--	--	--	--	--
<i>Noturus gyrinus</i>	tadpole madtom	--	--	--	--	--	--
<i>Noturus miurus</i>	brindled madtom	--	--	1	--	--	--
<i>Noturus nocturnus</i>	freckled madtom	--	--	1	--	--	--
<i>Pylodictis olivaris</i>	flathead catfish	--	--	1	1	2	--
Esocidae							
<i>Esox americanus</i>	redfin pickerel	--	--	--	--	--	--
<i>Esox niger</i>	chain pickerel	--	--	--	--	--	--
Aphredoderidae							
<i>Aphredoderus sayanus</i>	pirate perch	--	--	--	--	--	--
Atherinopsidae							
<i>Labidesthes sicculus</i>	brook silverside	--	4	13	--	--	--
Belonidae							
<i>Strongylura marina</i>	Atlantic needlefish	--	--	--	--	--	--
Fundulidae							
<i>Fundulus catenatus</i>	northern studfish	--	--	--	--	--	--
<i>Fundulus olivaceus</i>	blackspotted topminnow	6	16	2	15	3	--
Poeciliidae							
<i>Gambusia affinis</i>	western mosquitofish	12	--	--	--	--	1
Cottidae							
<i>Cottus carolinae</i>	banded sculpin	1	6	41	--	--	--
Moronidae							
<i>Morone chrysops</i>	white bass	--	--	--	--	--	--
<i>Morone mississippiensis</i>	yellow bass	--	--	--	--	--	--
<i>Morone saxatilis</i>	striped bass	--	--	--	--	--	--
Centrarchidae							
<i>Ambloplites rupestris</i>	rock bass	--	--	--	--	--	--
<i>Lepomis auritus</i>	redbreast sunfish	--	--	--	--	--	--
<i>Lepomis cyanellus</i>	green sunfish	10	8	--	2	5	1
<i>Lepomis gulosus</i>	warmouth	--	--	--	--	--	--
<i>Lepomis macrochirus</i>	bluegill	3	3	2	6	6	--
<i>Lepomis megalotis</i>	longear sunfish	29	30	19	23	5	--
<i>Lepomis microlophus</i>	redear sunfish	--	--	--	1	--	--
<i>Lepomis miniatus</i>	redspotted sunfish	--	--	--	--	--	--
<i>Micropterus dolomieu</i>	smallmouth bass	--	--	--	--	--	--
<i>Micropterus punctulatus</i>	spotted bass	4	1	4	13	10	1
<i>Micropterus salmoides</i>	largemouth bass	3	--	--	1	1	1
<i>Pomoxis annularis</i>	white crappie	--	--	--	--	--	--
<i>Pomoxis nigromaculatus</i>	black crappie	--	--	--	--	--	--

Scientific name	Common Name	Station					
		BC-7	BC-8	BC-9	BC-10	BC-11	BB-1
Percidae							
<i>Etheostoma blennioides</i>	greenside darter	1	--	--	11	--	--
<i>Etheostoma caeruleum</i>	rainbow darter	--	--	--	--	--	2
<i>Etheostoma duryi</i>	black darter	--	5	3	--	--	--
<i>Etheostoma histrio</i>	harlequin darter	1	--	--	--	--	--
<i>Etheostoma jessiae</i>	blueside darter	3	--	--	--	--	--
<i>Etheostoma kennicotti</i>	stripetail darter	--	--	--	--	--	--
<i>Etheostoma nigripinne</i>	blackfin darter	--	--	--	--	--	17
<i>Etheostoma nigrum</i>	johnny darter	--	--	--	--	--	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--	--	--	--	--	3
<i>Etheostoma rufilineatum</i>	redline darter	40	43	21	72	--	--
<i>Etheostoma tennesseense</i>	Tennessee darter	--	--	--	--	--	--
<i>Etheostoma stigmaeum</i>	speckled darter	--	--	--	8	1	--
<i>Etheostoma zonistium</i>	bandfin darter	--	--	--	--	--	15
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--	--	--	--	--	--
<i>Perca flavescens</i>	yellow perch	--	--	--	--	--	--
<i>Percina caprodes</i>	logperch	1	1	--	4	--	--
<i>Percina evides</i>	gilt darter	4	2	3	--	--	--
<i>Percina sciera</i>	dusky darter	5	6	4	--	--	--
<i>Percina shumardi</i>	river darter	--	--	--	--	--	--
hybrid percidae	hybrid darter	--	--	--	--	--	--
Sciaenidae							
<i>Aplodinotus grunniens</i>	freshwater drum	1	--	--	--	--	--



