

11-1-1991

## Number 24 (November 1991)

Southern Fishes Council

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### Recommended Citation

Southern Fishes Council (1991) "Number 24 (November 1991)," *Southeastern Fishes Council Proceedings*: No. 24.

Available at: <https://trace.tennessee.edu/sfcproceedings/vol1/iss24/1>

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## Number 24 (November 1991)

### Abstract

(November 1991) - Fishes of the Sucarnoochee River System Alabama and Mississippi. By W.D. Hubbard, et al., 11 pp.

Provenance and Disposition of Fish Specimens Appearing in Color Plates of Kuehne and A. Barbour's Book, The American Darters. By C.R. Gilbert and S.J. Walsh, 8 pp. Museum Notes by E.G. Maurakis, 1 pp.

### Keywords

fishes, sucarnoochee river, kuehne



# Southeastern Fishes Council PROCEEDINGS

DEDICATED TO THE PRESERVATION OF SOUTHEASTERN FISHES

Number 24

November 1991

## FISHES OF THE SUCARNOOCHEE RIVER SYSTEM, ALABAMA AND MISSISSIPPI

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### ABSTRACT

Fish collections from 1931 to 1988 were used to generate a species list for the Sucarnoochee River system, a major tributary of the lower Tombigbee River in Alabama and Mississippi. Specimens from 77 sites represent 19 families and 101 species. The greatest diversity at any one site was 76 species. Thirty-eight sites were represented by 15 or more species, and each of 8 sites were represented by only one species. The most frequently encountered species were *Fundulus olivaceus*, *Lepomis megalotis*, *Lythrurus bellus*, *Luxilus chrysocephalus*, *Lepomis macrochirus*, *Notropis ammophilus*, *Notropis baileyi*, *Lepomis cyanellus* and *Noturus gyrinus*. The Sucarnoochee may offer refuge for certain species of fishes that no longer can survive in the Tombigbee River due to habitat alteration perpetrated by the Tennessee-Tombigbee Waterway.

### INTRODUCTION

The Sucarnoochee River system is a major tributary to the lower Tombigbee River drainage in western Mobile Basin. The earliest mention of Sucarnoochee fishes was made by O.P. Hay (1881) who said, "At Narkeeta, in Kemper County, I saw a few 'Sunfishes' taken from the Sucarnoochee River, a tributary of the Tombigbee." Hay collected along the route of Mobile and Ohio Railroad from Corinth to Shubuta, Mississippi.

Numerous collections were made in the Sucarnoochee system by the senior author for the Mississippi Department of

Wildlife, Fisheries, and Parks; Charles Tucker, during his tenure at Livingston University, amassed a teaching collection of fishes, primarily from the Sucarnoochee, and over the years collectors for the University of Alabama Ichthyological Collection have also sampled there, as well as other contributors cited in the site descriptions. Mettee et al. (1987) listed 61 species from 16 locations in the Sucarnoochee River System. Our objective is to consolidate available data and compile a composite list of the ichthyofauna known to occur in the Sucarnoochee River System. This document will serve as baseline information for future resource assessments.

### STUDY AREA

The Sucarnoochee River System encompasses approximately 1567 km<sup>2</sup> square miles in the lower Tombigbee River drainage in Alabama and Mississippi (Richardson 1985). Most of the system is developed upon Tertiary formations of the Midway and Wilcox Groups within the Southern Red Hills physiographic district. Some tributaries on the north side of the river extend to the Chunnenugee physiographic district. Most streams within the system are perennial and are developed on sand, shale, or clay sediments. Headwater streams originate in Kemper and Lauderdale counties, Mississippi, and have substrata that consist primarily of sand. Sucarnoochee Creek, as it is known in Mississippi, is considered to be Sucarnoochee River once it enters Alabama

where it is a 6th order stream. Sucarnoochee River empties into the Coffeeville portion of the Tennessee-Tombigbee Waterway and has an average discharge of 111m<sup>3</sup>/s (Hayes 1978).

## METHODS

**Abbreviations:** AUM – Auburn University Museum; CU – Cornell University; MDWFP – Mississippi Department of Wildlife, Fisheries, and Parks; MMNS – Mississippi Museum of Natural Science, Jackson; UAIC – University of Alabama Ichthyological Collection; UAIC (GSA) – collections that bear UAIC numbers but data and specimens remain in Geological Survey of Alabama; UMMZ – University of Michigan Museum of Zoology; TU – Tulane University (data from Mettee et al., 1987). TTW – Tennessee-Tombigbee Waterway. N, E, S, W are compass points. T – Township, R – Range, Sec – Section. CoRd – county road, Hwy – State highway, US – Federal highway, I – Interstate highway, mi – road mile, ami – airmile.

Although objectives and sampling methods differ among collectors, the data reported herein document the occurrence of species at particular places and times. Rotenone sampling by the MDWFP furnished detailed accounts of species composition in 30 of the 77 sites described herein. Rotenone was applied at a rate of 1-3 mg/l, depending on stream flow, and was detoxified with 4-5 mg/l potassium permanganate behind the block net at the end of the sample area. The MDWFP also fished hoop nets at two stations (Sites 44 and 65) in the Sucarnoochee during 1986. Five nets were fished monthly at each station for 3 consecutive days, excluding

July and September. Hoop nets had a front hoop diameter of 94 cm and 2.2 cm mesh. Minnow seines were the principal means of capture in the other collections. Hook-and-line fishing records were occasionally used. Specimens are housed in MMNS. Remnants of collections made over about a 20 year period by Charles Tucker and his students at Livingston University are deposited in UAIC 9884 to 9978. The remainder of Tucker's material is in the uncataloged teaching collection at Livingston, and those named specimens, when used to document the presence of a species, are identified by an asterisk (\*).

Collection sites are numbered sequentially from downstream to upstream (Fig. 1). Site descriptions include: Name of stream, county, state, Township, Range and Section numbers, and access to site via roads. Next are the museum catalogue numbers, or in case of UAIC and MDWFP, the accession number, followed by the year the collection was made. All MDWFP collections were made in 1986.

The Species List follows Robins et al. (1991), with the following exceptions. We are following Andrew Simons (in press, a and b) in placing *Ammocrypta asprella* in *Crystallaria*, and *Ammocrypta beani* and *A. meridiana* in *Etheostoma*. We choose to recognize Fundulidae and Elasmobranchidae, and did not distinguish species within the *Fundulus notti* species group.

## RESULTS AND DISCUSSION

Fishes of the Sucarnoochee River system represent 19 families and 101 species. The UAIC data reported herein have limited

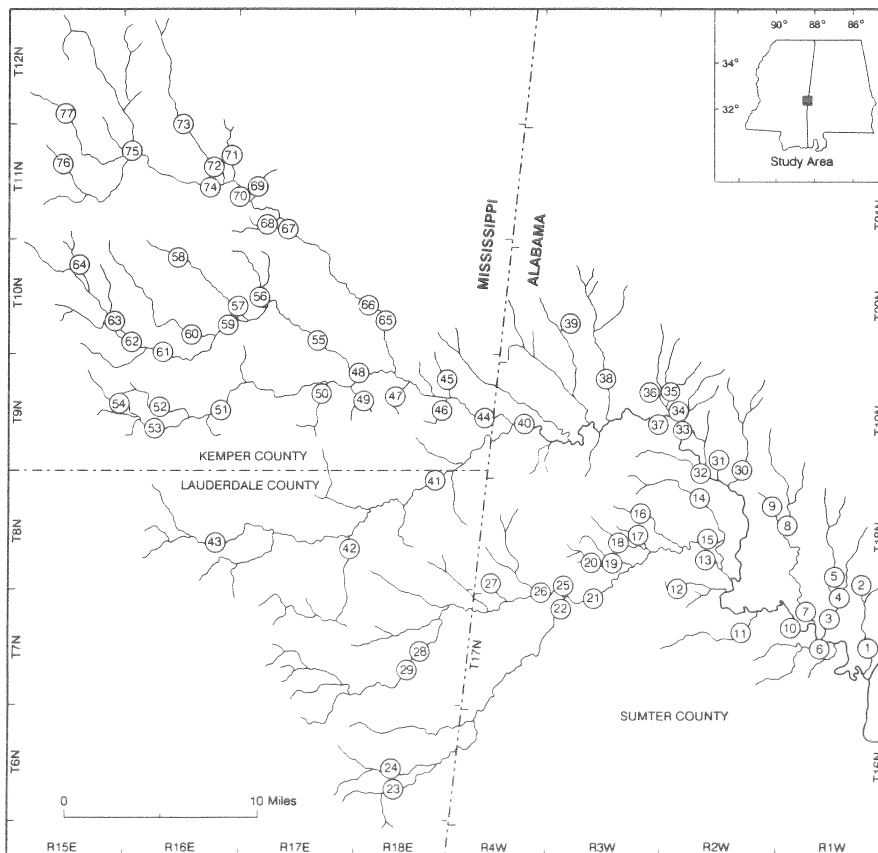


Fig 1. Sucarnoochee River system. Numbered circles represent the collection sites described in the text.



quantitative value due to the heterogeneity of the collections, unlike the MDWFP collections in which effort was standardized.

Seventy-seven sample sites are described and accompanied by a list ranging from 1 to 76 species. Thirty-eight sites were represented by 15 or more species, and each of 8 sites were represented by only one species. The rare species (those occurring only one time) were: *Lampetra aepyptera*, *Alosa chrysochloris*, *Cyprinella callistia*, *Notropis candidus*, *Carpiodes cyprinus*, *Ictiobus bubalus*, *Moxostoma carinatum*, *Ameiurus nebulosus*, *Strongylura marina*, *Crystallaria asprella*, *Etheostoma histrio*, *Etheostoma proeliare*, *Etheostoma zoniferum*, and *Percina* sp.cf. *caprodes*. Species of most frequent occurrence were *Fundulus olivaceus* (44 Sites), *Lepomis megalotis* (41), *Lythrurus bellus* (39), *Luxilus chrysocephalus* (35), *Lepomis macrochirus* (34), *Notropis ammophilus* (33), *Notropis baileyi* (31), *Noturus gyrinus*, and *Lepomis cyanellus* (31). Some species such as *Amia calva*, *Ictiobus bubalus*, and *Ictalurus furcatus* may actually be more widely distributed than our surveys indicate since their preferred habitats were sampled less frequently.

Although samples date to 1931 and 1951, most species represented then were collected again in the 1980s. Species collected before 1975 that failed to appear in samples after 1985 are: *Amia calva*, *Dorosompetenense*, *Hybognathus hayi*, *Notropis atherinoides*, *Erimyzon sucetta*, *Lepomis humilis*, *Lepomis marginatus*, and *Etheostoma proeliare*. These species frequently occur in slow-moving water and backwater areas. Samples taken after 1985 were primarily in fast to moderately flowing streams of the upper watershed that excluded much of the sluggish waters typical of the lower system; therefore, the species probably exist in the Sucarnoochee system despite their absence in more recent collections.

For the most part, the Sucarnoochee River has been spared major alterations; consequently, species composition is expected to remain somewhat stable. Habitat changes did occur in the lowermost reach after 1960 when a more lentic environment was created by the TTW. The habitat change may encourage invasion by certain fish species which could affect the competitive balance of natural stream populations; however, conclusive evidence concerning community changes are not possible with simple presence-absence data given here.

Channelization, canalization and inundation have undoubtedly affected the species composition in the Tombigbee River drainage (Boschung 1987; 1989). Species that depend on large river habitat are the most prone to extirpation. Boschung (1973) listed 12 vulnerable species in the upper Tombigbee drainage, and Mettee et al. (1989) discussed the more recent decline of certain species in the Black Warrior drainage, the first to be modified for navigation in Alabama. Species that inhabit the Sucarnoochee system and are potentially threatened in the Tombigbee River by the TTW are: *Polyodon spathula*, *Anguilla rostrata*, *Moxostoma carinatum*, *Hybognathus hayi*, *Hybognathus nuchalis*, *Notropis atherinoides*, *Crystallaria asprella*, *Etheostoma histrio*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma rupestre*, *Percina lenticula*, *Percina sciera*, and *Percina vigil*. The relative abundance of *Etheostoma beani*, *Etheostoma meridianum*, *Percina lenticula*, and *Percina sciera* suggest potential for success of these species in the Sucarnoochee system.

*Percina vigil* seems to be using the habitat of the Sucarnoochee as it does the large tributaries of the upper Tombigbee River (Boschung, 1987: fig. 23.2). Since *Noturus munitus* has not been found in the Sucarnoochee, its chances of using this refuge grows dimmer with time.

## SITE DESCRIPTIONS AND SPECIES LISTS

[SITES 1-12 ARE ON SUCARNOOCHEE RIVER PROPER OR TRIBUTARIES OF SUCARNOOCHEE RIVER IN SUMTER COUNTY, ALABAMA]

SITE 1. Adams Creek. T17N, R1W, Sec 13 SW. CoRd 25, 0.5 mi N Sumter-Marengo county line. UAIC 9944 '67.

2 SPECIES: *Erimyzon sucetta* and *Centrarchus macropterus*.\*

SITE 2. Adams Creek. T18N, R1W, Sec 35 S-central. CoRd 23, 1 mi E Coatopa. UAIC 9967 '77.

5 SPECIES: *Notropis ammophilus*\*, *Notropis buccatus*\*, *Semotilus atromaculatus*, *Ameiurus natalis*\*, and *Lepomis punctatus*.\*

SITE 3. Mill Creek. T17N, R1W, Sec9. US80. UAIC (GSA) 7446 '84.

23 SPECIES: *Campostoma oligolepis*, *Cyprinella venusta*, *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Notropis buccatus*, *Notropis texanus*, *Pimephales notatus*, *Minytrema melanops*, *Noturus gyrinus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis microlophus*, *Lepomis punctatus*, *Micropterus punctulatus*, *Micropterus salmoides*, *Etheostoma (Ulocentra) sp.*, and *Percina nigrofasciata*.

SITE 4. Mill Creek. T17N, R1W, Sec 3-Central. Hwy 28, 0.75 ami S Coatopa. UAIC 9907 '68, 9908 '69, 9909 '69, 9910 '70, 9911 '71, 9912 '72, 9913 '84, 9914 '84, 9915 '86, 9969 '77; UMMZ 97786-97805 '31.

