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ATLAS OF FISHES OF THE ST. LOUIS BAY DRAINAGE IN SOUTHERN MISSISSIPPI

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ABSTRACT This atlas presents a comprehensive report on fishes collected in the St. Louis Bay drainage between October 1950 and October 1989, prior to several recent years of accelerated commercial and residential development. A total of 261 samples taken at 126 sites from headwaters of major streams to the mouth of St. Louis Bay resulted in the collection of 75,625 specimens representing 124 species plus 2 hybrid sunfish combinations. Precise locality data are given for each collection site, with number of species and specimens taken at each site, followed by a total list of species taken at each site. A distribution map is presented for each species. The legend on each map includes family name, scientific and common name of the species, number of collection sites, and total number of specimens collected. The geographical location of the St. Louis Bay drainage is briefly described, as are local physical, geological, and vegetational features. We believe this atlas will be a useful document to assess the environmental impacts of future economic development on aquatic communities in the area.

INTRODUCTION

The coastal area of southern Mississippi has experienced substantial economic growth in recent years. Completion of the west to east Interstate 10 route across the Gulf coastal region from Louisiana to Florida has promoted commercial and residential development, resulting in increased environmental stress to some surface-water habitats and associated biological communities at various locations along the highway corridor. Impacts most often associated with coastal development include habitat alteration from permitted dredge, fill and bulkheading operations, increased marina and waterfront home construction, replacement and dissection of natural habitats with roadways and parking lots for new commercial and residential areas. These plus permitted point-source discharges from waste treatment and other permitted operations, increased non-point (unpermitted) pollution from surface run-off of nitrates, phosphates, fertilizers, oil and grease, and herbicides, increased use and potential failure of septic tanks in outlying areas, and accelerated stream erosion all impact associated aquatic habitats.

Environmental planners and regulators must have accurate biological information with which to assess the impacts of human-based activities on natural environments. This atlas has 2 primary goals—first, to document the distributions of freshwater and estuarine fish species collected from the St. Louis Bay drainage prior to recent economic growth in the watershed and second, to serve as an important database for assessing future environmental impacts resulting from continued economic growth in the watershed.

THE STUDY AREA

St. Louis Bay is bordered on the west by the Pearl River drainage and on the east, in part, by the Biloxi Bay drainage and northwestern upper tributaries of the Pascagoula River system. St. Louis Bay has 2 major tributaries, the Wolf and Jourdan rivers, which together drain an area of about 790 mi² (2046 km²). Wolf River arises at an elevation of about 400 feet (121.9 m) above sea level (Caldwell 1966) in southern Lamar County and drains portions of Pearl River, Hancock, Stone, and Harrison counties before entering St. Louis Bay. Jourdan River drains much of Hancock County, but it also receives a few tributaries from Pearl River County. Christmas and Eleuterius (1973) reported the mean total daily discharge of the Jourdan and Wolf rivers was 1,474 cubic feet per second (cfs) (41.74 m³/sec). The mean annual temperature of the St. Louis Bay area is 65°F (18.3°C); mean annual precipitation varies from 60 to 63 inches (1.52 to 1.60 m) (Shows 1970).

The entire St. Louis Bay drainage lies within the Coastal Plain Physiographic Province. Most of southern Mississippi, including the immediate study area, is developed on sands, gravels, and clays of Miocene, Pliocene, and Pleistocene ages (Murray 1961). Coastal alluvial Pleistocene deposits (Quaternary Period) occur as a distinct plain along the northern rim of the Gulf of Mexico and they also form well-defined terraces along the reaches of most major Coastal Plain rivers and streams. Coastal deposits generally lie on top of the Citronelle formation (Pliocene) which has a dip to the south at a rate of 6 to 8 feet per mile (1.14 to 1.52 m/km) (Anonymous 1971). The Pascagoula and Hattiesburg formations



Figure 1. Wolf River, looking upstream from Interstate 10, Harrison County, T7S, R12W, Sec. 21.

(Miocene) lie under the Citronelle formation. Forty percent of the artesian wells in the coastal area of Mississippi derive water from the sand and gravels of the Pascagoula member (Brown et al. 1944, Anonymous 1971).

Substrates for many larger streams in the upper and middle sections of the watershed are composed of sand and clay which are occasionally mixed in a few faster flowing sections (Figures 1 and 2). Siltstone outcrops occur in at least one area along the middle section of the Wolf River; more extensive, as yet undiscovered, exposures could occur along this stretch of the river, particularly during periods of reduced flow when water levels are much lower. Downstream sections of both the Jourdan (Figures 3 and 4) and Wolf (Figures 5 and 6) rivers have deposits of silt and fine organic debris. The bottom surface of St. Louis Bay (Figures 7 and 8) is covered by sand (27%) and mud (73%). Otvos (1973), after Hoskin (1971), reported that the composition of 62 samples taken from St. Louis Bay averaged 34% sand, 30% silt, and 36% clay. Water is relatively clear in the headwater tributaries, which arise in the upland areas but in general become increasingly stained toward the coastline, particularly where there is drainage from bordering swamps and flood pools (Figure 9).

The bay and tidal sections of the inflowing streams are seasonally dynamic environments. During winter

and early spring floods, increased freshwater discharge reduces normal salinity levels in the lower sections of Wolf and Jourdan rivers and the upper reaches of St. Louis Bay which provides additional temporary habitat for the resident freshwater species. The reverse occurs during the late summer and early fall. As riverine discharges decline, the more dense saline waters move inland along the bottom strata of the St. Louis Bay and lower sections of both rivers, giving a number of brackish and marine fish species the opportunity to move into the upper bay and invade tidal sections of its tributary rivers. These long-term seasonal trends are modified in part by daily tidal movements, which result in temporary flooding or drainage of the bordering marshes.

VEGETATION

The phytogeography of the St. Louis Bay drainage is relatively simple and common for the more eastern lands adjacent to the northern Gulf of Mexico. Two general regions exist, a more northern Southern Pine Hills and a southern Gulf Coast Flatwoods (Figure 10) (Fenneman 1938). The very coastal regions of the flatwoods are marshland. The Southern Pine Hills, an area which is upland of the Gulf Coast Flatwoods, is extensive and has more nutrient rich soils. It is a low hilly region dominated when undisturbed by a mixed hardwood forest of *Quercus*



Figure 2. Hickory Creek, looking upstream from Mississippi Highway 43, Hancock County, T6S, R15W, Sec. 21.



Figure 3. Jourdan River, looking upstream from Interstate 10, Hancock County, T8S, R14W, Sec. 9.



Figure 4. Jourdan River, looking downstream from Interstate 10, Hancock County, T8S, R14W, Sec. 9.



Figure 5. Wolf River, looking upstream from Rouse Bridge near Cuevas, Harrison County, T8S, R12W, Sec. 6.



Figure 6. Wolf River, looking upstream from LaRosa Bridge near DeLisle, Harrison County, T8S, R13W, Sec. 11.



Figure 7. St. Louis Bay, looking west from Bayou Portage, Harrison County, T8S, R13W, Sec. 14.



Figure 8. St. Louis Bay, looking northwest along the west shore of bay from U.S. Highway 90 bridge, Hancock County, T8S, R13W, Sec. 20.



Figure 9. Flood pool of Wolf River northwest of Rouse Bridge, Harrison County, T8S, R12W, Sec. 6.

