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Fishes of the Pine Bluff Arsenal, Jefferson County, Arkansas

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Abstract

A survey of the fishes of the Pine Bluff Arsenal (PBA) located in Jefferson County, Arkansas was initiated in February 1999 and continued until October 1999 with several supplemental collections made in 2000. A total of 3,396 fishes was taken in 81 collections on the PBA and revealed 59 species distributed in 17 families and 36 genera. The most abundant fishes collected were *Dorosoma petenense*, *Gambusia affinis*, *Labidesthes sicculus*, *Notemigonus crysoleucas*, and *Lepomis marginatus*.

Introduction

Arkansas has a diverse ichthyofauna of over 215 species of fishes distributed in 63 genera and 27 families that occupy a myriad of different aquatic habitats within its political boundaries (Robison and Buchanan, 1988). Ecologically, the fish fauna of Arkansas is primarily dominated by fluvial forms because of the absence of natural lakes other than oxbow lakes situated along the larger rivers (Robison and Buchanan, 1988). While the overall distributions of state fish species are well known, detailed data regarding the abundance and diversity for specific smaller areas within Arkansas are lacking. This study represents the first attempt to inventory the fishes of the Pine Bluff Arsenal, Jefferson County, Arkansas and to obtain baseline data on the ichthyofauna of the arsenal necessary for future monitoring and possible replication of this study. Specific purposes of this study were (1) to provide an inventory of the fishes inhabiting the five aquatic habitat types located on the Pine Bluff Arsenal (PBA) (2) to search for any taxa of fishes known from the PBA or adjoining counties that are tracked by the Arkansas Natural Heritage Commission (ANHC) and (3) to report any findings for populations of threatened, endangered, or otherwise significant taxa occurring on the PBA.

Materials and Methods

Field work for this project was conducted from February 1999 through October 1999. Collecting trips to the Pine Bluff Arsenal were made on February 26, March 13-14, April 9-10, June 28-29, July 1-2, August 13-14, September 10-11, October 8-9, and October 16, 1999. Nine trips were taken and 16 field days were spent during which 81 collections of fishes were made on the arsenal. All 81 collections are listed in Robison (1999).

Collecting was concentrated in streams, ponds, and lakes with some collections made in the mainstream Arkansas River adjacent to the arsenal. A variety of collecting methods was used including the use of seines

(3.65 m X 1.21 m., 6.1 m X 1.83 m, and 9.15 m X 2.44 m.), aquatic dip nets, and gill nets.

Representative specimens were preserved in 10% formalin in the field and later washed and transferred to 45 percent isopropyl alcohol. Preserved specimens were deposited in the Southern Arkansas University Fish Collection. In addition, all pertinent literature was searched for records of fishes previously collected from Jefferson County, Arkansas.

Description of the Area

The U. S. Pine Bluff Arsenal (PBA) is a 19 km by 6.4 km government military installation located in Jefferson County, Arkansas on the west bank of the Arkansas River approximately 51 km southeast of Little Rock, AR and 4.8 km northwest of Pine Bluff, AR. The arsenal covers 6,052 ha of which 4,313 ha are in forest (Charles Becker, PBA Biologist, pers. comm.). The remaining 1,739 ha of open land consist of lawns, buildings, roads, railroads, lakes and streams, wildlife plots, and open fields (Becker, 1992).

Topographically, the arsenal is generally flat with poor drainage. The eastern portion of the arsenal is about 12.2 m lower in elevation due to an abrupt drop to the river floodplain (Becker, 1992). The northernmost portion of the arsenal is characterized by rolling hills and numerous streams.

The arsenal is located within the Arkansas River drainage with the Arkansas River flowing along most of the eastern boundary (Campbell et al., 1997). The arsenal is drained by perennial, intermittent, and ephemeral drainage systems that flow east-southeast to the Arkansas River. The primary streams of the arsenal are Jackson Creek, Eastwood Bayou, Phillips Creek, Tulley Creek, Caney Creek, and White Creek. Numerous artificial impoundments, beaver dams, and one modified natural lake, Yellow Lake, occur on the arsenal. Yellow Lake is the largest lake on the arsenal with a surface area of 105.3 ha and a maximum depth of 2.74 m. It is flooded several times a year by the Arkansas River. Tulley Lake is next in size with a surface area of 12.15 ha and a maximum depth of 5.2 m.