27 SPECIES: *Campostoma oligolepis*, *Cyprinella venusta*, *Hybognathus nuchalis*, *Lythrurus bellus*, *Notemigonus crysoleucas*, *Notropis ammophilus*, *Notropis buccatus*, *Pimephales notatus*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Ameiurus natalis*, *Noturus gyrinus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis microlophus*\*, *Lepomis punctatus*, *Micropterus punctulatus*\*, *Micropterus salmoides*, *Etheostoma meridianum*\*, *Etheostoma nigrum*, *Etheostoma parvipinne*, *Etheostoma swaini*, *Etheostoma whipplei*, *Etheostoma (Ulocentra) sp.* and *Percina nigrofasciata*.

SITE 5. Coatopa Creek, trib Mill Creek. T18N, R1W, Sec 34 W-central. Hwy 28, 0.5 ami NW Coatopa. UAIC 9916 '69, 9917 '77, 9919 '84.

13 SPECIES: *Cyprinella venusta*\*, *Lythrurus bellus*\*, *Notemigonus crysoleucas*, *Notropis ammophilus*\*, *Opsopoeodus emiliae*, *Pimephales notatus*\*, *Moxostoma poecilurum*, *Noturus gyrinus*\*, *Gambusia affinis*\*, *Lepomis macrochirus*, *Lepomis megalotis*\*, *Micropterus punctulatus*, and *Micropterus salmoides*.\*

SITE 6 Sucarnoochee River, near mouth Mill Creek. T17N, R1W, Sec 16. AUM 5519-5525 '69.

7 SPECIES: *Pimephales notatus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, and *Lepomis punctatus*.

SITE 7. Ponkobia Creek. T17N, R1W, Sec 8. US 80. UAIC (GSA)

7450 '84.

23 SPECIES: *Esox americanus*, *Campostoma oligolepis*, *Cyprinella venusta*, *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Notropis buccatus*, *Pimephales notatus*, *Carpiodes velifer*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Ictalurus punctatus*, *Noturus gyrinus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Micropterus salmoides*, *Etheostoma whipplei*, and *Etheostoma (Ulocentra)* sp.

SITE 8. Ponkobia Creek. T18N, R1W, Sec 18 E-central. Hwy 28, 4 mi SE Livingston. UAIC 9952 '77.

5 SPECIES: *Notropis ammophilus*\*, *Noturus gyrinus*\*, *Lepomis cyanellus*, *Lepomis punctatus*\*, and *Percina sciera*\*.

SITE 9. Unnamed trib Ponkobia Creek. T18N, R2W, Sec 7 SW. Hwy 28, 3 mi SE Livingston. UAIC 9958 '77.

1 SPECIES: *Lythrurus bellus*.

SITE 10. Sucarnooche River. T17N, R1W, Sec 18. Ca 1 mi E Ballamy.

1 SPECIES: *Ictalurus punctatus*\*.

SITE 11. Fourth Creek. T17N, R2W, Sec 14 NE, NW. US 80, 1.3 mi W Bellamy. UAIC 9932 '77; UAIC(GSA) 7447 '84.

20 SPECIES: *Campostoma oligolepis*, *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis texanus*, *Pimephales notatus*, *Ameiurus natalis*, *Noturus gyrinus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus salmoides*, *Etheostoma nigrum*, *Etheostoma parvipinne*, and *Etheostoma whipplei*.

SITE 12. Unnamed trib Sucarnoochee River. T18N, R2W, Sec 32 SW. Unimproved road, 1.75 mi W Bennett. UAIC 9946 '78.

1 SPECIES: *Ameiurus natalis*.

#### [SITES 13-29 ARE IN THE ALAMUCHEE CREEK SYSTEM]

SITE 13. Swampy backwater of unnamed trib Alamuchee Creek, Sumter County, Alabama. T18N, R2W, Sec 28 NE. CoRd 13, 5.25 mi S Livingston. UAIC 9922 '71, 9923 '77, 9924 '81, 9925 '81, 9926 '84.

16 SPECIES: *Lepisosteus osseus*\*, *Esox niger*\*, *Cyprinus carpio*, *Hybognathus hayi*\*, *Nocomis leptocephalus*\*, *Notropis baileyi*, *Pimephales notatus*\*, *Erimyzon* sp\*, *Minytrema melanops*\*, *Fundulus notti*, *Labidesthes sicculus*, *Elassoma zonatum*, *Centrarchus macropeterus*\*, *Lepomis gulosus*, *Lepomis macrochirus*\*, and *Lepomis microlophus*\*.

SITE 14. Yellow Creek, Sumter County, Alabama. T18N, R2W, Sec 9 NW. CoRd 13, 1 mi S Livingston. UAIC 9962 '71.

1 SPECIES: *Etheostoma whipplei*.

SITE 15. Alamuchee Creek, Sumter County, Alabama. T18N, R2W, Sec 21 NE. Co Rd 13, 4.25 mi S Livingston. UAIC 4132 '71, 9884 '58, 9885 '67, 9886 '68, 9887 '69, 9888 '69, 9889 '70, 9890 '71, 9892 '72, 9893 '72, 9894 '73, 9895 '74, 9896 '77, 9897 '77, 9898 '80, 9899 '81, 9900 '81, 9901 '83, 9902 '84, 9903 '84, 9904 '85, 9905 '85, 9906 '78, 9977 '80; UAIC (GSA) 7448 '84, 7459 '84.

76 SPECIES: *Lampetra aepyptera*, *Lepisosteus oculatus*\*, *Lepisosteus osseus*\*, *Alosa chrysochloris*, *Dorosoma cepedianum*, *Esox niger*, *Campostoma oligolepis*\*, *Cyprinella venusta*, *Cyprinus carpio*\*, *Hybognathus hayi*, *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Macrhybopsis storeriana*, *Nocomis leptocephalus*, *Notemigonus crysoleucas*, *Notropis ammophilus*, *Notropis atherinoides*,

*Notropis baileyi*, *Notropis buccatus*, *Notropis maculatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis volucellus*, *Notropis winchelli*, *Opsopoeodus emiliae*, *Pimephales notatus*, *Pimephales vigilax*, *Semotilus atromaculatus*\*, *Carpiodes velifer*\*, *Erimyzon oblongus*\*, *Minytrema melanops*, *Moxostoma poecilurum*\*, *Ameiurus melas*, *Ameiurus nebulosus*\*, *Ictalurus punctatus*, *Noturus Junebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Noturus nocturnus*, *Fundulus notti*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*\*, *Centrarchus macropterus*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis microlophus*, *Lepomis punctatus*, *Micropterus punctulatus*, *Micropterus salmoides*, *Pomoxis annularis*\*, *Pomoxis nigromaculatus*\*, *Crystallaria asprella*, *Etheostoma beani*, *Etheostoma chlorosomum*, *Etheostoma meridianum*, *Etheostoma nigrum*\*, *Etheostoma parvipinne*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma swaini*\*, *Etheostoma whipplei*, *Etheostoma zonifer*, *Percina lenticula*, *Percina maculata*, *Percina nigrofasciata*, *Percina sciera*, *Percina vigil*, *Percina* sp. cf. *caprodes*, *Stizostedion vitreum*\*, and *Aplodinotus grunniens*\*.

SITE 16. Parker Creek, Sumter County, Alabama. T18N, R3W, Sec 12 SE. US 11, 4 mi SW Livingston. UAIC 9920 '70, 9921 '71.

6 SPECIES: *Hybognathus hayi*, *Ameiurus melas*\*, *Aphredoderus sayanus*, *Lepomis cyanellus*, *Lepomis marginatus*, and *Etheostoma proeliare*.

SITE 17. Unnamed trib Bear Creek, Sumter County, Alabama. T18N, R3W, Sec 14. UAIC 490'56.

3 SPECIES: *Lythrurus bellus*, *Fundulus olivaceus*, and *Lepomis cyanellus*.

SITE 18. Bear Creek, Sumter County, Alabama. T18N, R3W, Sec 23 W-central. US 11, 2.75 mi NE jct Hwy 17. UAIC 9963 '70.

1 SPECIES: *Erimyzon sucetta*.

SITE 19. White Hall Creek, Sumter County, Alabama. T18N, R3W, Sec 27-Central. Ca 2 mi NE jct Hwy 17 and US 11 in York. UAIC 9929 '68, 9930 '70.

3 SPECIES: *Campostoma oligolepis*, *Semotilus atromaculatus*, and *Fundulus olivaceus*.

SITE 20. Little White Oak Creek, trib White Hall Creek, Sumter County, Alabama. T18N, R3W, Sec 27. CU 15552 '56.

16 SPECIES: *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notemigonus crysoleucas*, *Notropis baileyi*, *Pimephales notatus*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis megalotis*, *Etheostoma chlorosomum*, *Etheostoma nigrum*, *Etheostoma whipplei*, and *Percina maculata*.

SITE 21. Alamuchee Creek, Sumter County, Alabama. T17N, R3W, Sec 4-Central. Hwy 17, 0.8 mi S jct US 11 in York. UAIC 491 '56, 9934 '69, 9935 '70, 9936 '77.

17 SPECIES: *Dorosoma cepedianum*, *Nocomis leptocephalus*\*, *Notemigonus crysoleucas*, *Notropis stilbius*, *Notropis winchelli*\*, *Opsopoeodus emiliae*, *Pimephales notatus*, *Pimephales vigilax*, *Fundulus olivaceus*, *Gambusia affinis*, *Ambloplites ariommus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis marginatus*, *Micropterus salmoides*, *Pomoxis annularis*, and *Etheostoma chlorosomum*.

SITE 22. Unnamed trib Alamuchee Creek, Sumter County, Alabama. T17N, R3W, Sec 6 E-central. US 11, 1 mi S York. UAIC 9949 '70.

1 SPECIES: *Etheostoma nigrum*.

SITE 23. Alamuchee Creek, Lauderdale County, Mississippi. T6N,

R18E, Sec 29 E-central. Unimproved road 1 mi S Alamucha. UAIC 9959 '77.

1 SPECIES: *Erimyzon oblongus*.

SITE 24. Little Alamuchee Creek, Lauderdale County, Mississippi. T6N, R18E, Sec 20/21-Central. Ca 0.5 mi S Alamucha. UAIC 9966 '70.

3 SPECIES: *Ameiurus natalis*\*, *Fundulus olivaceus*, and *Percina maculata*.

SITE 25. Toomsba Creek, Sumter County, Alabama. T17N, R3W, Sec 5. US 11 in York. UAIC 9978 '77; UAIC (GSA) 7457 '84.

25 SPECIES: *Cyprinellavenusta*, *Hybognathus nuchalis*, *Lythrurus bellus*, *Notropis amophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis volucellus*, *Notropis winchelli*, *Opsopoeodus emiliae*, *Pimephales vigilax*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.*, and *Percina nigrofasciata*.

SITE 26. Unnamed trib Toomsba Creek, Sumter County, Alabama. T18N, R3W, Sec 31 SW. Just off CoRd 2, 1 mi W York. UAIC 9955 '77.

4 SPECIES: *Notropis baileyi*, *Notropis winchelli*\*, *Moxostoma poecilurum*\*, and *Etheostoma beani*\*.

SITE 27. Unnamed trib Toomsba Creek, Sumter County, Alabama. T18N, R4W, Sec 34. CoRd 2, 3.5 mi W York. UAIC 9956 '77.

4 SPECIES: *Notropis baileyi*, *Moxostoma poecilurum*\*, *Pimephales notatus*, and *Lepomis megalotis*\*.

SITE 28. Toomsba Creek, Lauderdale County, Mississippi. T7N, R18E, Sec 22 NW. Co Rd, 1 mi N Kewanee. UAIC 9948 '70.

6 SPECIES: *Luxilus chrysocephalus*, *Nocomis leptoccephalus*\*, *Notropis baileyi*\*, *Aphredoderus sayanus*\*, *Etheostoma swaini*, and *Percina sciera*\*.

SITE 29. Toomsba Creek, Lauderdale County, Mississippi. T17N, R18E, Sec 28 N-central. US 11, 2.8 ami E Toomsba. UAIC 9937 '77.

2 SPECIES: *Cyprinella venusta* and *Noturus gyrinus*.

[SITES 30-40 ARE ON SUCARNOOCHEE RIVER PROPER OR  
TRIBUTARIES OF SUCARNOOCHEE RIVER IN  
SUMTER COUNTY, ALABAMA]

SITE 30. Cedar Creek. T19N, R2W, Sec 35-Central. Hwy 28, 0.5 mi SE Livingston. UAIC 9968 '71, 9972 '81.

5 SPECIES: *Lythrurus bellus*, *Semotilus atromaculatus*\*, *Ameiurus natalis*, *Lepomis cyanellus*\*, and *Lepomis cyanellus* x *Lepomis humilis*.

SITE 31. Cockrell Creek. T19N, R1W, Sec 34. In Livingston ca 0.5 mi E jct Hwy 28 and US 11. UAIC 9943 '69.

3 SPECIES: *Dorosoma petenense*\*, *Notemigonus crysoleucas*\*, and *Semotilus atromaculatus*.

SITE 32. Sucarnoochee River. T19N, R2W, Sec 33 SW. US 11 in Livingston. UAIC 488 '56, 489 '56, 9950 '71, 9951 '78.

18 SPECIES: *Ichthyomyzon gagei* (ammocoetes), *Anguilla rostrata*\*, *Dorosoma petenense*, *Cyprinella venusta*, *Lythrurus bellus*, *Notropis amophilus*, *Notropis atherinoides*, *Notropis candidus*\*, *Notropis stilbius*, *Pimephales notatus*, *Pimephales vigilax*, *Erimyzon sp.*, *Ictalurus furcatus*\*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis megalotis*, *Micropterus punctulatus*, and *Etheostoma whipplei*.

SITE 33. Tucker's Slough, off Sucarnoochee River, adjacent to Livingston Country Club Golf Course, Livingston. T19N, R2W, Sec 30 NE. UAIC 9954 '78, 9976 '68.

6 SPECIES: *Polyodon spathula*\*, *Amia calva*, *Anguilla rostrata*, *Carpiodes velifer*\*, *Lepomis microlophus*\*, and *Pomoxis nigromaculatus*\*.

SITE 34. Backwater of Sucarnoochee River. T19N, R2W, Sec 17 W-central. I-59. UAIC 9945 '81.