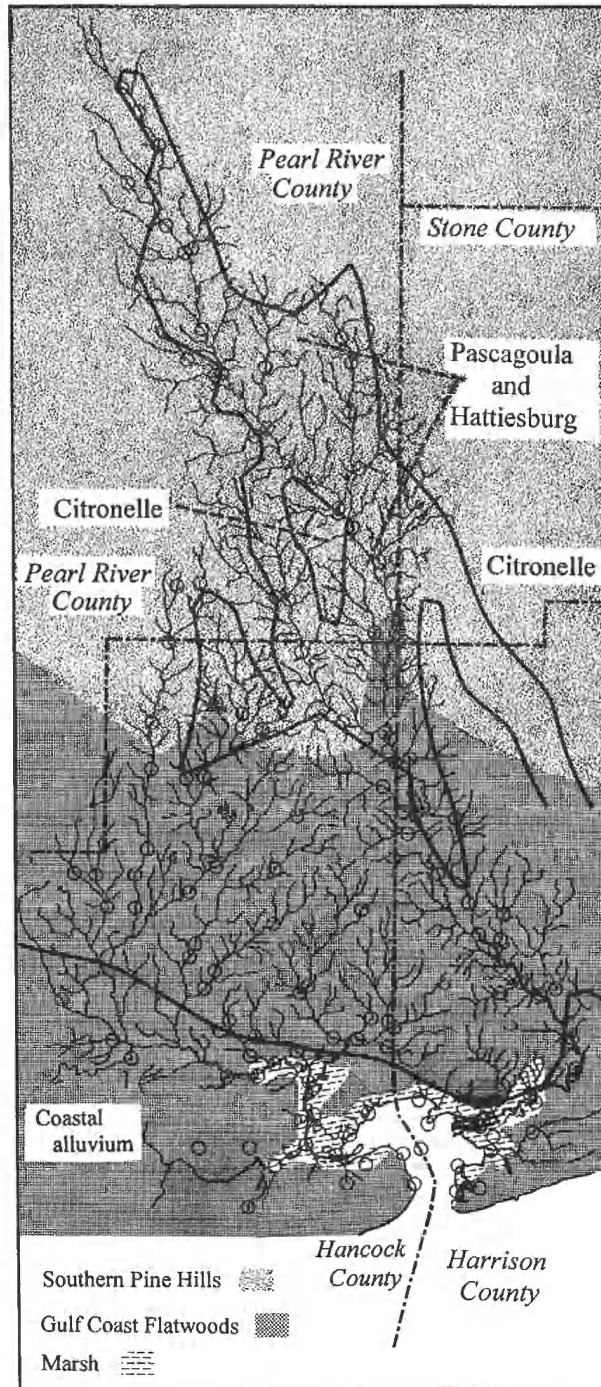


Figure 10. Geological and vegetative map of St. Louis Bay watershed.

(oaks), *Liquidambar styraciflua* (sweet gum), *Acer rubrum* (red maple), *Fraxinus* (ash), *Carya* (hickory), *Ulmus* (elm), *Nyssa* (tupelo/gum), *Ilex* (holly), and *Magnolia* (magnolia). Currently, large portions of this region are utilized for silviculture production of *Pinus taeda* (loblolly pine).

The more southern Gulf Coast Flatwoods region is flat and dominated by more open, less diverse forests of *Pinus elliotii* (slash pine), *Nyssa sylvatica* (black gum) and other woody tree species (red maple, sweet gum, oaks) tolerant of poorer and often sandy soils.

Bordering the bays of the coast is a relatively narrow band of saline marshland, whose dominant species associations depend greatly on the concentration of salt in the soil. The most common species is *Juncus roemerianus* (black rush) which dominates approximately 60% of these marshes (Eleuterius 1973). Other frequently encountered genera found in smaller patches and fringe areas are *Spartina* (cord grasses), *Scirpus* (three-square sedges), and *Eleocharis* (spike rush) with the specific species dependent upon salt conditions. Very little freshwater marshland is present within the drainage, although particular immediate shorelines to any of the streams can support small areas of only herbaceous species in the genera *Pontederia* (pickerel-weed), *Typha* (cattail), and *Sagittaria* (arrowhead).

PREVIOUS INVESTIGATIONS

A number of systematic or life history studies of individual species or species complexes published subsequent to 1950 have cited collection material from the St. Louis Bay drainage: Bailey and Suttkus (1952), Crawford (1956), Brown (1958), Collette (1962), Heins and Clemmer (1975), Heins and Bresnick (1975), Bailey and Robison (1978), Heins and Rooks (1984), Heins (1985), Warren (1992), Peterson and VanderKooy (1997), Rakocinski et al. (1997), and Thompson (1997). All species studied by these authors, except for the gulf logperch (Thompson, 1997), were taken at one or more sites during this study.

Several additional studies concerned with multiple species groups or larger geographical areas have contained species records from all or part of the St. Louis Bay drainage. Cook (1959) included records of 23 fish species from St. Louis Bay drainage. We note with interest that although *Fundulus olivaceus* (blackspotted topminnow) and *Fundulus notatus* (blackstripe topminnow) were considered to be conspecific at the time her book was published, she nevertheless listed both as species, although with some reservation. Cook (1959) also listed *Lepomis symmetricus*

(bantam sunfish) from 2 localities in the Jourdan River system. We did not obtain any specimens during the present study.

Caldwell (1966) collected 47 samples from the St. Louis Bay and Biloxi Bay drainages in southern Mississippi, most of which were taken with either nylon minnow seines or an English cast net. In total, he reported 2,656 specimens representing 46 species from his study area; of these, 39 species were taken from 14 collecting sites in the St. Louis Bay drainage. Caldwell (1966) listed *Lepomis symmetricus*, a species not collected by us, from one site in the St. Louis Bay drainage.

As a part of the published report on the Gulf of Mexico Estuarine Inventory, Christmas and Waller (1973) reported the results of a one-year sampling effort, which covered 5 life zones in the coastal area and extended from the Louisiana-Mississippi state line to the Mississippi-Alabama state line. Although most species were distributed in one or more zones, the authors failed to include specific collection data. Only 4 species, *Ictalurus furcatus* (blue catfish), *Ictalurus punctatus* (channel catfish), *Lepomis megalotis* (longear sunfish), and *Micropterus punctulatus* (spotted bass), were specifically mentioned as occurring in their samples from the St. Louis Bay area. Interestingly, we did not obtain any blue catfish during this study.

During their study of the ecology, foods, and feeding habits of *Notropis longirostris* (longnose shiner) in Mississippi, Heins and Clemmer (1975) presented a list of 40 species taken from their primary study area in the St. Louis Bay drainage. Included in their list were 2 specimens of *Centrarchus macropterus* (Nier), one specimen of *Lepomis humilis* (orangespotted sunfish), and 3 specimens of *Etheostoma histrio* (harlequin darter). We did not collect any individuals of these 3 species during the present study.