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Historical Review

Black (1940) completed a doctoral dissertation on the fishes of Arkansas, but he did little collecting near Pine Bluff. To the south of the arsenal, Thomas (1976) finished a master's thesis on the fishes of Bayou Bartholomew which drains southeast Arkansas and northeast Louisiana. Thomas (1976) made collections in Jefferson County, but none were on the arsenal. Buchanan (1976) studied the fishes of the Arkansas River navigation system and made collections on the Arkansas River slightly above and slightly below the arsenal boundaries.

The Arkansas Game and Fish Commission has not sampled the lakes of the arsenal according to Allen Carter (AGFC Fishery Biologist, pers. comm.). No other ichthyological studies have been documented from within the arsenal boundaries.

Results and Discussion

Fishes of Pine Bluff Arsenal.—Arkansas has 197 native fish species inhabiting the state (Robison and Buchanan, 1988). Fifty-nine native species of fishes were collected on the arsenal, representing about 29 percent of the total documented ichthyofauna of Arkansas. The 59 species of fishes were distributed in 17 families and 36 genera.

Abundance of Fishes.—A total of 3,396 fishes was collected during the study. Table 1 indicates the abundance of the fishes collected from the PBA by providing actual number of each species collected, plus the relative abundance of each species.

The most abundant species on the arsenal was the threadfin shad (*Dorosoma petenense*, 1,234 individuals), which comprised 36.34 percent of the total fishes collected. The second most abundant species collected was the western mosquitofish (*Gambusia affinis*) comprising 24.47 percent (831 individuals) of the total while the third most abundant species was the brook silverside (*Labidesthes sicculus*, 167 individuals) comprising 4.92 percent. Other abundant species included the golden shiner (*Notemigonus crysoleucas*, 129 individuals) with 3.80 percent and dollar sunfish (*Lepomis marginatus*, 106) with 3.12 percent of the total.

Table 2 designates each fish species collected on the arsenal according to a scheme of four categories: abundant, common, uncommon, and rare. These terms are defined as follows: rare = 0-2 individuals; uncommon = 3-10 individuals; common = 11-50 individuals, and abundant = over 50 individuals.

Using the above definitions, 10 species were categorized as being abundant on the arsenal: threadfin shad (*D. petenense*), red shiner (*Cyprinella lutrensis*), golden shiner (*N. crysoleucas*), emerald shiner (*Notropis atherinoides*),

western mosquitofish (*G. affinis*), brook silverside (*L. sicculus*), inland silverside (*Menidia beryllina*), green sunfish (*Lepomis cyanellus*), dollar sunfish (*L. marginatus*), and largemouth bass (*Micropterus salmoides*).

Common species (16 species) were the gizzard shad (*Dorosoma cepedianum*), blacktail shiner (*Cyprinella venusta*), redfin shiner (*Lythrurus umbratilis*), fathead minnow (*Pimephales promelas*), bullhead minnow (*P. vigilax*), yellow bullhead (*Ameiurus natalis*), blue catfish (*Ictalurus furcatus*), channel catfish (*I. punctatus*), tadpole madtom (*Noturus gyrinus*), pirate perch (*Aphredoderus sayanus*), blackspotted topminnow (*Fundulus olivaceus*), orangespotted sunfish (*Lepomis humilis*), bluegill (*L. macrochirus*), redear sunfish (*L. microlophus*), white crappie (*Pomoxis annularis*), and cypress darter (*Etheostoma proeliare*).

The 16 uncommon fish species collected were the common carp (*Cyprinus carpio*), river shiner (*Notropis blennioides*), creek chubsucker (*Erimyzon oblongus*), smallmouth buffalo (*Ictiobus bubalus*), black bullhead (*Ameiurus melas*), grass pickerel (*Esox americanus*), golden topminnow (*Fundulus chrysotus*), blackstripe topminnow (*F. notatus*), white bass (*Morone chrysops*), flier (*Centrarchus macropterus*), warmouth (*Lepomis gulosus*), longear sunfish (*L. megalotis*), redspotted sunfish (*L. miniatus*), black crappie (*Pomoxis nigromaculatus*), swamp darter (*Etheostoma fusiforme*), and sauger (*Stizostedion canadense*).