Scientific name	Common Name	Station					
		BRC-1	BRC-2	CDC-1	RC-1	CC-1a	CC-1b
Petromyzontidae							
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--	--	--	--	--	--
	ammocoetes	--	--	--	--	--	--
Lepisosteidae							
<i>Lepisosteus oculatus</i>	spotted gar	1	--	--	--	--	--
<i>Lepisosteus osseus</i>	longnose gar	2	--	--	--	--	1
Clupeidae							
<i>Dorosoma cepedianum</i>	gizzard shad	7	--	--	--	--	--
<i>Dorosoma petenense</i>	threadfin shad	--	--	--	--	--	--
Cyprinidae							
<i>Campostoma oligolepis</i>	largescale stoneroller	6	30	5	25	35	35
<i>Clinostomus funduloides</i>	rosyside dace	--	--	--	--	--	--
<i>Cyprinella galactura</i>	whitetail shiner	--	--	--	--	1	--
<i>Cyprinella spiloptera</i>	spotfin shiner	3	--	2	--	23	17
<i>Cyprinella venusta</i>	blacktail shiner	--	--	--	--	--	--
<i>Cyprinella whipplei</i>	steelcolor shiner	--	--	--	--	--	--
<i>Cyprinus carpio</i>	common carp	--	--	--	--	--	--
<i>Hybopsis amblops</i>	bigeye chub	--	--	--	--	--	--
<i>Luxilus chrysocephalus</i>	striped shiner	3	144	16	206	3	1
<i>Lythrurus bellus</i>	pretty shiner	--	--	--	--	--	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	1	51	8	8	8	2
<i>Lythrurus fumeus</i>	ribbon shiner	4	--	--	--	--	--
<i>Nocomis leptocephalus</i>	bluehead chub	--	--	--	--	1	--
<i>Nocomis micropogon</i>	river chub	--	--	--	--	--	--
<i>Notropis baileyi</i>	rough shiner	--	--	--	--	2	--
<i>Notropis boops</i>	bigeye shiner	13	37	--	2	--	--
<i>Notropis micropteryx</i>	highland shiner	--	--	--	--	2	7
<i>Notropis texanus</i>	weed shiner	1	1	18	15	8	7
<i>Notropis volucellus</i>	mimic shiner	9	--	14	--	84	17
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--	--	--	--	--	--
<i>Pimephales notatus</i>	bluntnose minnow	1	65	--	13	1	--
<i>Pimephales vigilax</i>	bullhead minnow	--	--	--	--	--	--
<i>Semotilus atromaculatus</i>	creek chub	--	--	--	--	--	--
<i>Semotilus thoreauianus</i>	Dixie chub	--	--	--	--	--	--
Catostomidae							
<i>Carpiodes carpio</i>	river carpsucker	--	--	--	--	--	--
<i>Erimyzon oblongus</i>	creek chubsucker	--	5	--	1	1	--
<i>Hypentelium nigricans</i>	northern hog sucker	--	3	1	5	4	8
<i>Ictiobus bubalus</i>	smallmouth buffalo	--	--	--	--	--	--
<i>Ictiobus niger</i>	black buffalo	--	--	--	--	--	--
<i>Minytrema melanops</i>	spotted sucker	--	1	--	--	--	--
<i>Moxostoma anisurum</i>	silver redhorse	--	--	--	--	--	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--	--	--	--	--	--
<i>Moxostoma carinatum</i>	river redhorse	--	--	--	--	--	--
<i>Moxostoma duquesnei</i>	black redhorse	1	--	--	--	--	--
<i>Moxostoma erythrurum</i>	golden redhorse	--	--	--	--	--	--

Scientific name	Common Name	Station					
		BRC-1	BRC-2	CDC-1	RC-1	CC-1a	CC-1b
Ictaluridae							
<i>Ameiurus natalis</i>	yellow bullhead	1	1	--	2	--	--
<i>Ictalurus punctatus</i>	channel catfish	--	--	--	--	1	--
<i>Noturus exilis</i>	slender madtom	--	--	--	--	--	--
<i>Noturus funebris</i>	black madtom	--	--	--	2	--	--
<i>Noturus gyrinus</i>	tadpole madtom	--	--	--	--	--	--
<i>Noturus miurus</i>	brindled madtom	--	--	--	--	--	2
<i>Noturus nocturnus</i>	freckled madtom	--	--	--	--	--	--
<i>Pylodictis olivaris</i>	flathead catfish	--	--	--	--	--	1
Esocidae							
<i>Esox americanus</i>	redfin pickerel	--	2	--	--	--	--
<i>Esox niger</i>	chain pickerel	--	--	1	--	--	--
Aphredoderidae							
<i>Aphredoderus sayanus</i>	pirate perch	--	--	5	--	--	--
Atherinopsidae							
<i>Labidesthes sicculus</i>	brook silverside	--	3	1	--	--	--
Belonidae							
<i>Strongylura marina</i>	Atlantic needlefish	--	--	--	--	--	--
Fundulidae							
<i>Fundulus catenatus</i>	northern studfish	--	--	--	--	3	8
<i>Fundulus olivaceus</i>	blackspotted topminnow	2	15	9	21	6	4
Poeciliidae							
<i>Gambusia affinis</i>	western mosquitofish	--	4	--	1	7	3
Cottidae							
<i>Cottus caroliniae</i>	banded sculpin	--	--	3	13	5	24
Moronidae							
<i>Morone chrysops</i>	white bass	--	--	--	--	--	--
<i>Morone mississippiensis</i>	yellow bass	8	--	--	--	--	--
<i>Morone saxatilis</i>	striped bass	--	--	--	--	--	--
Centrarchidae							
<i>Ambloplites rupestris</i>	rock bass	--	3	--	8	--	--
<i>Lepomis auritus</i>	redbreast sunfish	1	--	--	--	--	--
<i>Lepomis cyanellus</i>	green sunfish	2	28	2	7	--	--
<i>Lepomis gulosus</i>	warmouth	2	--	--	--	--	--
<i>Lepomis macrochirus</i>	bluegill	17	5	--	4	2	3
<i>Lepomis megalotis</i>	longear sunfish	29	77	20	93	29	44
<i>Lepomis microlophus</i>	reardear sunfish	1	--	2	--	--	1
<i>Lepomis miniatus</i>	redspotted sunfish	--	1	--	4	--	--
<i>Micropterus dolomieu</i>	smallmouth bass	--	1	--	--	--	--
<i>Micropterus punctulatus</i>	spotted bass	3	23	3	4	1	3
<i>Micropterus salmoides</i>	largemouth bass	9	1	--	--	--	1
<i>Pomoxis annularis</i>	white crappie	--	--	--	--	--	--
<i>Pomoxis nigromaculatus</i>	black crappie	--	--	--	--	--	--