Lorio and Capezza (1977) reported the collection of 2,182 specimens representing 62 species from 6 sites in the Jourdan River system. This was a mimeographed report and we do not know who identified the material. We question some of the identifications such as *Carcharhinus limbatus*, *Dasyatis americana*, *Lepisosteus platostomus*, *Morone americanus*, *Cynoscion nothus*, *Menidia audens*, and *Spheroides nephelus*, which are outside the known range. Also, they included *Ictiobus bubalus* (smallmouth buffalo), *Ictalurus furcatus* (blue catfish), *Morone mississippiensis* (yellow bass), *Morone saxatilis* (striped bass), *Lepomis humilis*, (orangespotted sunfish), *Pomoxis annularis* (white crappie), *Ammocrypta asprella* (crystal darter), *Percina caprodes* (logperch = *Percina suttkusi* Thompson (1997) = gulf logperch), and *Aplodinotus grunniens* (freshwater drum), none of which were taken during our study.

Swift et al. (1986) reported 58 freshwater fish species in the St. Louis Bay drainage, but we counted 59 in their expanded table 7.1, at the end of the chapter. They also included 9 euryhaline species which brought the total number of species to 68. Several freshwater species included in their list, *Fundulus notatus* (blackstripe topminnow), *Centrarchus macropterus* (flier), *Lepomis humilis* (orangespotted sunfish), *Lepomis symmetricus* (bantam sunfish), *Pomoxis annularis* (white crappie), *Etheostoma chlorosomum* (bluntnose darter), and *E. histrio* (harlequin darter), were not represented during our study. We are uncertain if these records were based on examination of preserved specimens or a review of published literature records.

MATERIALS AND METHODS

Most fishes were collected with a 10' (3.05 m) long by 6' (1.83 m) deep nylon minnow seine having a 3/16" (1.59 mm) ace mesh. A 40' (12.19 m) long bag seine was used to sample selected shoreline sites of St. Louis Bay. All specimens were preserved in a 10% aqueous formalin solution in the field and transported to the Tulane University Museum of Natural History in Belle Chasse, Louisiana, where they were sorted and the associated fish species were identified, numerated, and catalogued into the fish collection.

Collection dates extended from 29 October 1950 to and including 6 October 1989. Most of the collections were made by 2 of the authors (RDS and DAW) with student help. The other major contributor was Stephen O. Rohmann (SRO), a former student of the late Dr. Gerald E. Gunning. Rohmann (1983) sampled at 11 sites along Wolf River and compared fish composition with various physical and chemical parameters. The following individuals collected one or a few samples: D.C. Heins (DCH), M. Heit (MH), L.M. Jones (LMJ), J. Jordan (JJ), D.E. Lesley (DEL), R.R. Lubritz (RRL), R.J. Miller (RJM), A. Painter (AP), B.A. Thompson (BAT), P.R. Wagner (PRW), and J.D. Willis (JDW). We did not utilize or plot any material or literature records housed at other institutions.

All sites were initially plotted on U.S. Geological Survey 7.5 minute topographic maps and subsequently transferred to a hand-drawn basemap. Darkened circles indicate species present on individual distribution maps; open circles indicate species absence. Species distribution maps are based only on fishes housed at the Tulane University Museum of Natural History.

Collection data given for each of the 126 sample sites includes stream name or site location, county, TRS coordinates, collection number and date, number of

species and specimens collected at the site, and a total list of species (Appendix). Families are arranged in phylogenetic order and species within families in alphabetical order as given in the 1991 scientific and common names checklist (Robbins et al. 1991), even though the authors have reservations concerning the placement of some species, for instance *Hybopsis winchelli* in the genus *Notropis*.

The vegetation map was compiled primarily from 2 sources. Infrared aerial photos available at Stennis Space Center, Mississippi, were used as a starting point. Much of this information was ground truthed by physical observation and examination to confirm vegetation types. Photographs of habitats in St. Louis Bay drainage were taken in August and September 1997.

RESULTS AND DISCUSSION

A total of 261 collections taken at 126 sites (Figure 11) during the study resulted in the collection of 75,625 specimens which represented 124 species plus 2 hybrid sunfish combinations.

Slightly more than 99% (74,889) of the specimens collected during the study represented 66 species. Each of the remaining 58 species plus the 2 sunfish hybrids contributed less than 1% of the total number of specimens. The bay anchovy *Anchoa mitchilli* was the most abundant species, represented by 10,901 specimens and comprising 14.4% of the total specimens collected. *Cyprinella venusta* (blacktail shiner) was the 2nd most abundant with 7,524 specimens and made up 10.0% of the total. *Brevoortia patronus* (gulf menhaden) was the 3rd most abundant with 7,203 specimens or 9.5% of the total.

Fundulus olivaceus (blackspotted topminnow) and *Lepomis macrochirus* (bluegill) were taken at 80 (63.5%) of the 126 collecting sites. *Lepomis megalotis* (longear sunfish) was taken at 77 sites (61.1%), *Percina nigrofasciata* (blackbanded darter) at 61 sites (48.4%), *Labidesthes sicculus* (brook silverside) and *Micropterus salmoides* (largemouth bass) were each taken at 59 sites (46.8%). *Cyprinella venusta* (blacktail shiner) was taken at 58 sites (46.0%) and *Lythrurus roseipinnis* (cherryfin shiner) was taken at 57 sites (45.2%).

The 261 collections were not evenly distributed amongst the 12 calendar months. January was represented by a single collection; February—14 collections; March—41 collections; April—13 collections; May—27 collections; June—34 collections; July—35 collections; August—18 collections; September—29 collections; October—26 collections; November—8 collections; and December—15 collections.