3 SPECIES: *Lepisosteus osseus*, *Notemigonus crysoleucas*\*, and *Lepomis cyanellus*.

SITE 35. McCainville Creek. T19N, R2W, Sec 7-Central. Hwy 28, 3 mi W US 11. UAIC 9960 '77.

4 SPECIES: *Notropis amophilus*, *Noturus nocturnus*\*, *Lepomis humilis*\*, and *Micropterus punctulatus*.

SITE 36. Boyds pond. T19N, R2W, Sec 7 NW. Hwy 28, 1.75 mi W I-59. UAIC 9942 '84.

4 SPECIES: *Notemigonus crysoleucas*\*, *Ameiurus nebulosus*, *Lepomis cyanellus*\*, and *Lepomis macrochirus*\*.

SITE 37. Sucarnoochee River. T19N, R2W, Sec 18/19. Ca 3 mi NW Livingston (trot line).

5 SPECIES: *Polyodon spathula*\*, *Ictalurus furcatus*\*, *Ictalurus punctatus*\*, *Pylodictus olivaris*\*, and *Stizostedion vitreum*\*.

SITE 38. Sicoloco Creek. T19N, R3W, Sec 3 S-central. Hwy 28, 4 mi W I-59. UAIC 9947 '81; UAIC(GSA) 7451 '84.

19 SPECIES: *Cyprinella venusta*, *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notemigonus crysoleucas*, *Notropis amophilus*, *Notropis texanus*, *Pimephales notatus*, *Minytrema melanops*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus punctulatus*, *Micropterus salmoides*, *Etheostoma chlorosomum*, and *Etheostoma whipplei*.

SITE 39. Pools Lake, trib Little Sanusi Creek. T20N, R3W, Sec 20 NE. Hwy 17, 2.5 mi S Emelle. UAIC 9953 '77.

2 SPECIES: *Luxilus chrysocephalus* and *Ictalurus punctatus*.

SITE 40. Sucarnoochee River. T19N, R4W, Sec 13/24. Ca 2.5 ami W. Boyd. UAIC 9931 '77.

1 SPECIES: *Notropis atherinoides*.

[ALL OF THE REMAINING SITES ARE IN MISSISSIPPI]

SITE 41. Ponta Creek, Lauderdale County. T8N, R18E, Sec 2. UAIC(GSA) 7454 '84.

19 SPECIES: *Cyprinellavenusta*, *Notropis amophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis winchelli*, *Pimephales vigilax*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma meridianum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma whipplei*, and *Percina nigrofasciata*.

SITE 42. Little Reed Creek, trib Ponta Creek, Lauderdale County. T8N, R17E, Sec 24 SE. In city limits of Lauderdale. UAIC 9964 '77, 9965 '77, 9971 '70.

5 SPECIES: *Hybognathus nuchalis*, *Notropis buccatus*, *Noturus leptacanthus*, *Elassoma zonatum*, and *Ambloplites ariommus*\*.

SITE 43. Ponta Creek, Lauderdale County. T18N, R16E, Sec 23. CoRd, 2 mi SE Lizelia.

4 SPECIES: *Luxilus chrysocephalus*\*, *Notropis texanus*\*, *Pimephales vigilax*\*, and *Micropterus salmoides*\*.

SITE 44. Sucarnoochee Creek, Kemper County. T9N, R18E, Sec 13. Ca 1 mi NW state line. UAIC 4175 '71, 4444 '72. MDWFP-30 (includes lower hoop net station).

66 SPECIES: *Lepisosteus oculatus*, *Lepisosteus osseus*, *Amia calva*, *Dorosoma cepedianum*, *Camptostoma oligolepis*, *Cyprinella callistia*, *Cyprinella venusta*, *Cyprinus carpio*, *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Macrhybopsis storeriana*, *Nocomis leptoccephalus*, *Notemigonus crysoleucas*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis volucellus*, *Notropis winchelli*, *Pimephales vigilax*, *Carpododes cyprinus*, *Carpododes velifer*, *Ictiobus bubalus*, *Minytrema melanops*, *Moxostoma carinatum*, *Moxostoma erythrurum*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Noturus nocturnus*, *Pylodictis olivaris*, *Fundulus notatus*, *Fundulus olivaceus*, *Aphredoderus sayanus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Centrarchus macropterus*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis microlophus*, *Micropterus punctulatus*, *Micropterus salmoides*, *Pomoxis annularis*, *Pomoxis nigromaculatus*, *Etheostoma beani*, *Etheostoma histrio*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma whipplei*, *Percina lenticula*, *Percina maculata*, *Percina nigrofasciata*, *Percina sciera*, *Percina vigil*, *Stizostedion vitreum*, and *Aplodinotus grunniens*.

SITE 45. Unnamed trib Sucarnoochee Creek, Kemper County. T9N, R18E, Sec 11. Hwy 498, 1 mi N Sucarnoochee Creek. MDWFP-6.

11 SPECIES: *Esox americanus*, *Notemigonus crysoleucas*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, and *Etheostoma whipplei*.

SITE 46. Unnamed trib Sucarnoochee Creek, Kemper County. T9N, R18E, Sec 23. Ca 2.5 mi SE Enondale. MDWFP-4.

16 SPECIES: *Notemigonus crysoleucas*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Minytrema melanops*, *Ameiurus melas*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus salmoides*, *Pomoxis annularis*, and *Etheostoma chlorosomum*.

SITE 47. Unnamed trib Sucarnoochee Creek, Kemper County. T9N, R18E, Sec 16. Ca 0.25 mi E Enondale. MDWFP-27.

17 SPECIES: *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis texanus*, *Pimephales notatus*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Fundulus notatus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, and *Etheostoma whipplei*.

SITES 48 – 64 ARE IN THE PAWTICFAW CREEK SYSTEM IN KEMPER COUNTY, MISSISSIPPI.

SITE 48. Pawticfaw Creek. T9N, R18E, Sec 7. US 45, 8 mi S Electric Mills. UAIC 9940 '77, 9941 '77; MDWFP-1.

38 SPECIES: *Esox niger*, *Cyprinella venusta*, *Hybognathus nuchalis*, *Nocomis leptoccephalus*, *Notemigonus crysoleucas*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Macrhybopsis storeiana*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis texanus*,

*Notropis winchelli*, *Oposopoeodus emiliae*, *Pimephales notatus*, *Pimephales vigilax*, *Minytrema melanops*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Aphredoderus sayanus*, *Fundulus notatus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis megalotis*, *Lepomis microlophus*, *Micropterus punctulatus*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.*, and *Percina nigrofasciata*.

SITE 49. Unnamed trib Blackwater Creek. T9N, R18E, Sec 18. US 45. MDWFP-7.

13 SPECIES: *Luxilus chrysocephalus*, *Notemigonus crysoleucas*, *Notropis baileyi*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Noturus funebris*, *Noturus gyrinus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Etheostoma parvipinne*, *Etheostoma whipplei*, and *Etheostoma (Ulocentra) sp.*

SITE 50. Cap Branch Creek, trib Blackwater Creek. T9N, R17E, Sec 11. Ca 1.75 mi W US 45. MDWFP-2.

22 SPECIES: *Ichthyomyzon gagei*, *Esox americanus*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis texanus*, *Oposopoeodus emiliae*, *Erimyzon oblongus*, *Minytrema melanops*, *Ameiurus natalis*, *Noturus funebris*, *Noturus gyrinus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Elassoma zonatum*, *Lepomis gulosus*, *Lepomis megalotis*, *Lepomis punctatus*, *Etheostoma nigrum*, and *Etheostoma (Ulocentra) sp.*

SITE 51. Blackwater Creek. T9N, R16E, Sec 13. CA 3.5 mi E Blackwater. MDWFP-3.

27 SPECIES: *Esox americanus*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis buccatus*, *Notropis baileyi*, *Notropis texanus*, *Notropis winchelli*, *Pimephales notatus*, *Pimephales vigilax*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Noturus funebris*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis gulosus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus punctulatus*, *Etheostoma nigrum*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.* and *Percina nigrofasciata*.

SITE 52. Unnamed trib Blackwater Creek. T9N, R16E, Sec 20. Hwy 39 at Blackwater. MDWFP-9.

8 SPECIES: *Semotilus atromaculatus*, *Ameiurus melas*, *Elassoma zonatum*, *Lepomis gulosus*, *Lepomis macrochirus*, *Micropterus salmoides*, *Etheostoma parvipinne*, and *Etheostoma swaini*.

SITE 53. Blackwater Creek. T9N, R16E, Sec 29. Hwy 39, 1 mi S Blackwater. MDWFP-8.

22 SPECIES: *Esox americanus*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis texanus*, *Pimephales notatus*, *Minytrema melanops*, *Ameiurus natalis*, *Noturus funebris*, *Noturus gyrinus*, *Aphredoderus sayanus*, *Fundulus notatus*, *Fundulus olivaceus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus salmoides*, *Etheostoma chlorosomum*, *Etheostoma nigrum*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.*, and *Percina nigrofasciata*.

SITE 54. Blackwater Creek. T9N, R15E, Sec 13. Ca 2 mi W Blackwater. MDWFP-10.

17 SPECIES: *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Pimephales notatus*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Ameiurus natalis*, *Noturus funebris*, *Noturus gyrinus*, *Fundulus olivaceus*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus salmoides*, *Etheostoma chlorosomum*, *Etheostoma nigrum*, and *Etheostoma parvipinne*.

SITE 55. Pawticfaw Creek. T10N, R17E, Sec 34. Ca 2.5 mi W US 45. UAIC(GSA) 7453 '84; MDWFP-12.

32 SPECIES: *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis winchelli*, *Pimephales vigilax*, *Erimyzon oblongus*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Ictalurus punctatus*, *Noturus leptacanthus*, *Pylodictis olivaris*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma whipplei*, *Etheostoma (Ulocentra) sp.*, *Percina nigrofasciata*, and *Percina sciera*.

SITE 56. Poole Branch Creek. T10N, R17E, Sec 19. CoRd, 6 mi SE DeKalb. UAIC 9933 '70; MDWFP-13.

30 SPECIES: *Ichthyomyzon gagei* (ammocoetes), *Hybognathus nuchalis*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis texanus*, *Pimephales notatus*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Moxostoma poecilurum*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Noturus nocturnus*, *Fundulus notatus*, *Fundulus olivaceus*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus salmoides*, *Etheostoma nigrum*, *Etheostoma parvipinne*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma sp.* and *Percina nigrofasciata*.

SITE 57. Parker Creek, at confluence with Cullen Branch. T10N, R16E, Sec 24. MDWFP-14.

23 SPECIES: *Esox niger*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis texanus*, *Pimephales notatus*, *Moxostoma poecilurum*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus notatus*, *Fundulus olivaceus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus salmoides*, *Etheostoma nigrum*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.*, and *Percina nigrofasciata*.

SITE 58. Parker Creek. T10N, R16E, Sec 9. Hwy 39, 1.5 mi S DeKalb. UAIC 9961 '70.

5 SPECIES: *Hybognathus nuchalis*\*, *Notropis texanus*\*, *Gambusia affinis*\*, *Lepomis punctatus*, and *Etheostoma swaini*.

SITE 59. Pawticfaw Creek. T10N, R16E, Sec 25. CoRd, 2.25 mi NE Kipling. MDWFP-15.

24 SPECIES: *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Notropis buccatus*, *Notropis winchelli*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Noturus funebris*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Elassoma zonatum*, *Ambloplites ariommus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus punctulatus*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.* and *Percina nigrofasciata*.

SITE 60. Unnamed trib Pawticfaw Creek. T10N, R16E, Sec 27. CoRd, 0.5 mi N Kipling. UAIC 9973 '77; MDWFP-16.

22 SPECIES: *Ichthyomyzon gagei*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis buccatus*, *Notropis baileyi*, *Notropis texanus*, *Notropis winchelli*, *Opsopoeodus emiliae*, *Erimyzon oblongus*, *Moxostoma poecilurum*, *Noturus funebris*, *Noturus leptacanthus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Elassoma zonatum*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma parvipinne*, *Etheostoma swaini*, *Etheostoma (Ulocentra) sp.* and *Percina nigrofasciata*.

SITE 61. Pawticfaw Creek. T9N, R16E, Sec 5. Hwy 39, 3 mi N Blackwater. MDWFP-11.

27 SPECIES: *Dorosoma cepedianum*, *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Pimephales notatus*, *Pimephales vigilax*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Noturus funebris*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus punctulatus*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma (Ulocentra) sp.* *Percina nigrofasciata*, and *Percina vigil*.

SITE 62. Pawticfaw Creek. T10N, R16E, Sec 31. TU 14158 '55; TU 36062 '60.

4 SPECIES: *Erimyzon sucetta*, *Noturus leptacanthus*, *Fundulus olivaceus*, and *Ambloplites ariommus*.

SITE 63. Pawticfaw Creek. T10N, R15E, Sec 25. CoRd, 2.75 mi W Hwy. 39. MDWFP-17.

27 SPECIES: *Dorosoma cepedianum*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis texanus*, *Pimephales notatus*, *Pimephales vigilax*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma stigmaeum*, *Etheostoma (Ulocentra) sp.* *Percina nigrofasciata*, and *Aplodinotus grunniens*.

SITE 64. Delphia Creek. T10N, R15E, Sec 10. CoRd, 7.5 mi SW DeKalb. UAIC 9927 '70, 9928 '77.

7 SPECIES: *Notemigonus crysoleucas*, *Aphredoderus sayanus*, *Elassoma zonatum*, *Lepomis humilis*\*, *Pomoxis annularis*, *Etheostoma chlorosomum*, and *Etheostoma swaini*.

[SITES 65-77 ARE IN THE UPPER SUCARNOOCHEE SYSTEM  
IN KEMPER COUNTY, MISSISSIPPI]

SITE 65. Sucarnoochee Creek. T10N, R18E, Sec 29. Hwy 489 at Porterville. UAIC 9938 '70, 9970 '77; MDWFP-5 (includes upper hoop-net station).

44 SPECIES: *Lepisosteus oculatus*, *Lepisosteus osseus*, *Anguilla rostrata*, *Dorosoma cepedianum*, *Cyprinella venusta*, *Cyprinus carpio*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptoccephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis maculatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis winchelli*, *Pimephales vigilax*, *Erimyzon oblongus*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Pylodictis olivaris*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Pomoxis annularis*, *Pomoxis nigromaculatus*, *Etheostoma beani*, *Etheostoma meridianum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma whipplei*, *Percina nigrofasciata*, *Percina sciera*, *Stizostedion vitreum*, and *Aplodinotus grunniens*.