Scientific name	Common Name	Station					
		BRC-1	BRC-2	CDC-1	RC-1	CC-1a	CC-1b
Percidae							
<i>Etheostoma blennioides</i>	greenside darter	--	1	--	4	3	4
<i>Etheostoma caeruleum</i>	rainbow darter	1	2	--	3	--	--
<i>Etheostoma duryi</i>	black darter	--	16	--	8	--	--
<i>Etheostoma histrio</i>	harlequin darter	--	--	--	--	2	2
<i>Etheostoma jessiae</i>	blueside darter	--	--	--	1	1	1
<i>Etheostoma kennicotti</i>	stripetail darter	--	2	2	--	--	--
<i>Etheostoma nigripinne</i>	blackfin darter	--	2	1	1	--	--
<i>Etheostoma nigrum</i>	johnny darter	--	--	2	--	--	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--	--	--	--	--	--
<i>Etheostoma rufilineatum</i>	redline darter	9	--	--	22	80	118
<i>Etheostoma tennesseense</i>	Tennessee darter	--	--	1	--	4	3
<i>Etheostoma stigmaeum</i>	speckled darter	--	--	--	--	--	--
<i>Etheostoma zonistium</i>	bandfin darter	--	--	10	--	--	--
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--	--	--	--	--	--
<i>Perca flavescens</i>	yellow perch	2	--	--	--	--	--
<i>Percina caprodes</i>	logperch	4	--	5	2	4	6
<i>Percina evides</i>	gilt darter	--	--	--	--	2	5
<i>Percina sciera</i>	dusky darter	--	--	--	1	2	1
<i>Percina shumardi</i>	river darter	--	--	--	--	--	--
hybrid percidae	hybrid darter	--	--	1	--	--	--
Sciaenidae							
<i>Aplodinotus grunniens</i>	freshwater drum	2	--	--	--	--	--

Scientific name	Common Name	Station					
		CC-2a	CC-2b	CC-2c	CC-2d	CC-3	CC-4
Petromyzontidae							
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--	--	--	--	--	1
	ammocoetes	1	--	--	--	--	--
Lepisosteidae							
<i>Lepisosteus oculatus</i>	spotted gar	--	--	--	--	--	--
<i>Lepisosteus osseus</i>	longnose gar	--	--	--	--	--	--
Clupeidae							
<i>Dorosoma cepedianum</i>	gizzard shad	--	--	--	--	--	195
<i>Dorosoma petenense</i>	threadfin shad	--	--	--	--	--	13
Cyprinidae							
<i>Campostoma oligolepis</i>	largescale stoneroller	26	38	4	42	34	49
<i>Clinostomus funduloides</i>	rosyside dace	--	--	--	--	--	--
<i>Cyprinella galactura</i>	whitetail shiner	3	5	--	10	3	--
<i>Cyprinella spiloptera</i>	spotfin shiner	32	46	6	24	22	31
<i>Cyprinella venusta</i>	blacktail shiner	--	--	--	--	--	--
<i>Cyprinella whipplei</i>	steelcolor shiner	--	--	--	--	--	--
<i>Cyprinus carpio</i>	common carp	--	--	--	--	--	24
<i>Hybopsis amblops</i>	bigeye chub	--	--	--	--	--	--
<i>Luxilus chrysocephalus</i>	striped shiner	1	16	4	18	1	22
<i>Lythrurus bellus</i>	pretty shiner	--	--	--	--	--	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	1	--	--	1	--	1
<i>Lythrurus fumeus</i>	ribbon shiner	--	--	--	--	--	--
<i>Nocomis leptocephalus</i>	bluehead chub	--	--	--	--	--	--
<i>Nocomis micropogon</i>	river chub	--	--	--	--	--	--
<i>Notropis baileyi</i>	rough shiner	--	--	--	--	--	--
<i>Notropis boops</i>	bigeye shiner	--	--	--	--	--	--
<i>Notropis micropteryx</i>	highland shiner	3	5	--	2	--	--
<i>Notropis texanus</i>	weed shiner	--	9	3	7	--	--
<i>Notropis volucellus</i>	mimic shiner	--	--	--	--	3	--
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--	--	--	--	--	--
<i>Pimephales notatus</i>	bluntnose minnow	9	--	--	2	8	6
<i>Pimephales vigilax</i>	bullhead minnow	--	--	--	--	2	--
<i>Semotilus atromaculatus</i>	creek chub	--	--	--	--	--	--
<i>Semotilus thoreauianus</i>	Dixie chub	--	--	--	--	--	--
Catostomidae							
<i>Carpiodes carpio</i>	river carpsucker	--	--	--	--	--	15
<i>Erimyzon oblongus</i>	creek chubsucker	--	--	--	--	--	--
<i>Hypentelium nigricans</i>	northern hog sucker	1	3	--	11	4	2
<i>Ictiobus bubalus</i>	smallmouth buffalo	--	--	--	--	--	--
<i>Ictiobus niger</i>	black buffalo	--	--	--	--	--	--
<i>Minytrema melanops</i>	spotted sucker	--	--	--	--	--	11
<i>Moxostoma anisurum</i>	silver redhorse	--	--	--	--	--	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--	--	--	--	--	10
<i>Moxostoma carinatum</i>	river redhorse	--	--	--	--	--	1
<i>Moxostoma duquesnei</i>	black redhorse	--	--	--	--	--	11
<i>Moxostoma erythrurum</i>	golden redhorse	--	--	--	--	1	4