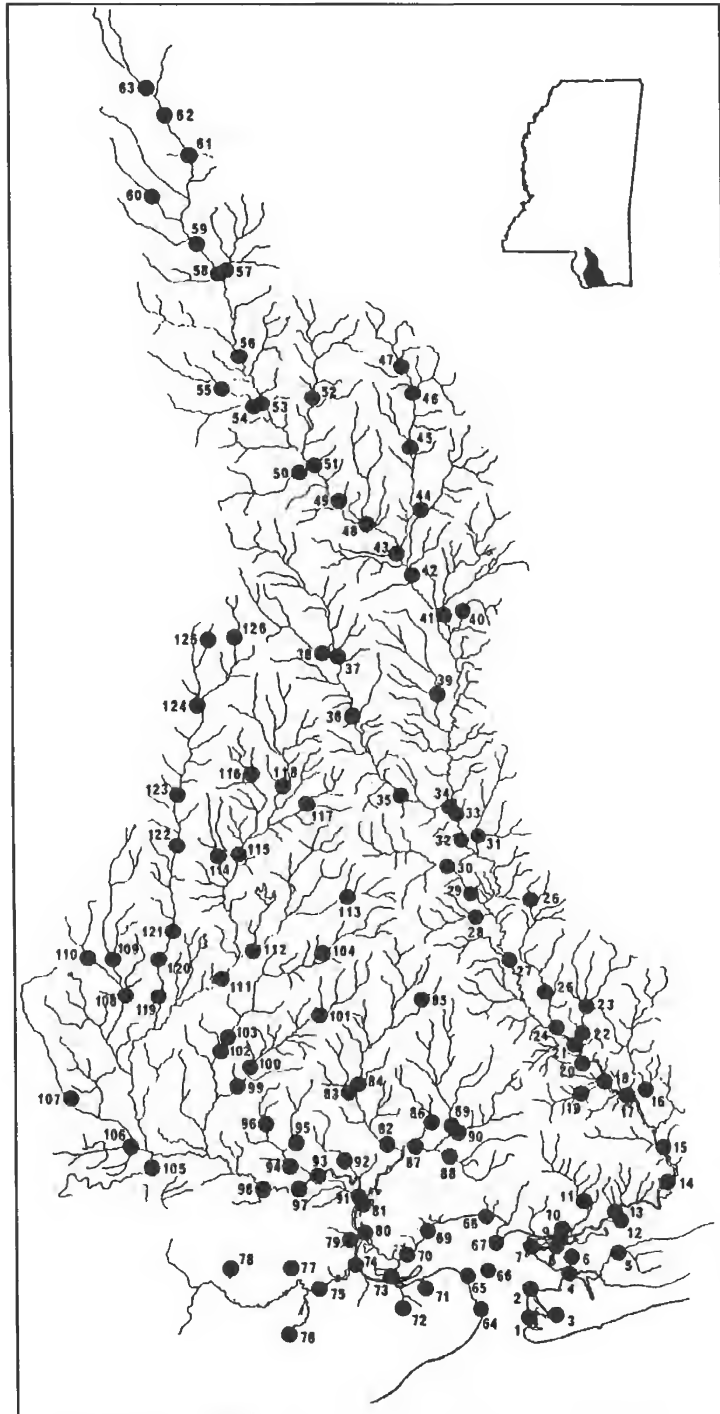


Figure 11. Collecting sites in the St. Louis Bay drainage, Mississippi.

The brackish areas of St. Louis Bay and the tidal sections of the rivers support a diversity of species during the different seasons. A few tolerant freshwater species frequent the tidal areas. There are marine species that live and spawn in brackish waters such as *Anchoa mitchilli* (bay anchovy), *Strongylura marina* (Atlantic needlefish), *Syngnathus scovelli* (gulf pipefish), and *Menidia beryllina s.s.* (tidewater silverside) and are typical examples of brackish water species (Suttkus 1967). Several marine species spawn outside of the bay, in the sound or around the barrier islands, but young and juvenile development takes place in the brackish areas. *Brevoortia patronus* (gulf menhaden), *Bairdiella chrysoura* (silver perch), *Leiostomus xanthurus* (spot), *Micropogonias undulatus* (Atlantic croaker), and *Lagodon rhomboides* (pinfish) are examples of this group.

COLLECTING SITES IN THE ST. LOUIS BAY DRAINAGE OF SOUTHERN MISSISSIPPI

Sites are numbered sequentially (1 through 126) from the east side of the mouth of the bay, up the tributaries in a counter clockwise direction around the bay (Figure 11). Each site is given, followed by field collection numbers, the respective dates of collection, number of species and specimens taken at each site, and a listing of species taken at the site.

1. St. Louis Bay along east shore at U.S. Highway 90, Harrison Co.; T8S, R13W, Sec. 28; RRL 5-55, DAW 47, DAW 91, RDS 8735, DAW 98, RDS 8903; 8 May 1955, 17 Jun 1984, 13 Sep 1984, 1 May 1985, 6 Aug 1985, 4 Oct 1984; 42 species, 3,876 specimens. Species: *Dasyatis sabina*, *Elops saurus*, *Brevoortia patronus*, *Dorosoma petenense*, *Harengula jaguana*, *Anchoa hepsetus*, *A. mitchilli*, *Arius felis*, *Synodus foetens*, *Gobiesox strumosus*, *Strongylura marina*, *Fundulus similis*, *Gambusia affinis*, *Membras martinica*, *Menidia beryllina*, *Syngnathus louisianae*, *Prionotus scitulus*, *P. tribulus*, *Chloroscombrus chrysurus*, *Oligoplites saurus*, *Trachinotus carolinus*, *T. falcatius*, *Archosargus probatocephalus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Cynoscion arenarius*, *C. nebulosus*, *Leiostomus xanthurus*, *Menticirrhus americanus*, *Micropogonias undulatus*, *Pogonias cromis*, *Sciaenops ocellatus*, *Mugil cephalus*, *M. curema*, *Hypsoblennius ionthas*, *Gobionellus boleosoma*, *Gobiosoma bosc*, *Citharichthys spilopterus*, *Paralichthys lethostigma*, *Symphurus plagiusa*, *Trinectes maculatus*, and *Sphoeroides parvus*.

2. St. Louis Bay along east shore at mouth of Mallini Bayou, Harrison Co.; T8S, R13W, Sec. 22; DAW 107, 25 Aug 1985; 24 species, 877 specimens. Species: *Dasyatis sabina*, *Harengula jaguana*, *Anchoa hepsetus*, *A. mitchilli*, *Arius felis*, *Fundulus similis*, *Membras martinica*, *Menidia beryllina*, *Syngnathus louisianae*, *Oligoplites saurus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Cynoscion arenarius*, *C. nebulosus*, *Leiostomus xanthurus*, *Menticirrhus americanus*, *Micropogonias undulatus*, *Mugil cephalus*, *M. curema*, *Gobionellus oceanicus*, *Citharichthys spilopterus*, *Paralichthys lethostigma*, *Achirus lineatus*, and *Sphoeroides parvus*.

3. Tributary to Mallini Bayou, 1.0 mile (1.61 km) east of U.S. Highway 90, St. Louis Bay bridge, Harrison Co., T8S, R13W, Sec. 27, DAW 97, 6 Aug 1985; 12 species, 280 specimens. Species: *Anchoa mitchilli*, *Fundulus grandis*, *F. jenkinsi*, *F. pulvereus*, *Lucania parva*, *Gambusia affinis*, *Poecilia latipinna*, *Menidia beryllina*, *Lepomis macrochirus*, *L. microlophus*, *Micropterus salmoides*, and *Mugil cephalus*.

4. St. Louis Bay at mouth of Bayou Portage, Harrison Co.; T8S, R13W, Sec. 14; SOR 132, SOR 143, SOR 154, SOR 155, SOR 176, RDS 8276; 31 Mar 1981, 26 Jun 1981, 25 Sep 1981, 9 Dec 1981, 19 Mar 1982, 23 Oct 1983; 33 species, 1,891 specimens. Species: *Brevoortia patronus*, *Dorosoma petenense*, *Anchoa hepsetus*, *A. mitchilli*, *Arius felis*, *Gobiesox strumosus*, *Strongylura marina*, *Adinia xenica*, *Cyprinodon variegatus*, *Fundulus grandis*, *F. jenkinsi*, *F. pulvereus*, *F. similis*, *Poecilia latipinna*, *Membras martinica*, *Menidia beryllina*, *Syngnathus louisianae*, *Lepomis macrochirus*, *L. microlophus*, *Oligoplites saurus*, *Eucinostomus argenteus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Cynoscion arenarius*, *C. nebulosus*, *Leiostomus xanthurus*, *Sciaenops ocellatus*, *Mugil cephalus*, *Gobiosoma bosc*, *Microgobius gulosus*, *Achirus lineatus*, *Symphurus plagiusa*, and *Sphoeroides parvus*.

5. Bayou Portage near Indian Bayou at Pass Christian, Harrison Co.; T8S, R12W, Sec. 7; DAW 45; 17 Jun 1984; 13 species, 568 specimens. Species: *Lepisosteus oculatus*, *Brevoortia patronus*, *Anchoa mitchilli*, *Lucania parva*, *Menidia beryllina*, *Syngnathus scovelli*, *Lepomis microlophus*, *Micropterus salmoides*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Leiostomus xanthurus*, *Gobiosoma bosc*, and *Trinectes maculatus*.