SITE 66. Sucarnoochee Creek. T10N, R18E, Sec 20. AT US 45. UAIC(GSA) 7452 '84; MDWFP-18.

35 SPECIES: *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis volucellus*, *Notropis winchelli*, *Pimephales vigilax*, *Minytrema melanops*, *Moxostoma erythrum*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Pylodictis olivaris*,



*Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma chlorosomum*, *Etheostoma meridianum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma whipplei*, *Percina lenticula*, *Percina maculata*, *Percina nigrofasciata*, and *Percina sciera*.

SITE 67. Sucarnoochee Creek. T11N, R17E, Sec 33. CoRd, 0.2 mi W Carters. MDWFP-20.

26 SPECIES: *Cyprinella venusta*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis ammophilus*, *Notropis stilbius*, *Notropis texanus*, *Notropis winchelli*, *Pimephales vigilax*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Pylodictis olivaris*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Ambloplites ariommus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma stigmaeum*, *Etheostoma (Ulocentra)* sp., and *Percina nigrofasciata*.

SITE 68. Hull Branch Creek. T11N, R17E, Sec 32. Ca 1 mi W Carters. MDWFP-19

28 SPECIES: *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis texanus*, *Minytrema melanops*, *Ameiurus natalis*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Pylodictis olivaris*, *Aphredoderus sayanus*, *Fundulus notatus*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Etheostoma parvipinne*, *Etheostoma swaini*, *Etheostoma whipplei*, *Etheostoma (Ulocentra)* sp., and *Percina nigrofasciata*.

SITE 69. Hamilton Branch. T11N, R17E, Sec 19. Hwy 16. MDWFP-21.

10 SPECIES: *Notemigonus crysoleucas*, *Erimyzon oblongus*, *Aphredoderus sayanus*, *Fundulus notatus*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis megalotis*, and *Etheostoma whipplei*.

SITE 70. Sucarnoochee Creek. T11N, R17E, Sec 19. TU 12780 '82.

31 SPECIES: *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Notropis texanus*, *Notropis volucellus*, *Notropis winchelli*, *Pimephales notatus*, *Pimephales vigilax*, *Moxostoma poecilurum*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Gambusia affinis*, *Ambloplites ariommus*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma meridianum*, *Etheostoma nigrum*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma whipplei*, *Etheostoma (Ulocentra)* sp., and *Percina nigrofasciata*.

SITE 71. Unnamed trib Sucarnoochee Creek. T11N, R16E, Sec 13. CoRd, 2 mi NE DeKalb. MDWFP-22.

10 SPECIES: *Luxilus chrysocephalus*, *Lythrurus bellus*, *Notemigonus crysoleucas*, *Semotilus atromaculatus*, *Erimyzon oblongus*, *Lepomis cyanellus*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, and *Etheostoma whipplei*.

SITE 72. Straight Creek. T11N, R16E, Sec 14. CoRd, 1.6 mi NE DeKalb. MDWFP-23.

20 SPECIES: *Ichthyomyzon gagei*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Pimephales notatus*, *Erimyzon oblongus*, *Ameiurus natalis*, *Noturus funebris*, *Noturus gyrinus*, *Fundulus olivaceus*, *Elassoma zonatum*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus salmoides*, *Etheostoma swaini*, *Etheostoma whipplei*, and *Percina nigrofasciata*.

SITE 73. Straight Creek. T11N, R16E, Sec 4. Hwy 39, 3.75 mi N DeKalb. MDWFP-29.

21 SPECIES: *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Pimephales notatus*, *Moxostoma poecilurum*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma nigrum*, *Etheostoma parvipinne*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma (Ulocentra)* sp., and *Percina nigrofasciata*.

SITE 74. Sucarnoochee Creek. T11N, R16E, Sec 23. CoRd, 1 mi DeKalb. MDWFP-24.

22 SPECIES: *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Moxostoma poecilurum*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis macrochirus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma rupestre*, *Etheostoma swaini*, *Etheostoma (Ulocentra)* sp., and *Percina nigrofasciata*.

SITE 75. Sucarnoochee Creek at mouth of Running Tiger Creek. T11N, R16E, Sec 7. Ca 3 mi NW DeKalb. UAIC 5563 '77; MDWFP-28.

31 SPECIES: *Cyprinella venusta*, *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notropis ammophilus*, *Notropis baileyi*, *Notropis buccatus*, *Notropis stilbius*, *Pimephales vigilax*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Noturus funebris*, *Noturus gyrinus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Lepomis cyanellus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, *Micropterus punctulatus*, *Etheostoma beani*, *Etheostoma nigrum*, *Etheostoma rupestre*, *Etheostoma stigmaeum*, *Etheostoma swaini*, *Etheostoma (Ulocentra)* sp., *Percina lenticula*, *Percina nigrofasciata*, *Stizostedion vitreum*, and *Aplodinotus grunniens*.

SITE 76. Unnamed trib Sucarnoochee Creek. T11N, R15E, Sec 16. Ca 4 mi NW DeKalb. MDWFP-25.

15 SPECIES: *Luxilus chrysocephalus*, *Lythrurus bellus*, *Nocomis leptocephalus*, *Notemigonus crysoleucas*, *Notropis baileyi*, *Notropis texanus*, *Erimyzon oblongus*, *Noturus gyrinus*, *Noturus leptacanthus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis cyanellus*, and *Lepomis megalotis*.

SITE 77. Little Minnow Creek. T12N, R15E, Sec 33. Just below Kemper County Lake spillway. MDWFP-26.

17 SPECIES: *Anguilla rostrata*, *Notropis stilbius*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Noturus gyrinus*, *Noturus leptacanthus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, *Lepomis macrochirus*, *Lepomis megalotis*, *Lepomis punctatus*, and *Micropterus salmoides*.

## SPECIES LIST AND SITE NUMBERS

### Family Petromyzontidae

*Ichthyomyzon gagei* Hubbs and Trautman      southern brook lamprey  
4 Sites: 50, 56, 60, 72.

*Lampetra aepyptera* (Abbott)      least brook lamprey  
1 Site: 15

### Family Polyodontidae – paddlefishes

*Polyodon spathula* (Walbaum) paddlefish  
2 Sites: 33, 37.

## Family Lepisosteidae – gars

*Lepisosteus oculatus* Winchell spotted gar  
2 Sites: 44, 65

*Lepisosteus osseus* (Linnaeus) longnose gar  
4 Sites: 13, 34, 44, 65.

## Family Amiidae – bowfins

*Amia calva* Linnaeus bowfin  
2 Sites: 33, 44.

## Family Anguillidae – freshwater eels

*Anguilla rostrata* (Lesueur) American eel  
4 Sites: 32, 33, 65, 77.

## Family Clupeidae – herrings

*Alosa chrysochloris* (Rafinesque) shipjack herring  
1 Site: 15

*Dorosoma cepedianum* (Lesueur) gizzard shad  
6 Sites: 15, 21, 44, 61, 63, 65.

*Dorosoma petenense* (Gunther) threadfin shad  
2 Sites: 31, 32.

## Esocidae – pikes

*Esox americanus americanus* Gmelin redfin pickerel  
5 Sites: 7, 45, 50, 51, 53.

*Esox niger* Lesueur chain pickerel  
4 Sites: 13, 15, 48, 57.

## Family Cyprinidae – carps and minnows

*Campostoma oligolepis* Hubbs and Greene largescale stoneroller  
7 Sites: 3, 4, 7, 11, 15, 19, 44.

*Cyprinella callistia* (Jordan) Alabama shiner  
1 Site: 44.

*Cyprinella venusta* Girard blacktail shiner  
22 Sites: 3, 4, 5, 7, 11, 15, 25, 29, 32, 38, 41, 44, 48, 55, 61, 65, 66, 67, 68, 70, 74, 75.

*Cyprinus carpio* Linnaeus common carp  
3 Sites: 13, 44, 65.

*Hybognathus hayi* Jordan cypress minnow  
3 Sites: 13, 15, 16.

*Hybognathus nuchalis* Agassiz Mississippi silvery minnow  
12 Sites: 3, 4, 7, 15, 25, 38, 42, 44, 47, 48, 56, 58.

*Luxilus chrysocephalus* Rafinesque striped shiner  
35 Sites: 3, 7, 11, 15, 20, 28, 38, 39, 43, 44, 46, 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 59, 60, 61, 63, 65, 66, 68, 70, 71, 72, 73, 74, 75, 76.

*Lythrurus bellus* (Hay) pretty shiner  
39 Sites: 3, 4, 5, 7, 9, 11, 15, 17, 20, 25, 30, 32, 38, 44, 46, 47, 48, 50, 51, 53, 54, 55, 56, 57, 59, 60, 61, 63, 65, 66, 67, 68, 70, 71, 72, 73, 74, 75, 76.

*Macrhybopsis storeriana* (Kirtland) silver chub  
3 Sites: 15, 44, 48.

*Nocomis leptocephalus* (Girard) bluehead chub  
23 Sites: 11, 13, 15, 21, 28, 44, 47, 48, 50, 51, 56, 57, 60, 61, 63, 65,

67, 68, 72, 73, 74, 75, 76.

*Notemigonus crysoleucas* (Mitchill) golden shiner  
18 Sites: 4, 5, 15, 20, 21, 31, 34, 36, 38, 44, 45, 46, 48, 49, 64, 69, 71, 76.

*Notropis amnophilus* Suttkus and Boschung orangefin shiner  
33 Sites: 2, 3, 4, 5, 7, 8, 11, 15, 25, 32, 35, 38, 41, 44, 47, 48, 50, 51, 54, 55, 56, 57, 59, 61, 63, 65, 66, 67, 68, 70, 72, 73, 75.

*Notropis atherinoides* Rafinesque emerald shiner  
3 Sites: 15, 32, 40.

*Notropis baileyi* Suttkus and Raney rough shiner  
30 Sites: 11, 13, 15, 20, 25, 26, 27, 28, 41, 44, 47, 48, 49, 50, 51, 55, 56, 57, 60, 61, 63, 65, 66, 68, 70, 72, 73, 74, 75, 76.

*Notropis buccatus* (Cope) silverjaw minnow  
22 Sites: 2, 3, 4, 7, 11, 15, 25, 41, 42, 44, 48, 51, 55, 57, 59, 60, 65, 66, 68, 70, 74, 75.

*Notropis candidus* Suttkus silverside shiner  
1 Site: 32.

*Notropis maculatus* (Hay) taillight shiner  
2 Sites: 15, 65.

*Notropis stilbius* (Jordan) silverstripe shiner  
13 Sites: 15, 21, 25, 32, 44, 55, 65, 66, 67, 70, 74, 75, 77.

*Notropis texanus* (Girard) weed shiner  
24 Sites: 3, 11, 15, 25, 38, 43, 44, 47, 48, 50, 51, 53, 55, 56, 57, 58, 60, 63, 65, 66, 67, 68, 70, 76.

*Notropis volucellus* (Cope) mimic shiner  
5 Sites: 15, 25, 44, 66, 70.

*Notropis winchelli* (Girard) clear chub  
15 Sites: 15, 21, 25, 26, 41, 44, 48, 51, 55, 59, 60, 65, 66, 67, 70.

*Opsopoeodus emiliae* Hay pugnose minnow  
7 Sites: 5, 15, 21, 25, 48, 50, 60.

*Pimephales notatus* (Rafinesque) bluntnose minnow  
25 Sites: 3, 4, 5, 6, 7, 11, 13, 15, 20, 21, 27, 32, 38, 47, 48, 51, 53, 54, 56, 57, 61, 63, 70, 72, 73.

*Pimephales vigilax* (Baird and Girard) bullhead minnow  
17 Sites: 15, 21, 25, 32, 41, 43, 44, 48, 51, 55, 61, 63, 65, 66, 67, 70, 75.

*Semotilus atromaculatus* (Mitchill) creek chub  
14 Sites: 2, 4, 15, 19, 20, 30, 31, 46, 47, 49, 52, 54, 56, 71.

## Family Catostomidae – suckers

*Carpionodes cyprinus* (Lesueur) quillback  
1 Site: 44.

*Carpionodes velifer* (Rafinesque) highfin carpsucker  
3 Sites: 7, 33, 44.

*Ictiobus bubalus* (Rafinesque) smallmouth buffalo  
1 Site 44.

*Erimyzon oblongus* (Mitchill) creek chubsucker  
16 Sites: 4, 15, 20, 23, 46, 47, 49, 50, 54, 56, 60, 65, 69, 71, 72, 76.

*Erimyzon sucetta* (Lacepede) lake chubsucker  
3 Sites: 1, 18, 62.

*Erimyzon* sp. (unidentified juveniles)  
2 Sites: 13, 32.

*Minytrema melanops* (Rafinesque) spotted sucker  
18 Sites: 3, 7, 13, 15, 38, 44, 46, 48, 50, 53, 55, 59, 61, 65, 66, 67, 68, 77.

*Moxostoma carinatum* (Cope) river redhorse  
1 Site: 44.

*Moxostoma erythrurum* (Rafinesque) golden redhorse  
2 Sites: 44, 66.

*Moxostoma poecilurum* (Jordan) blacktail redhorse  
21 Sites: 5, 7, 26, 27, 44, 51, 55, 56, 57, 59, 60, 61, 63, 65, 66, 67, 70, 73, 74, 75, 77.