Rare species with only one or two individuals collected were represented by 17 species. These rare species were the shovelnose sturgeon (*Scaphirhynchus platyrhynchus*), spotted gar (*Lepisosteus oculatus*), longnose gar (*L. osseus*), bowfin (*Amia calva*), goldeye (*Hiodon alosoides*), goldfish (*Carassius auratus*), creek chub (*Semotilus atromaculatus*), river carpsucker (*Carpododes carpio*), bigmouth buffalo (*Ictiobus cyprinellus*), spotted sucker (*Minytrema melanops*), flathead catfish (*Pylodictis olivaris*), yellow bass (*Morone mississippiensis*), bluntnose darter (*Etheostoma chlorosoma*), slough darter (*E. gracile*), redfin darter (*E. whipplei*), logperch (*Percina caprodes*), and freshwater drum (*Aplodinotus grunniens*).

Distribution by Habitat.—Five distinct aquatic habitat types were identified on the PBA. They are (1) small woodland streams, (2) sluggish bayou sections, (3) big river (Arkansas River mainstem), (4) ponds, and (5) lakes. Table 3 lists the fishes collected on the arsenal by habitat type.

Thirty-four species of fishes were collected from the lake habitat while 24 species were found in the big river habitat (Arkansas River), and 23 fish species were taken in the sluggish bayou sections of the arsenal. Ponds, as expected, yielded the fewest number of species (eight) because their fish faunas consist of "stocked" species like *I. punctatus* and *P. promelas* for the most part.

Only two species, *G. affinis* and *M. salmoides*, were collected from each of the five habitat types. *N. crysoleucas*, *A. natalis*, *I. punctatus*, *L. cyanellus*, *L. macrochirus*, and

L. marginatus were each found in four of the five habitat types.

Small woodland streams are fairly abundant on the arsenal. Such aquatic systems are relatively clear, tannin stained, shallow bodies of water with mud and sand substrates. Little aquatic vegetation occurs at the stream margins. Nineteen species of fishes were taken from the small woodland stream habitat (Table 3).

In several areas of the arsenal larger sluggish bayou sections of Eastwood and Caney bayous served as habitat for 23 species of fishes (Table 3). These areas were typically deeper, devoid of vegetation, and more turbid than the smaller streams of the arsenal. Substrates were generally mud and sand.

The Arkansas River forms the northeastern border of the Pine Bluff Arsenal. This "big river" habitat created by the Arkansas River adds an additional component of the fish fauna not generally found when surveying the fishes of other lowland delta regions. A total of 24 species (Table 3) was taken from the big river habitat.

There are a number of artificial ponds created by arsenal personnel as recreational areas for both base and other personnel. Such ponds are depauperate in species composition because they are stocked for fishing recreation. The pond habitat type yielded only eight fish species (Table 3).

Arsenal lakes include Yellow Lake, Tulley Lake, Upper Duck Pond and Lower Duck Pond. Yellow Lake is by far the largest lake on the arsenal and supports the largest and most diverse fish population. Thirty-four species of fishes were documented from Yellow Lake and other lakes (Table 3).

Conservation Status.—A single specimen of the goldeye (*Hiodon alosoides*) was collected on the arsenal from the Arkansas River (Station 47). The goldeye is considered a species of "Special Concern" by the ANHC with relatively few records in state collections; however its perceived scarcity probably results more from a lack of collecting the big river habitats in Arkansas than from actual scarcity. On-

going and future collecting in the big river habitat in Arkansas will no doubt reveal additional collecting sites for this species. Robison and Buchanan (1988) did not consider the goldeye as having any conservation status in Arkansas and did not include it among the 15 fish species they listed as being of "Special Concern" for Arkansas. In fact, it is fairly common in the Arkansas River near Fort Smith and was documented from 15 locations in the Arkansas River by Buchanan (1976) and Robison and Buchanan (1988).

The ANHC lists the swamp darter (*Etheostoma fusiforme*) from nearby Prairie and Grant counties as of "Special Concern." Seven specimens of the swamp darter were taken from Yellow Lake during this study. This species is probably more abundant than our collecting indicated.

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Table 1. Number and relative abundance (percent of total number) of fish species collected from the Pine Bluff Arsenal, Jefferson County, Arkansas from February–October, 1999.