Scientific name	Common Name	Station					
		CC-2a	CC-2b	CC-2c	CC-2d	CC-3	CC-4
Ictaluridae							
<i>Ameiurus natalis</i>	yellow bullhead	--	--	--	--	--	1
<i>Ictalurus punctatus</i>	channel catfish	--	1	--	--	--	6
<i>Noturus exilis</i>	slender madtom	--	--	--	--	--	--
<i>Noturus funebris</i>	black madtom	--	--	--	--	--	--
<i>Noturus gyrinus</i>	tadpole madtom	--	--	--	--	--	--
<i>Noturus miurus</i>	brindled madtom	--	--	--	2	--	--
<i>Noturus nocturnus</i>	freckled madtom	1	--	--	--	--	--
<i>Pylodictis olivaris</i>	flathead catfish	1	--	--	1	1	--
Esocidae							
<i>Esox americanus</i>	redfin pickerel	--	--	--	--	--	--
<i>Esox niger</i>	chain pickerel	--	--	--	--	--	--
Aphredoderidae							
<i>Aphredoderus sayanus</i>	pirate perch	--	--	--	--	--	--
Atherinopsidae							
<i>Labidesthes sicculus</i>	brook silverside	--	5	15	--	--	--
Belonidae							
<i>Strongylura marina</i>	Atlantic needlefish	--	--	--	--	--	--
Fundulidae							
<i>Fundulus catenatus</i>	northern studfish	2	8	13	4	3	--
<i>Fundulus olivaceus</i>	blackspotted topminnow	5	3	--	--	7	3
Poeciliidae							
<i>Gambusia affinis</i>	western mosquitofish	--	2	1	1	5	2
Cottidae							
<i>Cottus caroliniae</i>	banded sculpin	--	3	4	--	2	--
Moronidae							
<i>Morone chrysops</i>	white bass	--	--	--	--	--	1
<i>Morone mississippiensis</i>	yellow bass	--	--	--	--	--	65
<i>Morone saxatilis</i>	striped bass	--	--	--	--	--	--
Centrarchidae							
<i>Ambloplites rupestris</i>	rock bass	--	2	1	1	--	--
<i>Lepomis auritus</i>	redbreast sunfish	--	--	--	--	--	--
<i>Lepomis cyanellus</i>	green sunfish	--	--	--	--	3	10
<i>Lepomis gulosus</i>	warmouth	--	--	--	--	--	3
<i>Lepomis macrochirus</i>	bluegill	--	--	--	--	--	15
<i>Lepomis megalotis</i>	longear sunfish	67	52	16	42	60	10
<i>Lepomis microlophus</i>	redeer sunfish	1	--	--	--	1	3
<i>Lepomis miniatus</i>	redspotted sunfish	--	--	--	--	--	--
<i>Micropterus dolomieu</i>	smallmouth bass	--	--	--	--	--	--
<i>Micropterus punctulatus</i>	spotted bass	--	1	--	1	3	3
<i>Micropterus salmoides</i>	largemouth bass	--	1	--	--	--	11
<i>Pomoxis annularis</i>	white crappie	--	--	--	--	--	--
<i>Pomoxis nigromaculatus</i>	black crappie	--	--	--	--	--	--

Scientific name	Common Name	Station					
		CC-2a	CC-2b	CC-2c	CC-2d	CC-3	CC-4
Percidae							
<i>Etheostoma blennioides</i>	greenside darter	7	19	2	17	1	--
<i>Etheostoma caeruleum</i>	rainbow darter	--	--	1	--	--	--
<i>Etheostoma duryi</i>	black darter	--	3	--	--	3	--
<i>Etheostoma histrio</i>	harlequin darter	--	--	--	--	1	--
<i>Etheostoma jessiae</i>	blueside darter	--	--	--	1	1	--
<i>Etheostoma kennicotti</i>	stripetail darter	--	--	--	--	--	--
<i>Etheostoma nigripinne</i>	blackfin darter	--	--	--	--	--	--
<i>Etheostoma nigrum</i>	johnny darter	--	--	--	--	--	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--	--	--	--	--	--
<i>Etheostoma rufilineatum</i>	redline darter	15	160	21	284	102	--
<i>Etheostoma tennesseense</i>	Tennessee darter	6	14	5	16	8	--
<i>Etheostoma stigmaeum</i>	speckled darter	--	--	--	--	--	--
<i>Etheostoma zonistium</i>	bandfin darter	--	--	--	--	--	--
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--	--	--	--	--	--
<i>Perca flavescens</i>	yellow perch	--	--	--	--	--	--
<i>Percina caprodes</i>	logperch	10	1	2	6	5	3
<i>Percina evides</i>	gilt darter	2	3	1	3	4	--
<i>Percina sciera</i>	dusky darter	1	--	--	--	1	--
<i>Percina shumardi</i>	river darter	--	--	--	1	--	--
hybrid percidae	hybrid darter	--	--	--	--	--	--
Sciaenidae							
<i>Aplodinotus grunniens</i>	freshwater drum	--	--	--	--	--	1