## Family Ictaluridae – bullhead catfishes

- Ameiurus melas* (Rafinesque) black bullhead  
4 Sites: 15, 16, 46, 52.
- Ameiurus natalis* (Lesueur) yellow bullhead  
18 Sites: 2, 4, 7, 11, 12, 24, 30, 44, 50, 51, 53, 54, 55, 59, 61, 65, 68, 72.
- Ameiurus nebulosus* (Lesueur) brown bullhead  
1 Site: 36.
- Ictalurus furcatus* (Lesueur) blue catfish  
2 Sites: 32, 37.
- Ictalurus punctatus* (Rafinesque) channel catfish  
13 Sites: 7, 10, 15, 37, 39, 44, 63, 65, 66, 67, 68, 75, 77.
- Noturus funebris* Gilbert and Swain black madtom  
23 Sites: 15, 44, 48, 49, 50, 51, 53, 54, 56, 57, 59, 60, 61, 63, 65, 66, 67, 68, 70, 72, 73, 74, 75.
- Noturus gyrinus* (Mitchill) tadpole madtom  
31 Sites: 3, 4, 5, 7, 8, 11, 15, 25, 29, 41, 44, 48, 49, 50, 53, 54, 55, 56, 57, 63, 65, 66, 67, 68, 70, 72, 73, 74, 75, 76, 77.
- Noturus leptacanthus* Jordan speckled madtom  
23 Sites: 15, 25, 41, 42, 44, 48, 55, 56, 57, 59, 60, 61, 62, 63, 65, 66, 68, 70, 73, 74, 75, 76, 77.
- Noturus nocturnus* Jordan and Gilbert freckled madtom  
4 Sites: 15, 35, 44, 56.
- Pylodictis olivaris* (Rafinesque) flathead catfish  
7 Sites: 37, 44, 55, 65, 66, 67, 68.

## Family Aphredoderidae – pirate perches

- Aphredoderus sayanus* (Gilliams) pirate perch  
16 Sites: 16, 20, 28, 44, 45, 48, 50, 51, 53, 60, 63, 64, 68, 69, 76, 77.

## Family Belonidae – needlefishes

- Strongylura marina*\* (Walbaum) Atlantic needlefish  
1 Site: Near mouth of Sucarnoochee River. Not described or shown on map.

## Family Fundulidae – killifishes

- Fundulus notatus* (Rafinesque) blackstripe topminnow  
8 Sites: 44, 47, 48, 53, 56, 57, 68, 69.
- Fundulus notti* (Agassiz) bayou topminnow  
2 Sites: 13, 15.
- Fundulus olivaceus* (Storer) blackspotted topminnow  
44 Sites: 3, 6, 7, 11, 15, 17, 19, 20, 21, 24, 25, 32, 38, 41, 44, 45, 46, 47, 48, 49, 50, 51, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63, 65, 66, 67, 68, 69, 70, 72, 73, 74, 75, 76, 77.

## Family Poeciliidae – livebearers

- Gambusia affinis* (Baird and Girard) mosquitofish  
25 Sites: 3, 4, 5, 6, 7, 11, 15, 21, 32, 38, 46, 47, 48, 49, 51, 55, 58, 61, 66, 67, 68, 69, 70, 76, 77.

## Family Atherinidae – silversides

- Labidesthes sicculus* (Cope) brook silverside  
6 Sites: 13, 15, 44, 48, 55, 77.

## Family Elasmobranchidae – pygmy sunfishes

- Elasmoma zonatum* Jordan banded pygmy sunfish  
20 Sites: 4, 13, 42, 44, 45, 46, 48, 50, 51, 52, 59, 60, 64, 67, 68, 69, 72, 74, 76, 77.

## Family Centrarchidae – sunfishes

- Ambloplites ariommus* Viosca shadow bass  
13 Sites: 15, 21, 41, 42, 44, 59, 62, 63, 65, 67, 70, 74, 75.
- Centrarchus macropterus* (Lacepede) flier  
4 Sites: 1, 13, 15, 44.
- Lepomis cyanellus* Rafinesque green sunfish  
31 Sites: 3, 4, 6, 8, 15, 16, 17, 20, 30, 34, 36, 38, 44, 45, 46, 47, 48, 49, 54, 56, 61, 65, 66, 68, 69, 70, 71, 72, 73, 75, 76.
- Lepomis gulosus* (Cuvier) warmouth  
17 Sites: 3, 13, 15, 20, 21, 45, 48, 50, 51, 52, 53, 56, 59, 61, 63, 71, 77.
- Lepomis humilis* (Girard) orangespotted sunfish  
3 Sites: 30, 35, 64.
- Lepomis macrochirus* Rafinesque bluegill  
34 Sites: 3, 4, 5, 6, 7, 11, 13, 15, 21, 36, 38, 41, 44, 45, 46, 47, 52, 53, 54, 55, 56, 59, 61, 63, 65, 66, 68, 70, 71, 72, 73, 74, 75, 77.
- Lepomis marginatus* (Holbrook) dollar sunfish  
2 Sites: 16, 21.
- Lepomis megalotis* (Rafinesque) longear sunfish  
41 Sites: 3, 5, 6, 7, 11, 15, 20, 25, 27, 32, 38, 41, 44, 45, 46, 47, 48, 50, 51, 53, 54, 55, 56, 57, 59, 60, 61, 63, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77.
- Lepomis microlophus* (Gunther) redear sunfish  
7 Sites: 3, 4, 13, 15, 33, 44, 48.
- Lepomis punctatus* (Valenciennes) spotted sunfish  
18 Sites: 2, 3, 4, 6, 8, 15, 38, 45, 50, 51, 53, 56, 57, 58, 59, 61, 75, 77.
- Micropterus punctulatus* (Rafinesque) spotted bass  
27 Sites: 3, 4, 5, 7, 15, 25, 32, 34, 35, 38, 42, 41, 44, 48, 51, 55, 59, 60, 61, 63, 65, 66, 67, 70, 73, 74, 75.
- Micropterus salmoides* (Lacepede) largemouth bass  
19 Sites: 3, 4, 5, 7, 11, 15, 21, 35, 38, 43, 44, 46, 52, 53, 54, 56, 57, 72, 77.
- Pomoxis annularis* Rafinesque white crappie  
6 Sites: 15, 21, 44, 46, 64, 65.
- Pomoxis nigromaculatus* (Lesueur) black crappie  
3 Sites: 33, 44, 65.
- Family Percidae – perches
- Crystallaria asprella* (Jordan) crystal darter  
1 Site: 15.
- Etheostoma beani* (Jordan) naked sand darter  
12 Sites: 15, 25, 26, 41, 44, 55, 65, 66, 67, 70, 74, 75.
- Etheostoma chlorosomum* (Hay) bluntnose darter  
9 Sites: 15, 20, 21, 38, 46, 53, 54, 64, 66.
- Etheostoma histrio* Jordan and Gilbert harlequin darter  
1 Site: 44.
- Etheostoma meridianum* (Williams) southern sand darter  
13 Sites: 4, 15, 25, 41, 44, 48, 55, 59, 63, 65, 66, 67, 70.
- Etheostoma nigrum* Rafinesque johnny darter  
21 Sites: 4, 11, 15, 20, 22, 25, 44, 48, 50, 51, 53, 54, 55, 56, 57, 59,



63, 67, 70, 73, 75.

*Etheostoma parvipinne* Gilbert and Swain goldstripe darter  
10 Sites: 4, 11, 15, 49, 52, 54, 56, 60, 68, 73.

*Etheostoma proeliare* (Hay) cypress darter  
1 Site: 16.

*Etheostoma rupestre* Gilbert and Swain rock darter  
12 Sites: 15, 25, 41, 44, 48, 55, 61, 65, 66, 73, 74, 75.

*Etheostoma stigmaeum* (Jordan) speckled darter  
18 Sites: 15, 25, 41, 44, 48, 51, 55, 56, 57, 59, 61, 63, 65, 66, 67, 70, 73, 75.

*Etheostoma swaini* (Jordan) gulf darter  
20 Sites: 4, 25, 28, 44, 48, 51, 52, 53, 56, 57, 58, 59, 60, 64, 65, 68, 70, 72, 74, 75.

*Etheostoma whipplei* (Girard) redbfin darter  
21 Sites: 4, 7, 11, 14, 15, 20, 32, 38, 41, 44, 45, 47, 49, 55, 65, 66, 68, 69, 70, 71, 72.

*Etheostoma zonifer* (Hubbs and Cannon) backwater darter  
1 Site: 15.

*Etheostoma (Ulocentra) sp.*  
22 Sites: 3, 4, 7, 25, 48, 49, 50, 51, 53, 55, 56, 57, 59, 60, 61, 63, 67, 68, 70, 73, 74, 75.

*Percina lenticula* Richards and Knapp freckled darter  
4 Sites: 15, 44, 66, 75.

*Percina maculata* (Girard) blackside darter  
5 Sites: 15, 20, 24, 44, 66.

*Percina nigrofasciata* (Agassiz) blackbanded darter  
25 Sites: 3, 4, 15, 25, 41, 44, 48, 51, 53, 55, 56, 57, 59, 60, 61, 63, 65, 66, 67, 68, 70, 72, 73, 74, 75.

*Percina sciera* (Swain) dusky darter  
7 Sites: 8, 15, 28, 44, 65, 66, 79.

*Percina vigil* (Hay) saddleback darter  
4 Sites: 15, 44, 55, 61.

*Percina sp. cf. caprodes*  
1 Site: 15.

*Stizostedion vitreum* (Mitchill) walleye  
4 Sites: 37, 44, 65, 75.

#### Family Sciaenidae

*Aplodinotus grunniens* Rafinesque freshwater drum  
4 Sites: 44, 63, 65, 75.

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## PROVENANCE AND DISPOSITION OF FISH SPECIMENS APPEARING IN COLOR PLATES OF KUEHNE AND BARBOUR'S BOOK, *THE AMERICAN DARTERS*

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In 1983, Robert A. Kuehne and Roger W. Barbour published their monograph of the darters, the species of which comprise all but three of the North American members of the family Percidae. The book contains illustrated taxonomic keys, distribution maps, and general accounts for all species recognized as valid at the time, but its most outstanding feature is a series of 24 color plates, each containing six photographs, mostly of fresh specimens photographed immediately after preservation. A special effort was made to obtain material during the height of the breeding season, partly because of the aesthetically pleasing aspect of the brilliant nuptial coloration, but especially because these colors are highly species-specific. Most specimens were collected by the authors themselves, with the photographs being taken by Roger Barbour. In some cases specimens were donated or loaned by colleagues to be photographed, and for ten species color slides or prints were provided by other individuals, as indicated in the "Acknowledgments" section at the beginning of the book. The overall quality of the photographs is excellent, and for many species they represent the first published documentation of life colors, particularly of nuptial males.

Some widespread darter species exhibit notable geographic variation in life colors and/or pigmentation pattern. Kuehne and Barbour recognized this, as evidenced by the fact that five species (*Etheostoma blennioides*, *E. spectabile*, *E. stigmaeum*, *E. whipplei*, and *E. zonale*) were represented by two, and one species (*E. maculatum*) by three, different photographs. Sometimes this variation provides a clue that previously unrecognized species or subspecies are involved. Of the above, *E. maculatum* is now regarded as comprising three, and *E. zonale* two, distinct species (Page 1985, Etnier and Starnes 1986, Etnier and Williams 1989). There is unpublished evidence to suggest that *E. stigmaeum* is also a species complex (Howell 1968). Conversely, *E. atripinne*, which was listed as a valid species by Kuehne and Barbour, had earlier been downgraded to a subspecies of *E. simotereum* (Page and Mayden 1981), a decision that has gained general acceptance (Burr and Warren 1986, Bailey and Etnier 1988). Considering these points, the omission of accompanying locality data for all of the 144 specimens appearing in the color plates is especially puzzling, and remains an unfortunate flaw of this otherwise excellent book.

Bob Kuehne passed away on 18 December 1984 (Barbour 1985). Shortly before his death, he relayed to Roger Barbour his

wish that the fish collection he had assembled, which contained most of the specimens photographed for the book, be given to the Florida State Museum (now the Florida Museum of Natural History) for permanent deposition. This transfer was effected during the summer of 1985, and the material was shortly thereafter catalogued into our museum collection.

Several colleagues subsequently suggested that it would be desirable if the provenance and present disposition of the specimens used for the color plates of Kuehne and Barbour's book could be determined, and that an ideal outlet for this information would be the SFC Proceedings. It was initially assumed that this information could be obtained from Roger Barbour, but this unfortunately proved not to be the case. Roger suggested that much of the information might be available in Kuehne's file cards, which were transferred here along with the collection, and these have proved useful in a number of cases. We also contacted the University Press of Kentucky in order to confirm that these data were never included with the original manuscript. It soon became apparent that it would be necessary to examine individual series and compare the specimens with the photographs, and also to contact those individuals at other institutions who were involved in loans of specimens or photographs. In some cases, it has been easy to determine the fish used for particular photographs, especially if there is some obvious physical characteristic or peculiarity (fin tears, angles of fins, presence of encysted parasites on body, etc.) In other cases this has presented problems. Some of the photographed specimens exhibit no unusual physical characteristics, and in other cases there are large numbers of individuals present in a series that are very similar in size and appearance. Often the specimen was placed in a jar containing numerous other individuals. Since this was usually done before the fish had hardened completely, compression of the body or fins by other specimens in the container occasionally caused slight changes in body shape or angle of the fins to the body. It was Barbour's practice to tie a tag around each specimen photographed, which unfortunately sometimes resulted in one or more fins being depressed or torn. Although excessive fading or discoloration of specimens was seldom a problem, on rare occasions it was. In one case (*Etheostoma lynceum*) the photograph apparently was taken of the right side of the specimen, but was reversed so as to face in the same direction as other specimens on the plate. Considering all the above, it is possible that in some cases the specimens in question actually are in our collection, but have defied attempts to

identify them; in most cases, however, the specimen illustrated is so completely different from any of those available that we are satisfied it is not present. Although some specimens may have been lost, others presumably were sent on loan or exchange to ichthyologists; however, documentation relating to this is not available.

Confirmed locality and collection data have been ascertained for 117 of the 144 specimens used in the photographs, and probable locality and collection data have been determined for seven others. Of the specimens for which locality data are known, 100 are in the Florida Museum of Natural History collection, eleven are known to be in collections at other institutions, and the present disposition of thirteen is unknown. In the following list, the plates are listed in the sequence they appear in the book, with the respective positions identified by letters (LT = left top; LC = left center; LB = left bottom; RT = right top; RC = right center; RB = right bottom). For each plate and position, the genus and species name, as it originally appeared in Kuehne and Barbour, appears first. For those 18 taxa that have been the subject of subsequent nomenclatural changes, the updated name follows in parentheses. This is followed by sex and life-history stage of the specimen, standard length (to nearest half mm), museum catalogue number, locality data (state, county, and precise locality), date of collection, names of collectors, and Kuehne's reference number or collector's field number, if known. Museum catalogue numbers are identified by the following acronyms: UF = Florida Museum of Natural History, University of Florida; UT = University of Tennessee; UAIC = University of Alabama Ichthyological Collection; USNM = National Museum of Natural History. Two other collections are listed by their full names.