Species	Pine Bluff Drainages N = 3396	
	Number	Percentage
Family Acipenseridae – Sturgeons		
<i>Scaphirhynchus platyrhynchus</i> – shovelnose sturgeon	1	0.03

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Table 1. Continued.

Species	Pine Bluff Drainages N = 3396	
	Number	Percentage
Family Lepisosteidae – Gars		
<i>Lepisosteus oculatus</i> – spotted gar	2	0.06
<i>Lepisosteus osseus</i> – longnose gar	1	0.03
Family Amiidae – Bowfins		
<i>Amia calva</i> – bowfin	2	0.06
Family Hiodontidae – Mooneyes		
<i>Hiodon alosoides</i> – goldeye	1	0.03
Family Clupeidae – Herrings		
<i>Dorosoma cepedianum</i> – gizzard shad	38	1.12
<i>Dorosoma petenense</i> – threadfin shad	1,234	36.34
Family Cyprinidae – Carps and Minnows		
<i>Carassius auratus</i> – goldfish	2	0.06
<i>Cyprinella lutrensis</i> – red shiner	83	2.44
<i>Cyprinella venusta</i> – blacktail shiner	29	0.85
<i>Cyprinus carpio</i> – common carp	8	0.24
<i>Lythrurus umbratilis</i> – redbfin shiner	46	1.35
<i>Notemigonus crysoleucas</i> – golden shiner	129	3.80
<i>Notropis atherinoides</i> – emerald shiner	94	2.77
<i>Notropis blennioides</i> – river shiner	8	0.24
<i>Pimephales promelas</i> – fathead minnow	35	1.03
<i>Pimephales vigilax</i> – bullhead minnow	17	0.50
<i>Semotilus atromaculatus</i> – creek chub	2	0.06
Family Catostomidae – Suckers		
<i>Carpiodes carpio</i> – river carpsucker	2	0.06
<i>Erimyzon oblongus</i> – creek chubsucker	5	0.15
<i>Ictiobus bubalus</i> – smallmouth buffalo	3	0.09
<i>Ictiobus cyprinellus</i> – bigmouth buffalo	1	0.03
<i>Minytrema melanops</i> – spotted sucker	2	0.06
Family Ictaluridae – Bullhead Catfishes		
<i>Ameiurus melas</i> – black bullhead	9	0.27
<i>Ameiurus natalis</i> – yellow bullhead	16	0.47
<i>Ictalurus furcatus</i> – blue catfish	11	0.32
<i>Ictalurus punctatus</i> – channel catfish	22	0.65
<i>Noturus gyrinus</i> – tadpole madtom	13	0.38
<i>Pylodictis olivaris</i> – flathead catfish	2	0.06
Family Esocidae – Pikes		
<i>Esox americanus</i> – grass pickerel	6	0.18
Family Aphredoderidae – Pirate Perches		
<i>Aphredoderus sayanus</i> – pirate perch	14	0.41

Table 1. Continued.

Species	Pine Bluff Drainages N = 3396	
	Number	Percentage
Family Fundulidae – Killifishes		
<i>Fundulus chrysotus</i> – golden topminnow	7	0.21
<i>Fundulus notatus</i> – blackstripe topminnow	5	0.15
<i>Fundulus olivaceus</i> – blackspotted topminnow	48	1.41
Family Poeciliidae – Livebearers		
<i>Gambusia affinis</i> – mosquitofish	831	24.47
Family Atherinidae – Silversides		
<i>Labidesthes sicculus</i> – brook silverside	167	4.92
<i>Menidia beryllina</i> – inland silverside	63	1.86
Family Moronidae – Temperate Basses		
<i>Morone chrysops</i> – white bass	3	0.09
<i>Morone mississippiensis</i> – yellow bass	2	0.06
<i>Centrarchus macropterus</i> – flier	8	0.24
<i>Lepomis cyanellus</i> – green sunfish	57	1.68
<i>Lepomis gulosus</i> – warmouth	10	0.29
<i>Lepomis humilis</i> – orangespotted sunfish	21	0.62
<i>Lepomis macrochirus</i> – bluegill	39	1.15
<i>Lepomis marginatus</i> – dollar sunfish	106	3.12
<i>Lepomis megalotis</i> – longear sunfish	8	0.24
<i>Lepomis microlophus</i> – redear sunfish	14	0.41
<i>Lepomis miniatus</i> – redspotted sunfish	3	0.09
<i>Micropterus salmoides</i> – largemouth bass	62	1.83
<i>Pomoxis annularis</i> – white crappie	41	1.21
<i>Pomoxis nigromaculatus</i> – black crappie	3	0.09
Family Percidae – Perches		
<i>Etheostoma chlorosoma</i> – bluntnose darter	2	0.06
<i>Etheostoma fusiforme</i> – swamp darter	7	0.21
<i>Etheostoma gracile</i> – slough darter	2	0.06
<i>Etheostoma proeliare</i> – cypress darter	42	1.24
<i>Etheostoma whipplei</i> – redfin darter	1	0.03
<i>Percina caprodes</i> – logperch	2	0.06
<i>Stizostedion canadense</i> – sauger	3	0.09
Family Sciaenidae – Drums		
<i>Aplodinotus grunniens</i> – freshwater drum	1	0.03
Totals	3,396	100.00