Scientific name	Common Name	Station					
		CC-5	CC-6	LBC-1	LBC-2	LBC-3	LBC-4a
Petromyzontidae							
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--	--	--	--	--	--
	ammocoetes	--	--	--	--	--	--
Lepisosteidae							
<i>Lepisosteus oculatus</i>	spotted gar	--	--	--	--	--	--
<i>Lepisosteus osseus</i>	longnose gar	--	--	--	--	--	--
Clupeidae							
<i>Dorosoma cepedianum</i>	gizzard shad	1	--	--	--	--	--
<i>Dorosoma petenense</i>	threadfin shad	1	--	--	--	--	--
Cyprinidae							
<i>Campostoma oligolepis</i>	largescale stoneroller	1116	598	335	238	2	4
<i>Clinostomus funduloides</i>	rosyside dace	--	--	--	--	--	--
<i>Cyprinella galactura</i>	whitetail shiner	--	--	3	--	--	2
<i>Cyprinella spiloptera</i>	spotfin shiner	57	36	1	--	--	--
<i>Cyprinella venusta</i>	blacktail shiner	--	--	--	--	--	--
<i>Cyprinella whipplei</i>	steelcolor shiner	--	--	--	--	--	--
<i>Cyprinus carpio</i>	common carp	--	--	--	--	--	--
<i>Hybopsis amblops</i>	bigeye chub	2	15	--	--	6	2
<i>Luxilus chrysocephalus</i>	striped shiner	60	190	186	237	5	1
<i>Lythrurus bellus</i>	pretty shiner	--	--	--	--	--	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	--	2	14	5	--	8
<i>Lythrurus fumeus</i>	ribbon shiner	--	--	--	--	--	--
<i>Nocomis leptcephalus</i>	bluehead chub	--	--	--	--	--	--
<i>Nocomis micropogon</i>	river chub	--	--	--	--	--	--
<i>Notropis baileyi</i>	rough shiner	--	--	--	--	--	--
<i>Notropis boops</i>	bigeye shiner	5	3	--	--	--	--
<i>Notropis micropteryx</i>	highland shiner	--	--	--	--	--	--
<i>Notropis texanus</i>	weed shiner	--	--	--	--	--	--
<i>Notropis volucellus</i>	mimic shiner	--	--	--	--	--	--
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--	--	--	--	--	--
<i>Pimephales notatus</i>	bluntnose minnow	5	4	2	6	--	--
<i>Pimephales vigilax</i>	bullhead minnow	--	--	--	--	--	--
<i>Semotilus atromaculatus</i>	creek chub	--	1	1	--	--	--
<i>Semotilus thoreauianus</i>	Dixie chub	--	--	--	--	--	--
Catostomidae							
<i>Carpiodes carpio</i>	river carpsucker	--	--	--	--	--	--
<i>Erimyzon oblongus</i>	creek chubsucker	--	--	--	--	--	--
<i>Hypentelium nigricans</i>	northern hog sucker	74	64	15	17	1	1
<i>Ictiobus bubalus</i>	smallmouth buffalo	--	--	--	--	--	--
<i>Ictiobus niger</i>	black buffalo	--	--	--	--	--	--
<i>Minytrema melanops</i>	spotted sucker	--	--	--	--	--	--
<i>Moxostoma anisurum</i>	silver redhorse	--	--	--	--	--	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--	--	--	--	--	--
<i>Moxostoma carinatum</i>	river redhorse	--	--	--	--	--	--
<i>Moxostoma duquesnei</i>	black redhorse	--	--	--	2	--	--
<i>Moxostoma erythrurum</i>	golden redhorse	6	2	1	4	--	--

Scientific name	Common Name	Station					
		CC-5	CC-6	LBC-1	LBC-2	LBC-3	LBC-4a
Ictaluridae							
<i>Ameiurus natalis</i>	yellow bullhead	2	--	1	--	--	--
<i>Ictalurus punctatus</i>	channel catfish	--	--	--	--	--	--
<i>Noturus exilis</i>	slender madtom	--	--	4	--	--	--
<i>Noturus funebris</i>	black madtom	--	--	1	--	--	--
<i>Noturus gyrinus</i>	tadpole madtom	--	--	--	--	--	--
<i>Noturus miurus</i>	brindled madtom	--	--	1	--	--	--
<i>Noturus nocturnus</i>	freckled madtom	--	--	--	--	--	--
<i>Pylodictis olivaris</i>	flathead catfish	1	--	--	--	--	--
Esocidae							
<i>Esox americanus</i>	redfin pickerel	--	--	--	--	--	--
<i>Esox niger</i>	chain pickerel	--	--	--	--	--	--
Aphredoderidae							
<i>Aphredoderus sayanus</i>	pirate perch	--	--	--	--	--	--
Atherinopsidae							
<i>Labidesthes sicculus</i>	brook silverside	7	--	1	--	--	--
Belonidae							
<i>Strongylura marina</i>	Atlantic needlefish	--	--	--	--	--	--
Fundulidae							
<i>Fundulus catenatus</i>	northern studfish	15	6	7	--	--	1
<i>Fundulus olivaceus</i>	blackspotted topminnow	1	2	2	3	1	4
Poeciliidae							
<i>Gambusia affinis</i>	western mosquitofish	10	1	2	--	--	--
Cottidae							
<i>Cottus caroliniae</i>	banded sculpin	--	12	30	19	3	--
Moronidae							
<i>Morone chrysops</i>	white bass	--	--	--	--	--	--
<i>Morone mississippiensis</i>	yellow bass	--	--	--	--	--	--
<i>Morone saxatilis</i>	striped bass	--	--	--	--	--	--
Centrarchidae							
<i>Ambloplites rupestris</i>	rock bass	4	8	5	23	--	--
<i>Lepomis auritus</i>	redbreast sunfish	--	--	--	--	--	--
<i>Lepomis cyanellus</i>	green sunfish	1	7	3	--	--	--
<i>Lepomis gulosus</i>	warmouth	--	--	--	1	--	--
<i>Lepomis macrochirus</i>	bluegill	4	--	--	8	--	--
<i>Lepomis megalotis</i>	longear sunfish	42	20	29	16	--	--
<i>Lepomis microlophus</i>	reardear sunfish	--	--	--	--	--	--
<i>Lepomis miniatus</i>	redspotted sunfish	--	--	--	--	--	--
<i>Micropterus dolomieu</i>	smallmouth bass	--	--	--	--	--	--
<i>Micropterus punctulatus</i>	spotted bass	3	2	2	3	--	--
<i>Micropterus salmoides</i>	largemouth bass	12	5	1	1	--	--
<i>Pomoxis annularis</i>	white crappie	--	--	--	--	--	--
<i>Pomoxis nigromaculatus</i>	black crappie	--	--	--	--	--	--