We have attempted to follow nomenclature appearing in the fifth edition of the Common and Scientific Names of Fishes (Robins et al. 1991). This presents no problem, except for the seven species collectively called the "sand darters," which Robins et al. have continued to retain in *Ammocrypta*, the genus in which they have traditionally been placed. However, Page and Burr (1991), in their recently published field guide to North American freshwater fishes, have chosen to follow the findings of Simons, who elevated *Crystallaria* to a full genus (Simons, in press [a]), and placed the remaining six species of *Ammocrypta* in the expanded genus *Etheostoma* (Simons, in press [b]). We here follow the nomenclature adopted by Page and Burr.

We would like to thank W.J.B. Miller, who was responsible for cataloguing the material and identified several of the specimens used in the book. We also would like to thank the following individuals who responded to specific inquiries: Bruce H. Bauer, Breedlove, Dennis and Associates, Orlando, Florida; George C. Becker, Rogers, Arkansas; Herbert T. Boschung and Richard L. Mayden, University of Alabama; Richard T. Bryant, Doraiville, Georgia; Thomas M. Buchanan, Westark Junior College, Arkansas; John H. Caruso, Tulane University; Robert C. Cashner, University of New Orleans; Jeffrey M. Clayton, National Museum of Natural History (formerly United States National Museum); William Jerome Crouch, University Press of Kentucky; Anthony A. Echelle, Oklahoma State University; David A. Etnier, University of Tennessee; Julian M. Humphries, Cornell University; Robert E. Jenkins, Roanoke College; William H. LeGrande, University of Wisconsin at Stevens Point; William L. Pflieger,

Missouri Fish and Game Department; Henry W. Robison, Southern Arkansas University; Kate Shaw, University of Kansas; and Bruce A. Thompson, Louisiana State University. We particularly wish to thank James W. Small, Jr., Rollins College (Florida), who helped collect a number of the specimens photographed, and recalled specific localities and circumstances relating to their use in the book.

#### PLATE 1

- LT *Percina aurolineata* (preserved adult male, 57.5 mm SL). UAIC 1798.01. Georgia: Gilmer Co., Coosawattee River 3 mi. S of Ellijay, 9 September 1965, W. Smith-Vaniz and W. Rogers.
- LC *Percina lenticula* (preserved adult). Provenance and disposition unknown.
- LB *Percina nigrofasciata* (adult male). Provenance and disposition unknown.
- RT *Percina sciera* (breeding male, 60.0 mm). UF 43928. Louisiana: Ouachita Psh. Bayou Choudrant at U.S. hwy. 80 bridge, about 5 mi. W of Calhoun, 13 March 1970, N. Douglas and T. Guidroz (RAK No. 127).
- RC *Percina nasuta* (preserved adult, 65.0 mm SL). Disposition unknown. Arkansas: Montgomery Co., Ouachita River 1 mi. S of Pine Bluff, 18 July 1976, H. W. Robison and J. L. Harris.
- RB *Percina oxyrhyncha* (= *P. oxyrhynchus*) (breeding male). Disposition unknown. Probably from Kentucky: Bath-Rowan Co., Licking River about 1 mi. above mouth of Scotts Creek and 2 mi. S of Farmers, 22 September 1969 (RAK 107A) (J.W. Small, pers. comm.).

#### PLATE 2

- LT *Percina phoxocephala* (breeding male, 56.0 mm SL). UF 43353. Missouri: Dallas Co., Niangua River about 4 mi. E of Buffalo on st. rte. 32, 16 May 1968, R.A. Kuehne, R.W. Barbour, and C. Ernst (RAK No. 43).
- LC *Percina squamata* (preserved adult). Disposition unknown. Kentucky: Jackson-Rockcastle Co., Horse Lick Creek 0.4 mi. S mouth of White Oak Creek, about 4.5 air mi. NE of Livingston, unmarked road just N of st. rte. 89 (J.W. Small, pers. comm.).
- LB *Percina crassa* (adult female, 58.0 mm SL). UT 91.1810. North Carolina: Richmond Co., stream at co. rd. 1005, 0.7 mi. S of co. rd. 1143, 4 mi. N of Rockingham, 28 April 1979, W.C. Dickinson, C.K. Dodd, Jr., D.A. Etnier, and J.D. Williams.
- RT *Percina gymnocephala* (adult male, 58.0 mm SL). UF 43795. Virginia: Floyd Co., West Fork Little River at st. rte. 8 crossing, 15 May 1969, R.A. Kuehne, R.W. Barbour, and R. Ross (RAK No. 84).
- RC *Percina macrocephala* (young adult, 55.5 mm SL). UF 43966. Tennessee: Blount Co., Little River at U.S. hwy. 411 bridge, 15 May 1970, R.A. Kuehne, D.A. Etnier, and J.W. Small (RAK No. 142).

RB *Percina maculata* (adult male, 58.0 mm SL). UF 43927. Louisiana: Union Psh., Meridian Creek at st. rte. 348 bridge, 0.25 mi. E of Conway, 15 March 1970, R.A. Kuehne, R.W. Barbour, and N.H. Douglas (RAK No. 126).

## PLATE 3

LT *Percina notogramma* (adult male, 60.5 mm SL). UF 43692. Virginia: Botetourt Co., Craig Creek about 7 mi. E of Newcastle, 4 June 1968, R.A. Kuehne et al. (RAK No. 55).

LC *Percina pantherina* (preserved adult). Provenance and disposition unknown. Specimen supplied by H. W. Robison.

LB *Percina peltata* (adult male, 70.0 mm SL). UF 44035. Pennsylvania: Bedford Co., Raystown Branch, tributary of Juniata River, near Bedford, 26 July 1982, R.A. Kuehne and J. Stauffer.

RT *Percina roanoka* (breeding male, 44.0 mm SL). UF 43817. Virginia: Franklin Co., Blackwater River at old U.S. hwy. 220 bridge, 16 May 1969, R.A. Kuehne and R.W. Barbour (RAK No. 86).

RC *Percina (Alvordius)* sp. (young adult, 47.5 mm SL). UF 43969. Tennessee: Polk Co., Conasauga River at st. rte. 74 bridge to 0.5 mi. downstream, 16 May 1970, R.A. Stiles, J.L. Wilson, and D.A. Etnier (RAK No. 143).

RB *Percina evides* (breeding male, 49.5 mm SL). UF 43895. Kentucky: Rowan-Bath Co., Licking River about 1 mi. above mouth of Scotts Creek and 2 mi. S. of Farmers, 22 September 1969, R.A. Kuehne and R.W. Barbour (RAK No. 107A).

## PLATE 4

LT *Percina palmaris* (breeding male). Disposition unknown. Probably from Alabama: Jefferson Co., Turkey Creek at st. rte. 79 bridge, N of Pinson, 10 April 1972, R.A. Kuehne and J.W. Small (RAK No. 171) (J.W. Small, pers. comm.).

LC *Percina cymatotaenia* (young adult, 43.0 mm SL). UF 43614. Missouri: Dallas Co., Niangua River at Moon Valley Ford, 15 May 1968, R.A. Kuehne, R.W. Barbour, and C. Ernst (RAK No. 41).

LB *Percina cymatotaenia* (= *P. cf. cymatotaenia*) (adult male). Disposition unknown. Probably from Kentucky: Powell Co., Red River at iron bridge, N of Nada, 27 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 29) (J.M. Clayton, pers. comm.).

RT *Percina aurantiaca* (breeding male, 88.5 mm SL). UF 43962. Tennessee: Blount Co., Little River off st. rte. 73 near Walland, 15 May 1970, R.A. Kuehne, J.W. Small, and D.A. Etnier (RAK No. 141).

RC *Percina copelandi* (adult male, 38.5 mm SL). UF 43516. Kentucky: Magoffin Co., Licking River 1 mi. S of Salyersville, 27 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 27).

RB *Percina antesella* (preserved adult female, 59.0 mm SL). USNM 210666 (ex UT 91.383). Tennessee: Polk Co., Conasauga River at st. rte. 74 bridge, 22 October 1969, R.A. Stiles, J.L. Wilson, and D.A. Etnier (RAK No. 143).

## PLATE 5

LT *Percina ouachitae* (= *P. vigil*) (breeding male, 50.5 mm SL). UF 43937. Mississippi: Copiah Co., Bayou Pierre at st. rte. 18 bridge, 16 March 1970, R.A. Kuehne and R.W. Barbour (RAK No. 132).

LC *Percina shumardi* (adult male, 65.5 mm SL). UF 43886. Kentucky: Rowan-Bath Co., Licking River 4 mi. upstream from Farmers, 22 September 1969, R.A. Kuehne and R.W. Barbour (RAK No. 107).

LB *Percina tanasi* (breeding male, 58.0 mm SL). UT 91.2573. Tennessee: Bradley Co., South Chickamauga Creek just downstream from I-75 bridge, 5 April 1982, D.A. Etnier et al. (DAE 82-3).

RT *Percina uranidea* (preserved adult). Provenance and disposition unknown.

RC *Percina burtoni* (young adult, 74.5 mm SL). UF 43663. Virginia: Scott Co., Copper Creek just below mouth of Beecher Creek, at Spivey Mill at co. rte. 665 bridge, 2 June 1968, R.A. Kuehne and R.W. Barbour (RAK No. 52).

RB *Percina caprodes* (young adult). Provenance and disposition unknown.

## PLATE 6

LT *Percina macrolepida* (young adult). Provenance and disposition unknown.

LC *Percina rex* (adult male, 71.0 mm SL). UF 43812. Virginia: Montgomery Co., South Fork of Roanoke River at Shawsville, 15 May 1969, R.A. Kuehne et al. (RAK No. 85).

LB *Ammocrypta asprella* (= *Crystallaria asprella*) (adult male, 96.0 mm SL). UF 44046. Mississippi: Lowndes Co., Tombigbee River 0.5 mi above U.S. hwy. 50 bridge, 9 mi. NW of Columbus, 1 December 1970, G. H. Clemmer, D.C. and G. Heins (GHC 846).

RT *Ammocrypta beani* (= *Etheostoma beani*) (preserved male). Provenance and disposition unknown.

RC *Ammocrypta bifascia* (= *Etheostoma bifascia*) (young adult). Provenance and disposition unknown.

RB *Ammocrypta clara* (= *Etheostoma clarum*) (adult male, 45.0 mm SL). UF 43978. Wisconsin: Sauk Co., Wisconsin River at Spring Green, 26 July 1970, G. and S. Becker (RAK No. 149).

## PLATE 7

LT *Ammocrypta meridiana* (= *Etheostoma meridianum*) (young adult, 45.5 mm SL). UF 43999. Alabama: Macon-Montgomery Co., Line Creek at end of Brassell Road, 3.1 mi. NE of Waugh, 8 April 1972, R.A. Kuehne and J.W. Small (RAK No. 169).

LC *Ammocrypta pellucida* (= *Etheostoma pellucidum*) (adult male, 40.5 mm SL). UF 43893. Kentucky: Rowan-Bath Co., Licking River about 1 mi. above mouth of Scotts Creek and 2 mi. S of Farmers, 22 September 1969, R.A. Kuehne and R.W.

Barbour (RAK No. 107A).

LB *Ammocrypta vivax* (= *Etheostoma vivax*) (adult male, 48.5 mm SL). UF 43450. Mississippi: George Co., tributary of Black Creek at st. rte. 26 bridge, about 2 mi. W of junction with st. rte. 57, 21 March 1968, R.A. Kuehne, R.W. Barbour, and W. Davis (RAK No. 15).

RT *Etheostoma tuscumbia* (adult male, 40.0 mm SL). UF 43976. Alabama: Madison Co., Blue Spring at S edge of Huntsville, near edge of Redstone Arsenal, 18 June 1970, R.A. Kuehne et al. (RAK No. 147).

RC *Etheostoma nianguae* (breeding male). Provenance and disposition unknown. Photograph credited to C.A. Purkett, Jr. in Pflieger (1975), but to J.P. Henley in Kuehne and Barbour (1983).

RB *Etheostoma sagitta sagitta* (breeding male, 72.5 mm SL). UF 43922. Kentucky: Bell Co., Clear Creek several mi. SW of Pineville, 21 April 1970, J.W. Small and M. Creusere (RAK No. 117).

#### PLATE 8

LT *Etheostoma cinereum* (breeding male, 63.5 mm SL). UF 44038. Kentucky: Rockcastle-Jackson Co., Horse Lick Creek 1 mi. above confluence with Rockcastle River, 26 March 1977, R.A. Kuehne et al.

LC *Etheostoma blennioides blennioides* (breeding male, 58.5 mm SL). UF 43513. Kentucky: Magoffin Co., Licking River about 6 mi. N of Salyersville, 27 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 28).

LB *Etheostoma blennioides newmani* (breeding male, 58.5 mm SL). UF 43387. Arkansas: Montgomery Co., Jones Creek at Caddo Gap, 15 March 1968, R.A. Kuehne et al. (RAK No. 5).

RT *Etheostoma blennioides* (breeding male, 54.0 mm SL). UF 43503. Tennessee: Lawrence Co., West Branch of Shoal Creek 1 mi. N of Alabama state line, 21 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 23).

RC *Etheostoma euzonum* (adult male, 51.0 mm SL). UF 43868. Arkansas: Sharp Co., South Fork of Spring River 3 mi. W of Hardy at bridge, 1 June 196, R.A. Kuehne and R.W. Barbour (RAK No. 101).

RB *Etheostoma histrio* (breeding male, 42.5 mm SL). UF 43932. Mississippi: Copiah Co., Bayou Pierre at st. rte. 18 bridge, 16 March 1970, R.A. Kuehne and R.W. Barbour (RAK No. 132).

#### PLATE 9

LT *Etheostoma inscriptum* (breeding female, 50.0 mm SL). UF 44031. South Carolina: Edgefield Co., Turkey Creek at st. rte. 283 bridge, approx. 9 mi. W of Edgefield, 19 March 1974, R.A. Kuehne et al. (RAK No. 182-74).

LC *Etheostoma kanawhae* (breeding male, 52.0 mm SL). UF 43794. Virginia: Floyd Co., West Fork of Little River at st. rte. 8 bridge and above, 15 May 1969, R.A. Kuehne et al. (RAK No. 84).