Fishes of the Pine Bluff Arsenal, Jefferson County, Arkansas

Table 2. Abundance of the fishes collected from Pine Bluff Arsenal, Jefferson County, Arkansas from February–October, 1999.

Species	Abundant	Common	Uncommon	Rare
Family Acipenseridae – Sturgeons				
<i>Scaphirhynchus platyrhynchus</i> – shovelnose sturgeon	–	–	–	X
Family Lepisosteidae – Gars				
<i>Lepisosteus oculatus</i> – spotted gar	–	–	X	–
<i>Lepisosteus osseus</i> – longnose gar	–	–	–	X
Family Amiidae – Bowfins				
<i>Amia calva</i> – bowfin	–	–	–	X
Family Hiodontidae – Mooneyes				
<i>Hiodon alosoides</i> – goldeye	–	–	–	X
Clupeidae – Herrings				
<i>Dorosoma cepedianum</i> – gizzard shad	–	X	–	–
<i>Dorosoma petenense</i> – threadfin shad	X	–	–	–
Family Cyprinidae – Carps and Minnows				
<i>Carassius auratus</i> – goldfish	–	–	–	X
<i>Cyprinella lutrensis</i> – red shiner	X	–	–	–
<i>Cyprinella venusta</i> – blacktail shiner	–	X	–	–
<i>Cyprinus carpio</i> – common carp	–	–	X	–
<i>Lythrurus umbratilis</i> – redfin shiner	–	X	–	–
<i>Notemigonus crysoleucas</i> – golden shiner	X	–	–	–
<i>Notropis atherinoides</i> – emerald shiner	X	–	–	–
<i>Notropis blennioides</i> – river shiner	–	–	X	–
<i>Pimephales promelas</i> – fathead minnow	–	X	–	–
<i>Pimephales vigilax</i> – bullhead minnow	–	X	–	–
<i>Semotilus atromaculatus</i> – creek chub	–	–	–	X
Family Catostomidae – Suckers				
<i>Catostomus commersoni</i> – river carpsucker	–	–	–	X
<i>Erimyzon oblongus</i> – creek chubsucker	–	–	X	–
<i>Ictiobus bubalus</i> – smallmouth buffalo	–	–	X	–
<i>Ictiobus cyprinellus</i> – bigmouth buffalo	–	–	X	–
<i>Minytrema melanops</i> – spotted sucker	–	–	–	X
Family Ictaluridae – Bullhead Catfishes				
<i>Ameiurus melas</i> – black bullhead	–	–	X	–
<i>Ameiurus natalis</i> – yellow bullhead	–	X	–	–
<i>Ictalurus furcatus</i> – blue catfish	–	X	–	–
<i>Ictalurus punctatus</i> – channel catfish	–	X	–	–
<i>Noturus gyrinus</i> – tadpole madtom	–	X	–	–
<i>Pylodictis olivaris</i> – flathead catfish	–	–	–	X
Family Esocidae – Pikes				
<i>Esox americanus</i> – grass pickerel	–	–	X	–

Table 2. Continued.