Scientific name	Common Name	Station					
		CC-5	CC-6	LBC-1	LBC-2	LBC-3	LBC-4a
Percidae							
<i>Etheostoma blennioides</i>	greenside darter	79	60	10	19	1	--
<i>Etheostoma caeruleum</i>	rainbow darter	128	67	7	2	8	9
<i>Etheostoma duryi</i>	black darter	5	4	7	9	7	13
<i>Etheostoma histrio</i>	harlequin darter	--	--	--	--	--	--
<i>Etheostoma jessiae</i>	blueside darter	--	--	4	11	--	1
<i>Etheostoma kennicotti</i>	stripetail darter	--	--	--	--	--	--
<i>Etheostoma nigripinne</i>	blackfin darter	--	1	--	--	--	--
<i>Etheostoma nigrum</i>	johnny darter	--	--	--	--	--	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--	--	--	--	--	--
<i>Etheostoma rufilineatum</i>	redline darter	398	150	109	71	1	18
<i>Etheostoma tennesseense</i>	Tennessee darter	162	67	30	51	17	22
<i>Etheostoma stigmaeum</i>	speckled darter	--	--	--	--	--	--
<i>Etheostoma zonistium</i>	bandfin darter	--	--	--	--	--	--
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--	--	--	--	--	--
<i>Perca flavescens</i>	yellow perch	--	--	--	--	--	--
<i>Percina caprodes</i>	logperch	98	13	1	1	1	--
<i>Percina evides</i>	gilt darter	--	--	11	1	--	--
<i>Percina sciera</i>	dusky darter	--	--	--	--	--	--
<i>Percina shumardi</i>	river darter	--	--	--	--	--	--
hybrid percidae	hybrid darter	--	--	--	--	--	--
Sciaenidae							
<i>Aplodinotus grunniens</i>	freshwater drum	--	--	--	--	--	--

Scientific name	Common Name	Station					
		LBC-4b	LBC-5	LBC-6	ULB-1	TC-1	TC-2
Petromyzontidae							
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--	--	--	--	--	--
	ammocoetes	--	1	--	--	--	--
Lepisosteidae							
<i>Lepisosteus oculatus</i>	spotted gar	--	--	--	--	--	--
<i>Lepisosteus osseus</i>	longnose gar	--	--	--	--	--	--
Clupeidae							
<i>Dorosoma cepedianum</i>	gizzard shad	--	--	--	--	2	--
<i>Dorosoma petenense</i>	threadfin shad	--	--	--	--	--	--
Cyprinidae							
<i>Campostoma oligolepis</i>	largescale stoneroller	541	138	1	--	--	--
<i>Clinostomus funduloides</i>	rosyside dace	--	--	--	--	--	--
<i>Cyprinella galactura</i>	whitetail shiner	15	39	--	--	--	--
<i>Cyprinella spiloptera</i>	spotfin shiner	--	--	--	--	--	--
<i>Cyprinella venusta</i>	blacktail shiner	--	--	--	--	--	--
<i>Cyprinella whipplei</i>	steelcolor shiner	--	--	--	--	--	--
<i>Cyprinus carpio</i>	common carp	--	--	--	--	--	--
<i>Hybopsis amblops</i>	bigeye chub	27	22	1	--	--	--
<i>Luxilus chrysocephalus</i>	striped shiner	57	24	1	--	--	--
<i>Lythrurus bellus</i>	pretty shiner	--	--	--	53	--	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	21	44	--	--	--	--
<i>Lythrurus fumeus</i>	ribbon shiner	--	--	--	--	--	--
<i>Nocomis leptocephalus</i>	bluehead chub	--	--	--	--	--	1
<i>Nocomis micropogon</i>	river chub	--	--	--	--	--	--
<i>Notropis baileyi</i>	rough shiner	--	--	--	--	--	66
<i>Notropis boops</i>	bigeye shiner	--	--	--	--	--	--
<i>Notropis micropteryx</i>	highland shiner	--	--	--	--	--	--
<i>Notropis texanus</i>	weed shiner	--	--	--	--	--	--
<i>Notropis volucellus</i>	mimic shiner	--	--	--	--	--	--
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--	--	--	--	--	--
<i>Pimephales notatus</i>	bluntnose minnow	--	1	--	--	--	--
<i>Pimephales vigilax</i>	bullhead minnow	--	--	--	--	--	--
<i>Semotilus atromaculatus</i>	creek chub	2	--	1	--	--	--
<i>Semotilus thoreauianus</i>	Dixie chub	--	--	--	--	--	--
Catostomidae							
<i>Carpionodes carpio</i>	river carpsucker	--	--	--	--	--	--
<i>Erimyzon oblongus</i>	creek chubsucker	--	--	--	--	--	--
<i>Hypentelium nigricans</i>	northern hog sucker	23	6	--	--	--	--
<i>Ictiobus bubalus</i>	smallmouth buffalo	--	--	--	--	--	--
<i>Ictiobus niger</i>	black buffalo	--	--	--	--	--	--
<i>Minytrema melanops</i>	spotted sucker	--	1	--	--	--	--
<i>Moxostoma anisurum</i>	silver redhorse	--	--	--	--	--	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--	--	--	--	--	--
<i>Moxostoma carinatum</i>	river redhorse	--	--	--	--	--	--
<i>Moxostoma duquesnei</i>	black redhorse	2	--	--	--	--	--
<i>Moxostoma erythrurum</i>	golden redhorse	7	1	--	--	--	--