LB *Etheostoma osburni* (breeding male, 70.5 mm SL). UF 43977. Virginia: Giles Co., Big Stoney Creek about 3 mi. above mouth, 21 June 1970, R.A. Kuehne et al. (RAK No. 148).

RT *Etheostoma rupestre* (adult male, 42.5 mm SL). UF 43967. Tennessee: Polk Co., Conasauga River at st. rte. 74 bridge to 0.5 mi. downstream, 16 May 1970, R.A. Kuehne, J. L. Wilson, and D.A. Etnier (RAK No. 143).

RC *Etheostoma sellare* (preserved adult). Disposition unknown. Maryland: Harford Co., Deer Creek 1.2 mi. above confluence with Susquehanna River, at Stafford Road crossing. (Photographed specimen among those listed by Knapp [1976]).

RB *Etheostoma swannanoa* (breeding male). Disposition unknown. Tennessee: Sevier Co., West Prong of Little Pigeon River near Norton Creek, just N of Gatlinburg, 21 May 1970, R.A. Kuehne and J.W. Small (RAK No. 144) (J.W. Small, pers. comm.).

#### PLATE 10

LT *Etheostoma tetrazonum* (breeding male, 53.0 mm SL). UF 43612. Missouri: Dallas Co., Niangua River at Moon Valley Ford, 15 May 1968, R.A. Kuehne et al. (RAK No. 41).

LC *Etheostoma thalassinum* (adult male, 50.5 mm SL). UF 43972. North Carolina: McDowell Co., Crooked Creek approx. 1.5 mi. SE of Old Fort, 23 May 1970, R.A. Kuehne et al. (RAK No. 145).

LB *Etheostoma variatum* (breeding male, 74.5 mm SL). UF 43654. Kentucky: Breathitt Co., Buckhorn Creek 0.75 mi. above mouth, below Laurel, 1 June 1968, R.A. Kuehne et al. (RAK No. 51).

RT *Etheostoma zonale zonale* (= *E. zonale*) (breeding male, 43.0 mm SL). UF 43536. Kentucky: Powell Co., Red River at iron bridge, N of Nada, 27 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 29).

RC *Etheostoma zonale lynceum* (= *E. lynceum*) (breeding male, 39.0 mm SL). UF 43933. Mississippi: Copiah Co., Bayou Pierre at st. rte. 18 bridge, 16 March 1970, R.A. Kuehne and R.W. Barbour (RAK No. 132) (photograph of right side of specimen, reversed on plate).

RB *Etheostoma atripinne* (= *E. simoterum atripinne*) (breeding male). Provenance and disposition unknown.

#### PLATE 11

LT *Etheostoma baileyi* (breeding male, 37.5 mm SL). UF 43533. Kentucky: Powell Co., Red River at iron bridge, N of Nada, 27 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 29).

LC *Etheostoma barrenense* (breeding male). Provenance and disposition unknown.

LB *Etheostoma coosae* (breeding male, 46.0 mm SL). UF 43548. Georgia: Floyd Co., cave spring in Cave Springs, and Montgomery Branch 1 mi W of Cave Springs, 3 May 1968, R.A. Kuehne and R.W. Barbour (RAK No. 34A).

RT *Etheostoma duryi* (breeding male, 57.5 mm SL). UF 43505.

- Tennessee: Lawrence Co., West Branch of Shoal Creek 1 mi. N of Alabama state line, 21 April 1968, R.A. Kuehne and R.W. Barbour (RAK No.23).
- RC *Etheostoma etnieri* (breeding male). Disposition unknown. Tennessee: White Co., Cherry Creek at st. rte. 84 bridge near Sparta, 19 April 1970, R.A. Kuehne and J.W. Small (RAK No.137) (J.W. Small, pers. comm.).
- RB *Etheostoma rafinesquei* (breeding male, 44.0 mm SL). UF 43789. Kentucky: Edmonson Co., Bylew Creek at Bylew Cave, 5 April 1969, R.A. Kuehne and R.W. Barbour (RAK No. 83).

## PLATE 12

- LT *Etheostoma simoterum* (= *E. simoterum simoterum*) (breeding male, 55.5 mm SL). UF 43765. Tennessee: Hawkins Co., Bradley Creek at U.S. hwy. 11 bridge, 22 March 1969, R.A. Kuehne et al. (RAK No. 74).
- LC *Etheostoma (Ulocentra)* sp. ("Golden snubnose darter") (= *E. flavum*) (breeding male, 45.5 mm SL). UF 43914. Tennessee: Humphreys Co., Blue Creek at st. rte. 19 bridge, approx. 2.5 mi. S. of Waverly, 25 October 1969, R.A. Kuehne and R.W. Barbour (RAK No. 114).
- LB *Etheostoma (Ulocentra)* sp. ("Redbelly snubnose darter") (breeding male, 42.7 mm SL). UF 44011. Alabama: Calhoun Co., Shoal Creek 1 mi. E of White Plains, 10 April 1972, R.A. Kuehne and J.W. Small (RAK No. 172).
- RT *Etheostoma (Ulocentra)* sp ("Gulfcoast snubnose darter") (breeding male). Disposition unknown. Probably from Alabama: Escambia Co., branch of Escambia River at st. rte. 31 bridge, near Atmore, 8 April 1972, R.A. Kuehne and J.W. Small (RAK No. 167).
- RC *Etheostoma (Ulocentra)* sp. ("Black Warrior snubnose darter") (breeding male, 47.0 mm SL). UF 44006. Alabama: Jefferson Co., Turkey Creek at st. rte. 79 bridge, N of Pinson, 10 April 1972, R.A. Kuehne and J. W. Small (RAK No. 171).
- RB *Etheostoma (Ulocentra)* sp. ("Upland snubnose darter") (breeding male, 43.7 mm SL). UF 44011. Alabama: Calhoun Co., Shoal Creek near White Plains, 10 April 1972, R.A. Kuehne and J.W. Small (RAK No. 172).

## PLATE 13

- LT *Etheostoma (Ulocentra)* sp. ("Tallapoosa snubnose darter") (breeding male, 41.0 mm SL). UF 44000. Alabama: Elmore Co., southern tributary creek NW of Red Hill at st. rte. 229 bridge, 9 April 1979, R. A. Kuehne and J.W. Small (RAK No. 170).
- LC *Etheostoma jessiae* (breeding male, 53.5 mm SL). UF 43507. Tennessee: Lawrence Co., West Branch Shoal Creek 1 mi. N of Alabama state line, 21 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 23).
- LB *Etheostoma stigmaeum* (breeding male, 34.5 mm SL). UF 43481. Alabama: Tuscaloosa Co., Cottondale Creek at Keene Mill Rd. bridge, 19 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 21).

- RT *Etheostoma stigmaeum* (breeding male, 34.0 mm SL). UF 43827. Kentucky: Jackson Co., North Fork of Rockcastle River at st. rte. 82 bridge, near Jackson Co. line, 20 May 1969, R.A. Kuehne and R.W. Barbour (RAK No. 92).
- RC *Etheostoma longimanum* (breeding male, 54.0 mm SL). UF 43683. Virginia: Botetourt Co., Barbour's Creek at st. rte. 42 bridge, 5 mi. E of Newcastle, 3 June 1968, R.A. Kuehne et al. (RAK No. 55A).
- RB *Etheostoma nigrum* (breeding male). Provenance and disposition unknown.

## PLATE 14

- LT *Etheostoma olmstedii* (adult male, 59.0 mm SL). UF 43756. North Carolina: Moore Co., stream below Southern Pines Golf Course, Southern Pines, 21 March 1969, R.A. Kuehne et al. (RAK No. 71).
- LC *Etheostoma perlongum* (young adult, 60.5 mm SL). UF 43749. North Carolina: Columbus Co., Lake Waccamaw, N shore and side pond, 19 March 1969, R.A. Kuehne et al. (RAK No. 70).
- LB *Etheostoma podostemone* (breeding male, 44.5 mm SL). UF 43815. Virginia: Franklin Co., Blackwater River at old U.S. hwy. 220 bridge, 16 May 1969, R.A. Kuehne and R.W. Barbour (RAK No. 86).
- RT *Etheostoma vitreum* (adult male, 50.0 mm SL). UF 43987. Virginia: Franklin Co., Pigg River along co. rte. 908, 8 air mi. SW of Rocky Mount, 14 March 1971, R.E. Jenkins et al. (RAK No. 163 and REJ 433).
- RC *Etheostoma chlorosomum* (adult female). Provenance and disposition unknown.
- RB *Etheostoma acuticeps* (adult male, 52.5 mm SL). Roanoke College uncat. Virginia: Washington Co., South Fork Holston River along co. rte. 711, between jct. rtes. 710-711 and jct. rtes. 711-810, 11 November 1972, R.E. Jenkins et al. (REJ 608).

## PLATE 15

- LT *Etheostoma aquali* (adult male, length unknown). UT91.1673. Tennessee: Hickman Co., Duck River at st. hwy. 50, 0.25 air mi. SW of Centerville, 17 April 1985, D.E. Etnier et al. (Specimen now cleared and stained).
- LC *Etheostoma bellum* (breeding male). Provenance and disposition unknown.
- LB *Etheostoma camurum* (breeding male, 56.5 mm SL). UF 43906. Kentucky: Pulaski Co., Buck Creek at st. rte. 192 bridge, 13 October 1969, R.A. Kuehne and J.W. Small (RAK No.111).
- RT *Etheostoma chlorobranchium* (adult male). Disposition unknown. Tennessee: Sevier Co., West Prong of Little Pigeon River near Norton Creek, just N of Gatlinburg, 21 May 1970, R.A. Kuehne and J.W. Small (RAK No. 144) (J.W. Small, pers. comm.; collection of specimen discussed on p. 114 of book).
- RC *Etheostoma jordani* (breeding male, 39.0 mm SL). UF 43541.



Tennessee: Polk Co., Conasauga River at U.S. hwy. 441 bridge, 2 May 1968, R.A. Kuehne and R.W. Barbour (RAK No. 30).

- RB *Etheostoma juliae* (breeding male). Disposition unknown. Probably from Missouri: Greene Co., James River at st. rte. 125 bridge, about 8-10 air mi. SE of center of Springfield, 17 May 1968, R.A. Kuehne, R.W. Barbour, and C. Ernst (RAK No. 45) (J.W. Small, pers. comm.).

#### PLATE 16

- LT *Etheostoma maculatum maculatum* (= *E. maculatum*) (adult male, 47.5 mm SL). UF 43882. Kentucky: Casey Co., Green River 5 mi. W of Dunnville, 21 September 1969, R.A. Kuehne et al. (RAK No. 106).
- LC *Etheostoma maculatum sanguifluum* (= *E. sanguifluum*) (adult male, 70.0 mm SL). UF 43949. Tennessee: Scott Co., Big South Fork of Cumberland River at Station Camp Creek, 18 April 1970, R. A. Kuehne and J.W. Small (RAK No. 136).
- LB *Etheostoma maculatum vulneratum* (= *E. vulneratum*) (breeding male, 52.0 mm SL). UF 43965. Tennessee: Blount Co., Little River at U.S. hwy. 411 bridge near Maryville, 15 May 1970, R.A. Kuehne et al. (RAK No. 142).
- RT *Etheostoma microlepidum* (breeding male, 48.5 mm SL). UF 43463. Tennessee: Rutherford Co., Stones River 5 mi. N of Kitrell, 22 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 24).
- RC *Etheostoma moorei* (breeding male, 48.0 mm SL). UF 44101. Arkansas: Van Buren Co., Middle Fork of Little Red River just downstream from st. rte. 9 bridge (T12N, R13W, Sec 25), 21 May 1975, T.M. Buchanan and W. Shepherd.
- RB *Etheostoma rubrum* (adult male, 35.5 mm SL). UF 43934. Mississippi: Copiah Co., Bayou Pierre at st. rte. 18 bridge, 16 March 1970, R.A. Kuehne and R.W. Barbour (RAK No. 132).

#### PLATE 17

- LT *Etheostoma rufilineatum* (breeding male, 59.5 mm SL). UF 43580. Tennessee: Overton Co., West Fork of Obey River at st. rte. 85 bridge, near Crawford, 5 May 1968, R.A. Kuehne and R.W. Barbour (RAK No. 37).
- LC *Etheostoma tippecanoe* (breeding male, 25.0 mm SL). UF 44018. Kentucky: Owsley Co., South Fork of Kentucky River at Booneville, 13 August 1972, R.A. Kuehne, J. and C. Small (RAK No. 174).
- LB *Etheostoma edwini* (adult male, 32.0 mm SL). UF 43725. Florida: Columbia-Suwannee Co., Ichetucknee River at U.S. hwy. 27 bridge, 17 March 1969, R.A. Kuehne et al. (RAK No. 67).
- RT *Etheostoma okaloosae* (adult female). Disposition unknown. Probably from Florida: Okaloosa Co., stream entering Choctawatchee Bay at Niceville, or at st. rte. 285 bridge 7 mi. N of Niceville, 22 March 1968, R.A. Kuehne, R.W. Barbour, and W. Davis (RAK 16 or 17).
- RC *Etheostoma boschungii* (breeding male). Provenance and dis-

position unknown; probably from Cypress Creek, Alabama or Tennessee.

- RB *Etheostoma cragini* (breeding male, 44.0 mm SL). UF 43361. Missouri: Jasper Co., spring at st. rte. F bridge, 0.25 mi. W of st. rte. 37 intersection, 31 May 1969, R.A. Kuehne and R.W. Barbour (RAK No. 100).

#### PLATE 18

- LT *Etheostoma pallidiorum* (preserved male, 37.8 mm SL). UF 43930. Arkansas: Montgomery Co., Caddo River 7 mi. W of Black Springs, 7 March 1970, P. Hambrick et al. (RAK No. 129).
- LC *Etheostoma punctulatum* (breeding male). Provenance and disposition unknown.
- LB *Etheostoma trisella* (young female, 35.0 mm SL). UF 43968. Tennessee: Polk Co., Conasauga River at st. rte. 74 bridge to 0.5 mi. downstream, 16 May 1970, R.A. Kuehne, J.L. Wilson, and D.A. Etnier (RAK No. 143).
- RT *Etheostoma australe* (preserved adult). Provenance and disposition unknown.
- RC *Etheostoma asprigene* (breeding male, 46.5 mm SL). UF 43860. Arkansas: Green Co., Locust Creek ditch 5 mi. E of Paragould, 3 June 1969, R.A. Kuehne and R.W. Barbour (RAK No. 102).
- RB *Etheostoma caeruleum* (breeding male, 42.5 mm SL). UF 43630. Missouri: Christian Co., Swan Creek at st. rte. 125 bridge, 17 May 1968, R.A. Kuehne et al. (RAK No. 46).