6. Marsh pond on east side of West Whitman Road between Acadian and Portage bayous, Harrison Co.;

- T8S, R13W, Sec. 14; DAW 96, 6 Aug 1985; 8 species, 652 specimens. Species: *Cyprinodon variegatus*, *Lucania parva*, *Gambusia affinis*, *Heterandria formosa*, *Poecilia latipinna*, *Menidia beryllina*, *Lepomis macrochirus*, and *Micropterus salmoides*.
7. St. Louis Bay at mouth of Wolf River, Harrison Co.; T8S, R13W, Sec. 10; DEL 31, DAW 108; 23 Nov 1968, 25 Aug 1985; 23 species, 167 specimens. Species: *Anchoa hepsetus*, *Arius felis*, *Adinia xenica*, *Cyprinodon variegatus*, *Fundulus grandis*, *F. similis*, *Poecilia latipinna*, *Membras martinica*, *Menidia beryllina*, *Syngnathus scovelli*, *Prionotus tribulus*, *Oligoplites saurus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Cynoscion nebulosus*, *Micropogonias undulatus*, *Sciaenops ocellatus*, *Mugil cephalus*, *Gobionellus boleosoma*, *Gobiosoma bosc*, *Paralichthys lethostigma*, *Symphurus plagiatus*, and *Sphaeroides parvus*.
8. Wolf River near mouth of Acadian Bayou, Harrison Co.; T8S, R13W, Sec. 11; SOR 121, SOR 131, SOR 142, SOR 153, SOR 156, SOR 175, RDS 8275, 3 Jul 1980, 31 Mar 1981, 26 Jun 1981, 25 Sep 1981, 9 Dec 1981, 19 Mar 1982, 23 Oct 1983; 30 species, 3,045 specimens. Species: *Lepisosteus oculatus*, *Brevoortia patronus*, *Anchoa mitchilli*, *Cyprinella venusta*, *Gobiesox strumosus*, *Strongylura marina*, *Fundulus grandis*, *F. jenkinsi*, *F. similis*, *Lucania parva*, *Gambusia affinis*, *Poecilia latipinna*, *Menidia beryllina*, *Syngnathus louisianae*, *S. scovelli*, *Lepomis macrochirus*, *L. microlophus*, *Micropterus salmoides*, *Eucinostomus argenteus*, *Lagodon rhomboides*, *Cynoscion nebulosus*, *Leiostomus xanthurus*, *Chaetodipterus faber*, *Gobionellus shufeldti*, *Gobiosoma bosc*, *Microgobius gulosus*, *Paralichthys lethostigma*, *Achirus lineatus*, *Trinectes maculatus*, and *Sphaeroides parvus*.
9. Wolf River, 1.0 mile (1.61 km) south of Delisle on West Whitman Road, Harrison Co.; T8S, R13W, Sec. 11; DAW 95, 6 Aug 1985; 10 species, 480 specimens. Species: *Anchoa mitchilli*, *Notropis petersoni*, *Lucania parva*, *Menidia beryllina*, *Lepomis macrochirus*, *L. microlophus*, *Micropterus salmoides*, *Lagodon rhomboides*, *Gobiosoma bosc*, and *Trinectes maculatus*.
10. Wolf River tributary, about 1 mile (1.61 km) south of Delisle between Wolf River crossings, Harrison Co.; T8S, R13W, Sec. 11; DAW 46, 17 Jun 1984; 5 species, 170 specimens. Species: *Menidia beryllina*, *Lepomis megalotis*, *L. microlophus*, *Micropterus salmoides*, and *Paralichthys lethostigma*.
11. Bayou Delisle, 1.0 mile (1.61 km) east of Delisle, Harrison Co.; T8S, R13W, Sec. 2; DAW 43, 17 Jun 1984; 13 species, 473 specimens. Species: *Lepisosteus oculatus*, *Notropis petersoni*, *N. texanus*, *Erimyzon tenuis*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *Micropterus salmoides*, *Etheostoma fusiforme*, and *Trinectes maculatus*.
12. Wolf River, 1.2 miles (1.93 km) northwest Cuevas at Rouse Bridge, Harrison Co.; T8S, R12W, Sec. 6; PRW 11-69, SOR 130, SOR 141, SOR 152, SOR 157, SOR 174, RDS 8274; 21 Nov 1969, 31 Mar 1981, 26 Jun 1981, 25 Sep 1981, 9 Sep 1981, 9 Dec 1981, 19 Mar 1982, 23 Oct 1983; 37 species, 1,207 specimens. Species: *Lepisosteus osseus*, *Anguilla rostrata*, *Anchoa mitchilli*, *Cyprinella venusta*, *Notropis petersoni*, *N. texanus*, *Opsopoeodus emiliae*, *Esox niger*, *Strongylura marina*, *Fundulus chrysotus*, *F. grandis*, *F. jenkinsi*, *F. notti*, *F. olivaceus*, *F. pulvereus*, *Lucania parva*, *Gambusia affinis*, *Heterandria formosa*, *Poecilia latipinna*, *Labidesthes sicculus*, *Menidia beryllina*, *Syngnathus scovelli*, *Enneacanthus gloriosus*, *Lepomis gulosus*, *L. macrochirus*, *L. marginatus*, *L. megalotis*, *L. microlophus*, *L. punctatus*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma fusiforme*, *Eucinostomus argenteus*, *Dormitator maculatus*, *Gobionellus shufeldti*, *Microgobius gulosus*, and *Trinectes maculatus*.
13. Marsh pools along Wolf River just north of Rouse Bridge, Harrison Co.; T8S, R12W, Sec. 6; DAW 44, RDS 8734; 17 Jun 1984, 1 May 1985; 27 species, 1,653 specimens. Species: *Lepisosteus oculatus*, *Anchoa mitchilli*, *Notropis petersoni*, *Erimyzon tenuis*, *Esox niger*, *Cyprinodon variegatus*, *Fundulus chrysotus*, *F. grandis*, *F. jenkinsi*, *F. pulvereus*, *Lucania parva*, *Gambusia affinis*, *Heterandria formosa*, *Poecilia latipinna*, *Labidesthes sicculus*, *Menidia beryllina*, *Syngnathus scovelli*, *Enneacanthus gloriosus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Pomoxis nigromaculatus*, *Etheostoma fusiforme*, and *Trinectes maculatus*.
14. Wolf River at Tucker Road, Harrison Co.; T7S, R12W, Sec. 33; SOR 129, SOR 140, SOR 151, SOR 158, SOR 173; 31 Mar 1981, 26 Jun 1981, 25 Sep 1981, 9 Dec 1981, 19 Mar 1982; 18 species, 546 specimens. Species: *Cyprinella venusta*, *Notropis longirostris*, *N. petersoni*, *N. texanus*, *N. winchelli*, *Moxostoma poecilurum*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis macrochirus*,

L. megalotis, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma swaini*, *Percina nigrofasciata*, *Gobionellus shufeldti*, and *Trinectes maculatus*.