Scientific name	Common Name	Station					
		LBC-4b	LBC-5	LBC-6	ULB-1	TC-1	TC-2
Ictaluridae							
<i>Ameiurus natalis</i>	yellow bullhead	--	1	--	1	--	--
<i>Ictalurus punctatus</i>	channel catfish	--	--	--	--	--	--
<i>Noturus exilis</i>	slender madtom	--	13	--	--	--	--
<i>Noturus funebris</i>	black madtom	1	5	--	--	--	--
<i>Noturus gyrinus</i>	tadpole madtom	--	--	--	--	--	--
<i>Noturus miurus</i>	brindled madtom	--	--	--	--	--	--
<i>Noturus nocturnus</i>	freckled madtom	--	--	--	--	--	--
<i>Pylodictis olivaris</i>	flathead catfish	--	--	--	--	--	--
Esocidae							
<i>Esox americanus</i>	redfin pickerel	--	--	--	--	--	--
<i>Esox niger</i>	chain pickerel	--	--	--	--	--	--
Aphredoderidae							
<i>Aphredoderus sayanus</i>	pirate perch	--	--	--	--	--	--
Atherinopsidae							
<i>Labidesthes sicculus</i>	brook silverside	14	--	--	--	--	--
Belonidae							
<i>Strongylura marina</i>	Atlantic needlefish	--	--	--	--	--	--
Fundulidae							
<i>Fundulus catenatus</i>	northern studfish	2	2	--	--	--	--
<i>Fundulus olivaceus</i>	blackspotted topminnow	15	9	1	2	5	1
Poeciliidae							
<i>Gambusia affinis</i>	western mosquitofish	1	--	--	--	4	--
Cottidae							
<i>Cottus carolinae</i>	banded sculpin	3	2	--	--	--	--
Moronidae							
<i>Morone chrysops</i>	white bass	--	--	--	--	--	--
<i>Morone mississippiensis</i>	yellow bass	--	--	--	--	--	--
<i>Morone saxatilis</i>	striped bass	--	--	--	--	--	--
Centrarchidae							
<i>Ambloplites rupestris</i>	rock bass	3	--	--	--	--	--
<i>Lepomis auritus</i>	redbreast sunfish	--	--	--	--	--	--
<i>Lepomis cyanellus</i>	green sunfish	--	--	--	--	1	--
<i>Lepomis gulosus</i>	warmouth	--	--	--	--	--	--
<i>Lepomis macrochirus</i>	bluegill	2	3	1	80	56	9
<i>Lepomis megalotis</i>	longear sunfish	17	13	1		2	--
<i>Lepomis microlophus</i>	reardear sunfish	--	--	--	1	9	--
<i>Lepomis miniatus</i>	redspotted sunfish	--	--	--	--	--	--
<i>Micropterus dolomieu</i>	smallmouth bass	--	--	--	--	--	--
<i>Micropterus punctulatus</i>	spotted bass	3	3	--	13	1	4
<i>Micropterus salmoides</i>	largemouth bass	5	--	--	1	4	--
<i>Pomoxis annularis</i>	white crappie	--	--	--	--	--	--
<i>Pomoxis nigromaculatus</i>	black crappie	--	--	--	--	--	--

Scientific name	Common Name	Station					
		LBC-4b	LBC-5	LBC-6	ULB-1	TC-1	TC-2
Percidae							
<i>Etheostoma blennioides</i>	greenside darter	--	--	--	--	--	--
<i>Etheostoma caeruleum</i>	rainbow darter	15	19	--	--	--	--
<i>Etheostoma duryi</i>	black darter	13	26	1	--	--	--
<i>Etheostoma histrio</i>	harlequin darter	--	--	--	--	--	--
<i>Etheostoma jessiae</i>	blueside darter	--	--	--	--	--	--
<i>Etheostoma kennicotti</i>	stripetail darter	--	--	--	--	--	--
<i>Etheostoma nigripinne</i>	blackfin darter	--	--	--	--	--	--
<i>Etheostoma nigrum</i>	johnny darter	--	--	--	--	--	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--	--	--	--	--	--
<i>Etheostoma rufilineatum</i>	redline darter	108	21	--	--	--	--
<i>Etheostoma tennesseense</i>	Tennessee darter	27	10	--	--	--	--
<i>Etheostoma stigmaeum</i>	speckled darter	--	--	--	--	--	--
<i>Etheostoma zonistium</i>	bandfin darter	--	--	--	--	--	--
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--	--	--	--	--	2
<i>Perca flavescens</i>	yellow perch	--	--	--	--	--	--
<i>Percina caprodes</i>	logperch	5	1	--	--	--	--
<i>Percina evides</i>	gilt darter	--	--	--	--	--	--
<i>Percina sciera</i>	dusky darter	--	--	--	--	--	--
<i>Percina shumardi</i>	river darter	--	--	--	--	--	--
hybrid percidae	hybrid darter	--	--	--	--	--	--
Sciaenidae							
<i>Aplodinotus grunniens</i>	freshwater drum	--	--	--	--	--	--