Species	Abundant	Common	Uncommon	Rare
Family Aphredoderidae – Pirate Perches				
<i>Aphredoderus sayanus</i> – pirate perch	–	X	–	–
Family Fundulidae – Killifishes				
<i>Fundulus chrysotus</i> – golden topminnow	–	–	X	–
<i>Fundulus notatus</i> – blackstripe topminnow	–	–	X	–
<i>Fundulus olivaceus</i> – blackspotted topminnow	–	X	–	–
Family Poeciliidae – Livebearers				
<i>Gambusia affinis</i> – mosquitofish	X	–	–	–
Family Atherinidae – Silversides				
<i>Labidesthes sicculus</i> – brook silverside	X	–	–	–
<i>Menidia beryllina</i> – inland silverside	X	–	–	–
Family Moronidae – Temperate Basses				
<i>Morone chrysops</i> – white bass	–	–	X	–
<i>Morone mississippiensis</i> – yellow bass	–	–	–	X
Family Centrarchidae – Sunfishes				
<i>Centrarchus macropterus</i> – flier	–	–	X	–
<i>Lepomis cyanellus</i> – green sunfish	X	–	–	–
<i>Lepomis gulosus</i> – warmouth	–	–	X	–
<i>Lepomis humilis</i> – orangespotted sunfish	–	X	–	–
<i>Lepomis macrochirus</i> – bluegill	–	X	–	–
<i>Lepomis marginatus</i> – dollar sunfish	X	–	–	–
<i>Lepomis megalotis</i> – longear sunfish	–	–	X	–
<i>Lepomis microlophus</i> – redear sunfish	–	X	–	–
<i>Lepomis miniatus</i> – redspotted sunfish	–	–	X	–
<i>Micropterus salmoides</i> – largemouth bass	X	–	–	–
<i>Pomoxis annularis</i> – white crappie	–	X	–	–
<i>Pomoxis nigromaculatus</i> – black crappie	–	–	X	–
Family Percidae – Perches				
<i>Etheostoma chlorosoma</i> – bluntnose darter	–	–	–	X
<i>Etheostoma fusiforme</i> – swamp darter	–	–	X	–
<i>Etheostoma gracile</i> – slough darter	–	–	–	X
<i>Etheostoma proeliare</i> – cypress darter	–	X	–	–
<i>Etheostoma whipplei</i> – redfin darter	–	–	–	X
<i>Percina caprodes</i> – logperch	–	–	–	X
<i>Stizostedion canadense</i> – sauger	–	–	X	–
<i>Stizostedion vitreum</i> – walleye				
Family Sciaenidae – Drums				
<i>Aplodinotus grunniens</i> – freshwater drum	–	–	–	X
TOTALS	10	16	17	16

Fishes of the Pine Bluff Arsenal, Jefferson County, Arkansas

Table 3. Habitats of fishes collected from the Pine Bluff Arsenal, Jefferson County, Arkansas from February – October, 1999.*

Species	1	2	3	4	5
Family Acipenseridae – Sturgeons					
<i>Scaphirhynchus platyrhynchus</i> – shovelnose sturgeon	–	–	X	–	–
Family Lepisosteidae – Gars					
<i>Lepisosteus oculatus</i> – spotted gar	–	X	–	–	X
<i>Lepisosteus osseus</i> – longnose gar	–	–	–	–	X
Family Amiidae – Bowfins					
<i>Amia calva</i> – bowfin	–	–	–	–	X
Family Hiodontidae – Mooneyes					
<i>Hiodon alosoides</i> – goldeye	–	–	X	–	–
Family Clupeidae – Herrings					
<i>Dorosoma cepedianum</i> – gizzard shad	–	X	X	–	X
<i>Dorosoma petenense</i> – threadfin shad	–	X	X	–	X
Family Cyprinidae – Minnows					
<i>Carassius auratus</i> – goldfish	–	–	–	–	X
<i>Cyprinella lutrensis</i> – red shiner	–	–	X	–	–
<i>Cyprinella venusta</i> – blacktail shiner	–	X	X	–	–
<i>Cyprinus carpio</i> – common carp	–	X	–	–	–
<i>Lythrurus umbratilis</i> – redbfin shiner	X	X	–	–	–
<i>Notemigonus crysoleucas</i> – golden shiner	X	X	–	X	X
<i>Notropis atherinoides</i> – emerald shiner	–	–	X	–	–
<i>Notropis blennius</i> – river shiner	–	–	X	–	–
<i>Pimephales promelas</i> – fathead minnow	–	–	X	X	X
<i>Pimephales vigilax</i> – bullhead minnow	–	–	X	–	X
<i>Semotilus atromaculatus</i> – creek chub	X	–	–	–	–
Family Catostomidae – Suckers					
<i>Carpionotus carpio</i> – river carpsucker	–	–	X	–	–
<i>Erimyzon oblongus</i> – creek chubsucker	X	X	–	–	–
<i>Ictiobus bubalus</i> – smallmouth buffalo	–	X	X	–	–
<i>Ictiobus cyprinellus</i> – bigmouth buffalo	–	–	X	–	–
<i>Minytrema melanops</i> – spotted sucker	–	X	–	–	–
Family Ictaluridae – Bullhead Catfishes					
<i>Ameiurus melas</i> – black bullhead	X	X	–	–	X
<i>Ameiurus natalis</i> – yellow bullhead	X	X	–	X	X
<i>Ictalurus furcatus</i> – blue catfish	–	–	X	–	–
<i>Ictalurus punctatus</i> – channel catfish	–	X	X	X	X
<i>Noturus gyrinus</i> – tadpole madtom	–	–	–	–	X
<i>Pylodictis olivaris</i> – flathead catfish	–	–	X	–	–
Family Esocidae – Pikes					
<i>Esox americanus</i> – grass pickerel	X	–	–	–	X