15. Wolf River at Interstate 10, Harrison Co.; T7S, R12W, Sec. 21; SOR 128, SOR 139, SOR 150, SOR 159, SOR 172, RDS 8273, DAW 23, RDS 9709; 28 Mar 1981, 26 Jun 1981, 12 Sep 1981, 9 Dec 1981, 19 Mar 1982, 23 Oct 1983, 29 Apr 1984, 21 Oct 1988; 37 species, 3,804 specimens. Species: *Cyprinella venusta*, *Notemigonus crysoleucas*, *Notropis longirostris*, *N. petersoni*, *N. texanus*, *N. winchelli*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Hypentelium nigricans*, *Mintytrema melanops*, *Moxostoma poecilurum*, *Noturus leptacanthus*, *Esox americanus*, *E. niger*, *Aphredoderus sayanus*, *Fundulus chrysotus*, *F. notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. microlophus*, *L. punctatus*, *Micropterus punctulatus*, *M. salmoides*, *Pomoxis nigromaculatus*, *Ammocrypta beani*, *Etheostoma fusiforme*, *E. lynceum*, *E. stigmaeum*, *E. swaini*, *Percina nigrofasciata*, and *Trinectes maculatus*.

16. Wolf River at mouth of Big Creek, Harrison Co.; T7S, R12W, Sec. 7; RDS 8518, 5 Oct 1984; 14 species, 385 specimens. Species: *Cyprinella venusta*, *Notropis longirostris*, *N. texanus*, *N. winchelli*, *Opsopoeodus emiliae*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.

17. Big Creek, 2.5 miles (4.02 km) north of Interstate 10, Harrison Co.; T7S, R12W, Sec. 8; DAW 24, 29 Apr 1984; 18 species, 131 specimens. Species: *Lythrurus roseipinnis*, *Notropis signipinnis*, *N. texanus*, *Erimyzon tenuis*, *Noturus funebris*, *Esox americanus*, *E. niger*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis cyanellus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Etheostoma swaini*, and *Percina nigrofasciata*.

18. Wolf River at mouth of unnamed tributary, Harrison Co.; T7S, R13W, Sec. 12; RDS 8517, 5 Oct 1984; 23 species, 799 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *N. volucellus*, *N. winchelli*, *Opsopoeodus emiliae*, *Hypentelium nigricans*, *Noturus miurus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. macrochirus*,

L. megalotis, *L. punctatus*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma fusiforme*, *E. stigmaeum*, *Percina nigrofasciata*, and *Trinectes maculatus*.

19. Tributary to Wolf River about 2.5 miles (4.02 km) north of Interstate 10, north of Delisle, Harrison Co.; T7S, R13W, Sec. 12; DAW 65, 7 Jul 1984; 17 species, 247 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. signipinnis*, *N. texanus*, *N. winchelli*, *Erimyzon sucetta*, *Fundulus notti*, *F. olivaceus*, *Ambloplites ariommus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.

20. Wolf River at swamp tributary entering from west, Harrison Co.; T7S, R13W, Sec. 2; RDS 8516, 5 Oct 1984; 26 species, 446 specimens. Species: *Lepisosteus osseus*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notemigonus crysoleucas*, *Notropis longirostris*, *N. texanus*, *Hypentelium nigricans*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis cyanellus*, *L. gulosus*, *L. macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. swaini*, *Percina nigrofasciata*, and *Trinectes maculatus*.

21. Wolf River at mouth of Pole Creek, Harrison Co.; T6S, R13W, Sec. 35; RDS 8515, 5 Oct 1984; 22 species, 509 specimens. Species: *Cyprinella venusta*, *Notropis longirostris*, *N. texanus*, *N. winchelli*, *Opsopoeodus emiliae*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Ictalurus punctatus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. microlophus*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma fusiforme*, *E. stigmaeum*, *Percina nigrofasciata*, and *Trinectes maculatus*.

22. Pole Branch, about 5 miles (8.05 km) north of Interstate 10, Harrison Co.; T6S, R13W, Sec. 35; DAW 25, 29 Apr 1984; 14 species, 108 specimens. Species: *Cyprinella venusta*, *Notropis signipinnis*, *N. texanus*, *Erimyzon tenuis*, *Ameiurus natalis*, *Noturus funebris*, *N. leptacanthus*, *Fundulus olivaceus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.

23. Pole Branch, 3.0 miles (4.82 km) south of Lizana, Harrison Co.; T6S, R13W, Sec. 26; DAW 29, 10 May 1984; 12 species, 392 specimens. Species: *Notropis*

- signipinnis*, *Noturus funebris*, *Aphredoderus sayanus*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus salmoides*, *Etheostoma swaini*, and *Percina nigrofasciata*.
24. Wolf River near Lizana, Harrison Co.; T6S, R13W, Sec. 34; SOR 120, SOR 127, SOR 138, SOR 149, SOR 160, SOR 171, RDS 8277, DAW 27; 3 Jul 1980, 28 Mar 1981, 12 Jun 1981, 12 Sep 1981, 10 Dec 1981, 18 Mar 1982, 23 Oct 1983, 29 Apr 1984; 27 species, 1,628 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *N. volucellus*, *N. winchelli*, *Opsopoeodus emiliae*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis cyanellus*, *L. macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma fusiforme*, *E. lynceum*, *E. stigmaeum*, *Percina nigrofasciata*, and *Trinectes maculatus*.
25. Sandy Creek, 3.0 miles (4.82 km) southwest of Lizana, Harrison Co.; T6S, R13W, Sec. 22; DAW 26, 29 Apr 1984; 13 species, 328 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Hypentelium nigricans*, *Moxostoma poecilurum*, *Noturus miurus*, *Fundulus olivaceus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Etheostoma swaini*, and *Percina nigrofasciata*.
26. Tributary to Bay Branch about 3 miles (4.82 km) west of Lizana, Harrison Co.; DAW 31, 10 May 1984; 3 species, 4 specimens. Species: *Erimyzon sucetta*, *Esox americanus*, and *Fundulus notti*.
27. Wolf River and tupelo swamp about 4 miles (6.44 km) west southwest of Lizana, Harrison Co.; T6S, R13W, Sec. 16; DAW 30, 10 May 1984; 8 species, 37 specimens. Species: *Cyprinella venusta*, *Notropis longirostris*, *Fundulus olivaceus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, and *Percina nigrofasciata*.
28. Tributary to Wolf River about 4.5 miles (7.24 km) west of Lizana, south of Bell Creek, Harrison Co.; T6S, R13W, Sec. 6; DAW 66, 7 Jul 1984; 11 species, 95 specimens. Species: *Lythrurus roseipinnis*, *N. signipinnis*, *Erimyzon sucetta*, *E. tenuis*, *Esox americanus*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Lepomis megalotis*, *L. punctatus*, *Etheostoma swaini*, and *Percina nigrofasciata*.
29. Bell Creek, about 5.5 miles (8.85 km) west northwest of Lizana, Harrison Co.; T5S, R13W, Sec. 31; DAW 35, 10 May 1984; 12 species, 329 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Hypentelium nigricans*, *Noturus leptacanthus*, *N. miurus*, *Fundulus olivaceus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.
30. Bell Creek at Highway 53, Hancock Co.; T5S, R14W, Sec. 25; DAW 19, 31 Mar 1984; 20 species, 262 specimens. Species: *Ichthyomyzon gagei*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Hypentelium nigricans*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Fundulus olivaceus*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma parvipinne*, *E. stigmaeum*, and *Percina nigrofasciata*.
31. Mill Creek at Highway 53, Harrison Co.; T5S, R13W, Sec. 19; DAW 32, 10 May 1984; 7 species, 32 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis signipinnis*, *Fundulus olivaceus*, *Lepomis megalotis*, *L. punctatus*, and *Percina nigrofasciata*.
32. Wolf River, 7.6 miles (12.23 km) northwest of Lizana, Highway 53, Harrison Co.; T5S, R13W, Sec. 19; RDS 5319, SOR 119, SOR 126, SOR 137, SOR 148, SOR 161, SOR 170, DAW 33; 23 Sep 1972, 3 Jul 1980, 28 Mar 1981, 12 Jun 1981, 12 Sep 1981, 10 Dec 1981, 18 Mar 1982, 10 May 1984; 28 species, 1,945 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notemigonus crysoleucas*, *Notropis longirostris*, *N. texanus*, *N. volucellus*, *N. winchelli*, *Opsopoeodus emiliae*, *Minytrema melanops*, *Moxostoma poecilurum*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis cyanellus*, *L. gulosus*, *L. macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, *Percina nigrofasciata*, and *Trinectes maculatus*.
33. Wolf River from 0.5 mile (0.8 km) above, down to the mouth of Crane Creek, Hancock Co.; T5S, R14W, Sec. 13; RDS 8461, 21 Jul 1984; 14 species, 730 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. winchelli*, *Hypentelium nigricans*, *Moxostoma poecilurum*, *Ictalurus punctatus*, *Fundulus olivaceus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma stigmaeum*, *Percina nigrofasciata*, and *Trinectes maculatus*.