Scientific name	Common Name	QC-1
Petromyzontidae		
<i>Ichthyomyzon castaneus</i>	chestnut lamprey	--
	ammocoetes	--
Lepisosteidae		
<i>Lepisosteus oculatus</i>	spotted gar	--
<i>Lepisosteus osseus</i>	longnose gar	--
Clupeidae		
<i>Dorosoma cepedianum</i>	gizzard shad	--
<i>Dorosoma petenense</i>	threadfin shad	--
Cyprinidae		
<i>Campostoma oligolepis</i>	largescale stoneroller	114
<i>Clinostomus funduloides</i>	rosyside dace	--
<i>Cyprinella galactura</i>	whitetail shiner	--
<i>Cyprinella spiloptera</i>	spotfin shiner	--
<i>Cyprinella venusta</i>	blacktail shiner	--
<i>Cyprinella whipplei</i>	steelcolor shiner	--
<i>Cyprinus carpio</i>	common carp	--
<i>Hybopsis amblops</i>	bigeye chub	--
<i>Luxilus chrysocephalus</i>	striped shiner	24
<i>Lythrurus bellus</i>	pretty shiner	--
<i>Lythrurus fasciolaris</i>	scarlet shiner	--
<i>Lythrurus fumeus</i>	ribbon shiner	--
<i>Nocomis leptcephalus</i>	bluehead chub	11
<i>Nocomis micropogon</i>	river chub	--
<i>Notropis baileyi</i>	rough shiner	38
<i>Notropis boops</i>	bigeye shiner	--
<i>Notropis micropteryx</i>	highland shiner	--
<i>Notropis texanus</i>	weed shiner	--
<i>Notropis volucellus</i>	mimic shiner	--
<i>Phoxinus erythrogaster</i>	southern redbelly dace	--
<i>Pimephales notatus</i>	bluntnose minnow	--
<i>Pimephales vigilax</i>	bullhead minnow	--
<i>Semotilus atromaculatus</i>	creek chub	11
<i>Semotilus thoreauianus</i>	Dixie chub	--
Catostomidae		
<i>Carpiodes carpio</i>	river carpsucker	--
<i>Erimyzon oblongus</i>	creek chubsucker	--
<i>Hypentelium nigricans</i>	northern hog sucker	--
<i>Ictiobus bubalus</i>	smallmouth buffalo	--
<i>Ictiobus niger</i>	black buffalo	--
<i>Minytrema melanops</i>	spotted sucker	--
<i>Moxostoma anisurum</i>	silver redhorse	--
<i>Moxostoma breviceps</i>	smallmouth redhorse	--
<i>Moxostoma carinatum</i>	river redhorse	--
<i>Moxostoma duquesnei</i>	black redhorse	--
<i>Moxostoma erythrurum</i>	golden redhorse	--

Scientific name	Common Name	QC-1
Ictaluridae		
<i>Ameiurus natalis</i>	yellow bullhead	3
<i>Ictalurus punctatus</i>	channel catfish	--
<i>Noturus exilis</i>	slender madtom	--
<i>Noturus funebris</i>	black madtom	--
<i>Noturus gyrinus</i>	tadpole madtom	3
<i>Noturus miurus</i>	brindled madtom	--
<i>Noturus nocturnus</i>	freckled madtom	--
<i>Pylodictis olivaris</i>	flathead catfish	--
Esocidae		
<i>Esox americanus</i>	redfin pickerel	--
<i>Esox niger</i>	chain pickerel	--
Aphredoderidae		
<i>Aphredoderus sayanus</i>	pirate perch	--
Atherinopsidae		
<i>Labidesthes sicculus</i>	brook silverside	--
Belonidae		
<i>Strongylura marina</i>	Atlantic needlefish	--
Fundulidae		
<i>Fundulus catenatus</i>	northern studfish	--
<i>Fundulus olivaceus</i>	blackspotted topminnow	36
Poeciliidae		
<i>Gambusia affinis</i>	western mosquitofish	8
Cottidae		
<i>Cottus carolinae</i>	banded sculpin	--
Moronidae		
<i>Morone chrysops</i>	white bass	--
<i>Morone mississippiensis</i>	yellow bass	--
<i>Morone saxatilis</i>	striped bass	--
Centrarchidae		
<i>Ambloplites rupestris</i>	rock bass	--
<i>Lepomis auritus</i>	redbreast sunfish	--
<i>Lepomis cyanellus</i>	green sunfish	9
<i>Lepomis gulosus</i>	warmouth	--
<i>Lepomis macrochirus</i>	bluegill	94
<i>Lepomis megalotis</i>	longear sunfish	5
<i>Lepomis microlophus</i>	redeer sunfish	1
<i>Lepomis miniatus</i>	redspotted sunfish	--
<i>Micropterus dolomieu</i>	smallmouth bass	--
<i>Micropterus punctulatus</i>	spotted bass	9
<i>Micropterus salmoides</i>	largemouth bass	15
<i>Pomoxis annularis</i>	white crappie	--
<i>Pomoxis nigromaculatus</i>	black crappie	--

Scientific name	Common Name	QC-1
Percidae		
<i>Etheostoma blennioides</i>	greenside darter	--
<i>Etheostoma caeruleum</i>	rainbow darter	--
<i>Etheostoma duryi</i>	black darter	--
<i>Etheostoma histrio</i>	harlequin darter	--
<i>Etheostoma jessiae</i>	blueside darter	--
<i>Etheostoma kennicotti</i>	stripetail darter	--
<i>Etheostoma nigripinne</i>	blackfin darter	--
<i>Etheostoma nigrum</i>	johnny darter	--
<i>Etheostoma parvipinne</i>	goldstripe darter	--
<i>Etheostoma rufilineatum</i>	redline darter	--
<i>Etheostoma tennesseense</i>	Tennessee darter	--
<i>Etheostoma stigmaeum</i>	speckled darter	10
<i>Etheostoma zonistium</i>	bandfin darter	--
<i>Etheostoma</i> sp. cf. <i>zonistium</i>	blueface darter	--
<i>Perca flavescens</i>	yellow perch	--
<i>Percina caprodes</i>	logperch	--
<i>Percina evides</i>	gilt darter	--
<i>Percina sciera</i>	dusky darter	--
<i>Percina shumardi</i>	river darter	--
hybrid percidae	hybrid darter	--
Sciaenidae		
<i>Aplodinotus grunniens</i>	freshwater drum	--