Table 3. Continued.

Species	1	2	3	4	5
Family Aphredoderidae – Pirate Perches					
<i>Aphredoderus sayanus</i> –pirate perch	X	X	–	–	–
Family Fundulidae – Killifishes					
<i>Fundulus chrysotus</i> –golden topminnow	–	–	–	–	X
<i>Fundulus notatus</i> –blackstripe topminnow	–	X	–	–	–
<i>Fundulus olivaceus</i> –blackspotted topminnow	X	X	–	–	X
Family Poeciliidae – Livebearers					
<i>Gambusia affinis</i> –mosquitofish	X	X	X	X	X
Family Atherinidae – Silversides					
<i>Labidesthes sicculus</i> –brook silverside	X	X	–	–	X
<i>Menidia beryllina</i> –inland silverside	–	–	X	–	–
Family Moronidae – Temperate Basses					
<i>Morone chrysops</i> –white bass	–	–	–	–	X
<i>Morone mississippiensis</i> –yellow bass	–	–	–	–	X
Family Centrarchidae – Sunfishes					
<i>Centrarchus macropterus</i> –flier	–	–	–	–	X
<i>Lepomis cyanellus</i> –green sunfish	X	X	–	X	X
<i>Lepomis gulosus</i> –warmouth	–	–	–	–	X
<i>Lepomis humilis</i> –orangespotted sunfish	–	–	X	–	X
<i>Lepomis macrochirus</i> –bluegill	X	X	–	X	X
<i>Lepomis marginatus</i> –dollar sunfish	X	X	X	–	X
<i>Lepomis megalotis</i> –longear sunfish	–	–	X	–	–
<i>Lepomis microlophus</i> –redeer unfish	–	–	–	–	X
<i>Lepomis miniatus</i> –redspotted sunfish	–	–	–	–	X
<i>Micropterus salmoides</i> –largemouth bass	X	X	X	X	X
<i>Pomoxis annularis</i> –white crappie	–	–	–	–	X
<i>Pomoxis nigromaculatus</i> –black crappie	–	–	–	–	X
Family Percidae – Perches					
<i>Etheostoma chlorosoma</i> –bluntnose darter	X	–	–	–	–
<i>Etheostoma fusiforme</i> –swamp darter	–	–	–	–	X
<i>Etheostoma gracile</i> –slough darter	X	–	–	–	–
<i>Etheostoma proeliare</i> –cypress darter	X	X	–	–	X
<i>Etheostoma whipplei</i> –redfin darter	X	–	–	–	–
<i>Percina caprodes</i> –logperch	–	–	–	–	X
<i>Stizostedion canadense</i> –sauger	–	–	X	–	–
Family Sciaenidae – Drums					
<i>Aplodinotus grunniens</i> –freshwater drum	–	–	X	–	–
TOTALS	19	23	24	8	34

*1 = small woodland streams

2 = sluggish bayou section

3 = big river

4 = ponds

5 = lakes

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