#### PLATE 19

- LT *Etheostoma collettei* (breeding male, 43.5 mm SL). UF 43925. Louisiana: Union Psh., Meridian Creek at st. rte. 348 bridge, 0.25 mi. E of Conway, 15 March 1970, R.A. Kuehne, R.W. Barbour, and N.H. Douglas (RAK No. 126).
- LC *Etheostoma ditrema* (breeding male, 48.0 mm SL). UF 44015. Georgia: Murray Co., spring at intersection of st. rte. 225, near Conasauga River, 10 April 1972, R.A. Kuehne and J.W. Small (RAK No. 173).
- LB *Etheostoma exile* (adult male, 35.0 mm SL). UF 44037. Wisconsin: Portage Co., Collins Lake (T25N, R10E, Sec. 31), 19 November 1975, B. McKee and G. Lutterbie.
- RT *Etheostoma fricksium* (breeding male, length unknown). UT 91.2024. South Carolina: Aiken Co., Upper Three Runs Creek at co. rd. 114, lowest culvert crossing above Savannah River Plant Reservation, 19 May 1980, D.A. Etnier et al. (Specimen now cleared and stained).
- RC *Etheostoma grahami* (breeding male, putative specimen = 40.5 mm SL). UF 43408. Texas: Val Verde Co., Devil's River at Hudspeth Springs, below Juno, 18 March 1968, R.A. Kuehne et al. (RAK No. 10). No specimen was found that unequivocally matches the photograph, but a single distorted specimen (40.5 mm SL) had a Barbour tag tied around the body.
- RB *Etheostoma hopkinsi hopkinsi* (adult male, 41.0 mm SL). UF

43743. Georgia: Telfair Co., spillway of lake at Little Ocmulgee State Park, near McRae, 18 March 1969, R.A. Kuehne et al. (RAK No. 69).

## PLATE 20

- LT *Etheostoma lepidum* (breeding male, 31.0 mm SL). UF 43401. Texas: Uvalde Co., Nueces River at U.S. hwy. 90 bridge, 17 March 1968, R.A. Kuehne et al. (RAK No. 9).
- LC *Etheostoma luteovinctum* (breeding male, 42.0 mm SL). UF 43958. Tennessee: Coffee Co., spring crossing at st. rte. 55 bridge, 6.4 mi. NE of Forest Mills, 19 April 1970, R.A. Kuehne and J.W. Small (RAK No. 138).
- LB *Etheostoma mariae* (breeding male, 48.5 mm SL). UF 43755. North Carolina: Moore Co., stream below Southern Pines Golf Course, Southern Pines, 21 March 1969, R.A. Kuehne et al. (RAK No. 71).
- RT *Etheostoma nuchale* (breeding male, 34.0 mm SL). UF 43443. Alabama: Jefferson Co., Glen Springs, Bessemer, 19 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 20).
- RC *Etheostoma parvipinne* (breeding female, 48.3 mm SL). UF 43923. Louisiana: Union Psh., spring trickle along st. rte. 2, approx. 9 mi. E of Farmerville, 15 March 1970, R.A. Kuehne et al. (RAK No. 125).
- RB *Etheostoma pottsi* (adult male). Baylor University uncat. Mexico: Estado Durango, Río Peñon Blanco del Covadonga, at Peñon Blanco, 5 January 1976, A. Echelle et al.

## PLATE 21

- LT *Etheostoma radiosum* (breeding male, 50.5 mm SL). UF 43376. Arkansas: Glenwood-Pike Co., Caddo River at old low-water bridge, below old iron RR bridge, behind cemetery, 14 March 1968, R. A. Kuehne et al. (RAK No. 2).
- LC *Etheostoma spectabile spectabile* (breeding male, 40.0 mm SL). UF 43441. Kentucky: Fayette Co., upper end of Shelby Branch, Hickman Creek, 7 April 1968, R.A. Kuehne and R.W. Barbour (RAK No. 19).
- LB *Etheostoma spectabile squamosum* (breeding male, 44.0 mm SL). UF 43364. Missouri: Jasper Co., spring at st. rte. F bridge, 0.5 mi. W of st. rte. 37 intersection, 31 May 1969, R.A. Kuehne and R. W. Barbour (RAK No. 100).
- RT *Etheostoma swaini* (breeding male). Provenance and disposition unknown.
- RC *Etheostoma whipplei whipplei* (breeding male, 77.5 mm SL). UF 43929. Louisiana: Ouachita Psh., Cheniere Creek at Cheniere, SW of Monroe, 13 March 1970, N. Douglas and T. Guidroz (RAK No. 128).
- RB *Etheostoma whipplei artesiae* (young male, 36.0 mm SL). UF 43941. Alabama: Choctaw Co., small creek beside Bladon Springs, 17 March 1970, R.A. Kuehne and R.W. Barbour (RAK No. 133).

## PLATE 22

- LT *Etheostoma barbouri* (breeding male, 46.0 mm SL). UF 44039. Kentucky: Casey Co., South Fork of Green River at U.S. hwy. 421 bridge, 18 April 1982, R.A. Kuehne et al.
- LC *Etheostoma flabellare* (breeding male, 46.0 mm SL). UF 43779. Kentucky: Clinton Co., Smith Creek at st. rte. 696 bridge, approx. 2 mi. SE of Albany, 2 April 1969, R.A. Kuehne and R.W. Barbour (RAK No. 77).
- LB *Etheostoma kennicotti* (adult male, 35.0 mm SL). UF 44021. Tennessee: Campbell Co., trib. of Elk River near Elk Valley, 18 March 1974, R.A. Kuehne et al. (RAK No. 180-74).
- RT *Etheostoma neopterum* (adult male, 43.5 mm SL). UF 43959. Tennessee: Benton Co., Sycamore Creek at st. rte. 69 bridge, 0.5 mi. E of Holladay, 19 April 1970, R.A. Kuehne and J.W. Small (RAK No. 139).
- RC *Etheostoma obeyense* (breeding male, 52.0 mm SL). USNM 204345. Kentucky: Clinton Co., Smith Creek at co. rte. 69, 2 mi. SE of Albany, 3 April 1969, R.A. Kuehne and R.W. Barbour. (Photograph also appeared in Fig. 1 in Kuehne and Small [1971]).
- RB *Etheostoma olivaceum* (breeding male, 49.0 mm SL). UF 43782. Tennessee: DeKalb Co., Dry Creek at st. rte. 70 bridge, 4 April 1969, R.A. Kuehne and R.W. Barbour (RAK No. 79).

## PLATE 23

- LT *Etheostoma smithi* (breeding male, 50.5 mm SL). UF 44034. Kentucky: Livingston Co., Ferguson Creek at st. rte. 70 bridge, 5 mi. E of Smithland, 31 May 1982, R.A. Kuehne and P. Hudgins.
- LC *Etheostoma squamiceps* (breeding male, 62.0 mm SL). UF 43791. Kentucky: Edmonson Co., Bylew Creek at Bylew Cave, 5 April 1969, R.A. Kuehne and R.W. Barbour (RAK No. 83).
- LB *Etheostoma striatulum* (breeding male, 45.5 mm SL). UAIC 10022.01. Tennessee: Bedford Co., Hurricane Creek at un-numbered co. rd. crossing, 2.8 air mi. N of Elbethel, 21 March 1979, D. Nieland and B.A. Bauer (DN 79-23).
- RT *Etheostoma virgatum* (breeding male, 50.5 mm SL). USNM 204350. Kentucky: Rockcastle-Jackson Co., Horse Lick Creek, approx. 1 mi. above mouth, 6 October 1969, R.A. Kuehne and J.W. Small (RAK No. 110) (Photograph also appeared in Fig. 1 in Kuehne and Small [1971]).
- RC *Etheostoma collis* (breeding male, 39.5 mm SL). UF 43760. North Carolina: Stanley Co., small creek at st. rte. 24 bridge, near county line, date undetermined, R.A. Kuehne and R.W. Barbour et al. (RAK No. 72).
- RB *Etheostoma fusiforme barratti* (adult male, 42.5 mm SL). UF 43742. Georgia: Telfair Co., spillway of lake at Little Ocmulgee State Park, near McRae, 18 March 1969, R.A. Kuehne et al. (RAK No. 69).



## PLATE 24

- LT *Etheostoma gracile* (breeding male). Provenance and disposition unknown.
- LC *Etheostoma saludae* (breeding male, 45.0 mm SL). UF 44033. South Carolina: Saluda Co., Persimmon Creek at st. rte. 121 bridge, approx. 5 mi. N of Saluda, 20 March 1974, R.A. Kuehne et al. (RAK No. 184).
- LB *Etheostoma serriferum* (young adult). Provenance and disposition unknown.
- RT *Etheostoma fonticola* (breeding male, 24.0 mm SL). UF 43395. Texas: Hays Co., San Marcos River at old cotton gin crossing, 16 March 1968, R.A. Kuehne et al. (RAK No. 7).
- RC *Etheostoma microperca* (breeding male, 27.5 mm SL). UF 43855. Missouri: Wright Co., Woods Fork of Gasconade River, 5.5 mi. W of Hartville, 30 May 1969, R.A. Kuehne and R.W. Barbour (RAK No. 98).
- RB *Etheostoma proeliare* (breeding male). Disposition unknown. Probably from Louisiana: Union Psh., Meridian Creek at st. rte. 348 bridge, 0.25 mi. E of Conway, 15 March 1970, R.A. Kuehne, R.W. Barbour, and N.H. Douglas (RAK No. 126) (J.W. Small, pers. comm.).

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## MUSEUM NOTES

During the course of the SFC business meeting in Charlotte, N.C., I suggested and solicited contributions from southeastern fish collections in describing their holdings, emphasis, past history and protocol of cataloging and accession that may be of interest to members of the society. I would publish these contributions as arrived in the PROCEEDINGS with minimal review. The following is the first of these to get into print.

### Holdings of the University of Richmond Fish Collection

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The holdings of fishes catalogued in ledgers in the fish collection at the University of Richmond have been computerized and stored in ASCII files in the University's mainframe computer system.

There are 401 species of fishes (58 families; 17 freshwater, 41 marine) in 5,371 lots representing 45,869 specimens. The average number of specimens per lot is 9 (range, 1-311). Type materials of the collection are deposited in the National Museum of Natural History, Washington, D.C. Dominated by freshwater species, the most speciose families are Cyprinidae (72 species), Percidae (33), Centrarchidae (19), and Catostomidae (15). The storage preservative is 70% isopropyl alcohol. Catalogue information includes species, catalogue number, collector's number, state, county, drainage, collection locality and date, collector(s), and numbers of specimens. Nomenclature is like that in Robins et al. (1980).

Collections are primarily from montane, Piedmont, and Coastal Plain provinces of Virginia with good representation of fishes from southeastern United States. The geographic range of freshwater fishes extends from St. Lawrence River south to Georgia and Alabama and west to Tennessee. A few collections are from Minnesota, Illinois, Wisconsin, and Great Britain. Marine fishes are from the western North Atlantic Ocean and Gulf of Mexico.

Angling, block nets, electrofishing, gill nets, primacord, seining and trawling were the principal methods of collection. Bartering and cash, consisting of one 10 lb carp and a one dollar bill, respectively, were used to obtain an adult tuberculate male *Nocomis raneyi* from an old fisherman cane-pole fishing from the bank in the lower Piedmont James River in 1973. The species at the time was considered to be restricted to upper portions of drainage (Lachner and Jenkins, 1971).

The collapse of a shelf in 1976 resulted in a loss or damage of about one-fifth of the collection, mainly specimens of five families (Petromyzontidae, Amiidae, Clupeidae, Salmonidae and Esocidae). Although not included in the total count of species, their collection data are maintained in the catalogue but are listed as lost/discarded. Since the collapse, additional specimens representatives of these families, except Salmonidae, have been deposited in the catalogued collection.

The collection was established in 1956, although specimens date back to 1935. Most of the fishes were collected by William S. Woolcott and his students over the past 35 years. Throughout the history of the collection, exhaustive sampling has been the collecting strategy for building the collection as a teaching and research tool, and a repository of fishes for central Virginia. Approximately 350 unsorted collections, primarily from southeastern drainages, remain uncatalogued.

Exchanges and loans are encouraged with other institutions.

## ACKNOWLEDGMENTS

This paper is dedicated to Dr. William S. Woolcott, D.A. Kuyk Professor of Biology at University of Richmond, who will retire in 1992; and his 33 graduate students that assisted in field collections and curation of the museum (E.A. Bergin, A.C. Bierne, G.R. Brooks, S.B. Churn, J.T. Clark, J.C. Conyers, C.B. Cross, R.M. Daniels, J. M. Dolan, III, W. Duncanson, R.K. Falls, D.A. Flemer, D.V. Grimes, W.M. Hall, Jr., W.T. Hogarth, A.F. Horne, M.A. King, G.W. Link, Jr., J.J. Loos, J.T. Magee, E. G. Maurakis, W. R. McGuire, H. S. Milsaps, A. H. O'Bier, Jr., M. H. Sabaj, J. R. Saecker, D. G. Saintsing, E. R. Smith, D. R. White, and J.W. White). Appreciation is extended to G. Brown, University of Richmond Academic Computer Center for coordinating computer file storage and access of fish collection data.

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## A NOTE FROM THE EDITOR

It has been brought to my attention by Bob Jenkins that the actual title as arranged on the masthead of this publication is the Southeastern Fishes Council PROCEEDINGS. To maintain propriety and continuity, I am asking that articles from this publication be cited in that format.

PROCEEDINGS is a publication of the Southeastern Fishes Council, Inc. and is published in New Orleans, Louisiana. Officers are: Bruce Bauer, Chairman; David Heins, Chairman-elect; Hank Bart, Secretary/Treasurer. Editor for the PROCEEDINGS is Michael M. Stevenson, Biological Sciences, University of New Orleans, LA 70148. Phone: (504) 286-7057.