34. Crane Creek, Hancock Co.; T5S, R14W, Sec. 13; RDS 8460, 21 Jul 1984; 15 species, 288 specimens. Species: *Anguilla rostrata*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Hypentelium nigricans*, *Moxostoma poecilurum*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, and *Percina nigrofasciata*.
35. Crane Creek at Crane Creek Road, about 2.5 miles (4.02 km) northeast of Necaie, Hancock Co.; T5S, R14W, Sec. 10; DAW 34, 10 May 1984; 15 species, 206 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Hypentelium nigricans*, *Noturus miurus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
36. Crane Creek, about 5 air miles (8.05 km) southwest of Silver Run and one mile (1.61 km) east of Highway 53, Pearl River Co.; T4S, R14W, Sec. 29; DAW 54, 24 Jun 1984; 10 species, 55 specimens. Species: *Lythrurus roseipinnis*, *Notropis signipinnis*, *N. texanus*, *Fundulus olivaceus*, *Noturus leptacanthus*, *Lepomis megalotis*, *Micropterus salmoides*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
37. Crane Creek, about 5 air miles (8.05 km) southeast of Savannah, Pearl River Co.; T4S, R14W, Sec. 17; DAW 39, 16 Jun 1984; 9 species, 170 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis signipinnis*, *N. texanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
38. Redfish Creek, about 5 air miles (8.05 km) southeast of Savannah, Pearl River Co.; T4S, R14W, Sec. 18; DAW 40, 16 Jun 1984; 10 species, 71 specimens. Species: *Lythrurus roseipinnis*, *Notropis signipinnis*, *Noturus funebris*, *Esox americanus*, *Fundulus notti*, *F. olivaceus*, *Lepomis megalotis*, *L. punctatus*, *Etheostoma swaini*, and *Percina nigrofasciata*.
39. Pen Branch, about 4 air miles (6.44 km) south of Silver Run, Pearl River Co.; T4S, R14W, Sec. 24; DAW 55, 24 Jun 1984; 11 species, 91 specimens. Species: *Erimyzon tenuis*, *Esox americanus*, *E. niger*, *Aphredoderus sayanus*, *Fundulus notti*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus salmoides*, and *Etheostoma fusiforme*.
40. Tributary to Wolf River 0.5 mile (0.8 km) east of Silver Run, Stone Co.; T4S, R13W, Sec. 6; DAW 87, 2 Sep 1984; 3 species, 10 specimens. Species: *Lepomis megalotis*, *L. microlophus*, and *Micropterus salmoides*.
41. Wolf River near Silver Run, Pearl River Co.; T4S, R14W, Sec. 1; SOR 118, SOR 125, SOR 136, SOR 147, SOR 162, SOR 169; 3 Jul 1980, 28 Mar 1981, 12 Jun 1981, 12 Sep 1981, 10 Dec 1981, 18 Mar 1982; 16 species, 616 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *Noturus leptacanthus*, *N. miurus*, *N. nocturnus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, and *Percina nigrofasciata*.
42. Wolf River, 1.5 air miles (2.41 km) northwest of Silver Run, Pearl River Co.; T3S, R14W, Sec. 35; RDS 8522, 6 Oct 1984; 12 species, 551 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. volucellus*, *N. winchelli*, *Moxostoma poecilurum*, *Fundulus olivaceus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, and *Percina nigrofasciata*.
43. Wolf River at mouth of Murder Creek, Pearl River Co.; T3S, R14W, Sec. 27; RDS 8521, 6 Oct 1984; 15 species, 424 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. volucellus*, *N. winchelli*, *Moxostoma poecilurum*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.
44. Juniper Creek, about 5 miles (8.05 km) north of Silver Run, Pearl River Co.; T3S, R14W, Sec. 14; DAW 41, 16 Jun 1984; 12 species, 132 specimens. Species: *Anguilla rostrata*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *Moxostoma poecilurum*, *Noturus funebris*, *Fundulus olivaceus*, *Ambloplites ariommus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus salmoides*, and *Percina nigrofasciata*.
45. Murder Creek, about 6 air miles (9.65 km) north of Silver Run, Pearl River Co.; T3S, R14W, Sec. 3; DAW 42, 16 Jun 1984; 6 species, 43 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Lepomis macrochirus*, *Etheostoma lynceum*, *E. stigmaeum*, and *Percina nigrofasciata*.

46. Murder Creek and tributary at Highway 26, Pearl River Co.; T2S, R14W, Sec. 23; DAW 86, RDS 8672, RDS 8733, RDS 9732, RDS 9958; 2 Sep 1984, 4 Mar 1985, 1 May 1985, 2 Dec 1988, 6 Oct 1989; 25 species, 786 specimens. Species: *Ichthyomyzon gagei*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *N. signipinnis*, *N. winchelli*, *Erimyzon tenuis*, *Hypentelium nigricans*, *Minytrema melanops*, *Moxostoma poecilurum*, *Noturus funebris*, *N. leptacanthus*, *Esox americanus*, *Aphredoderus sayanus*, *Fundulus notti*, *F. olivaceus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus salmoides*, *Etheostoma lynceum*, *E. swaini*, and *Percina nigrofasciata*.
47. Murder Creek, 1.0 mile (1.61 km) north of Highway 26, Pearl River Co.; T2S, R14W, Sec. 15; DAW 85, 2 Sep 1984; 6 species, 54 specimens. Species: *Lythrurus roseipinnis*, *Notropis signipinnis*, *Erimyzon tenuis*, *Fundulus olivaceus*, *Lepomis macrochirus*, and *L. megalotis*.
48. Wolf River at mouth of Cowpen Creek, Pearl River Co.; T3S, R14W, Sec. 21; RDS 8520, 6 Oct 1984; 19 species, 711 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *N. volucellus*, *N. winchelli*, *Hypentelium nigricans*, *Moxostoma poecilurum*, *Noturus funebris*, *N. leptacanthus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. megalotis*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, and *Percina nigrofasciata*.
49. Wolf River at mouth of unnamed tributary (from left side), Pearl River Co.; T3S, R14W, Sec. 17; RDS 8519, 6 Oct 1984; 19 species, 400 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *Erimyzon tenuis*, *Hypentelium nigricans*, *Moxostoma poecilurum*, *Noturus leptacanthus*, *N. miurus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.
50. Mill Creek, tributary to Wolf River 6.0 air miles (9.65 km) east southeast of Poplarville, Pearl River Co.; T3S, R15W, Sec. 12; RDS 8411, 23 May 1984; 16 species, 186 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *Minytrema melanops*, *Noturus leptacanthus*, *Esox niger*, *Fundulus olivaceus*, *Gambusia affinis*, *Lepomis cyanellus*, *L. macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma lynceum*, *E. stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
51. Wolf River just above mouth of Mill Creek at Progress Church, Pearl River Co.; T3S, R14W, Sec. 6; SOR 124, SOR 135, SOR 146, SOR 163, SOR 168, DAW 88; 15 Mar 1981, 12 Jun 1981, 12 Sep 1981, 11 Dec 1981, 18 Mar 1982, 2 Sep 1984; 25 species, 501 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *N. volucellus*, *Opsopoeodus emiliae*, *Hypentelium nigricans*, *Minytrema melanops*, *Moxostoma poecilurum*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
52. Alligator Creek at Highway 26, Pearl River Co.; T2S, R14W, Sec. 30; DAW 84, 2 Sep 1984; 19 species, 378 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *Opsopoeodus emiliae*, *Erimyzon sucetta*, *E. tenuis*, *Moxostoma poecilurum*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Etheostoma fusiforme*, *E. stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
53. Wolf River at Highway 26, Pearl River Co.; T2S, R15W, Sec. 26; JJ 67-28, LMJ 67-30, SOR 117, SOR 123, SOR 134, SOR 145, SOR 164, SOR 167, DAW 83, RDS 8732; 15 Apr 1967, 16 Apr 1967, 3 Jul 1980, 15 Mar 1981, 12 Jun 1981, 12 Sep 1981, 11 Dec 1981, 18 Mar 1982, 2 Sep 1984, 1 May 1985; 33 species, 2,136 specimens. Species: *Ichthyomyzon gagei*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *N. volucellus*, *N. winchelli*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Hypentelium nigricans*, *Minytrema melanops*, *Moxostoma poecilurum*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma lynceum*, *E. stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
54. Poplar Springs Branch, tributary to Wolf River, 4.5 miles (7.24 km) east of Poplarville, Highway 26, Pearl

- River Co.; T2S, R15W, Sec. 26; RDS 8359, 24 Feb 1984; 12 species, 164 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus salmoides*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
55. Beaverdam Creek at Interstate 59, 0.3 mile (.48 km) north of Highway 26, Pearl River Co.; T2S, R15W, Sec. 21; DAW 64, 1 Jul 1984; 12 species, 264 specimens. Species: *Lythrurus roseipinnis*, *Notropis texanus*, *Opsopoeodus emiliae*, *Esox americanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus salmoides*, *Etheostoma swaini*, and *Percina nigrofasciata*.
56. Wolf River at Interstate Highway 59, 2.1 miles (3.38 km) north of Poplarville exit (Highway 26), Pearl River Co.; T2S, R15W, Sec. 15; RDS 4664, PRW-Nov 69, PRW-Dec 69, RDS 4749, RDS 4763, RDS 4768, BAT 70-255, SOR 116, SOR 122, SOR 133, SOR 144, SOR 165, SOR 166; 24 Oct 1969, 30 Nov 1969, 30 Dec 1969, 18 Apr 1970, 10 May 1970, 9 Jun 1970, 30 Jul 1970, 3 Jul 1980, 15 Mar 1981, 12 Jun 1981, 12 Sep 1981, 11 Dec 1981, 18 Mar 1982; 38 species, 3,424 specimens. Species: *Ichthyomyzon gagei*, *Anguilla rostrata*, *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis chalybaeus*, *N. longirostris*, *N. texanus*, *N. volucellus*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Hypentelium nigricans*, *Minytrema melanops*, *Moxostoma poecilurum*, *Ameiurus natalis*, *Noturus funebris*, *N. leptacanthus*, *N. miurus*, *Esox americanus*, *E. niger*, *Aphredoderus sayanus*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma fusiforme*, *E. lynceum*, *E. stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
57. Mill Creek at Hillsdale Road, 0.3 mile (0.48 km) east of Hillsdale, Pearl River Co.; T1S, R15W, Sec. 28; DAW 57, 1 Jul 1984; 8 species, 88 specimens. Species: *Lythrurus roseipinnis*, *N. signipinnis*, *Minytrema melanops*, *Esox niger*, *Fundulus olivaceus*, *Lepomis megalotis*, *Etheostoma swaini*, and *Percina nigrofasciata*.
58. Wolf Creek (River) at Hillsdale Road at Hillsdale, Pearl River Co.; T1S, R15W, Sec. 33; DAW 58, 1 Jul 1984; 17 species, 265 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis chalybaeus*, *N. signipinnis*, *N. texanus*, *Notropis winchelli*, *Erimyzon tenuis*, *Minytrema melanops*, *Noturus funebris*, *N. leptacanthus*, *Esox niger*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. megalotis*, *Etheostoma swaini*, and *Percina nigrofasciata*.
59. Wolf Creek (River) at U.S. Highway 11 near Orrisville, Pearl River Co.; T1S, R15W, Sec. 20; DAW 59, 1 Jul 1984; 3 species, 13 specimens. Species: *Lythrurus roseipinnis*, *Fundulus notti*, and *F. olivaceus*.
60. Boggy Branch, about 8 miles (12.87 km) north of Poplarville, Pearl River Co.; T1S, R16W, Sec. 12; DAW 60, 1 Jul 1984; 7 species, 32 specimens. Species: *Notropis signipinnis*, *Erimyzon tenuis*, *Ameiurus natalis*, *Esox americanus*, *E. niger*, *Fundulus notti*, and *Micropterus salmoides*.
61. Wolf Creek (River), about 2 air miles (3.22 km) south of Lamar County line, Pearl River Co.; T1S, R15W, Sec. 5; DAW 61, 1 Jul 1984; 12 species, 117 specimens. Species: *Lythrurus roseipinnis*, *Notropis chalybaeus*, *N. signipinnis*, *N. texanus*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Lepomis gulosus*, and *L. megalotis*.
62. Wolf Creek (River) at Pearl River and Lamar County line, Pearl River Co.; T1N, R15W, Sec. 29; DAW 62, 1 Jul 1984; 14 species, 52 specimens. Species: *Notemigonus crysoleucas*, *Notropis chalybaeus*, *N. texanus*, *Minytrema melanops*, *Esox americanus*, *E. niger*, *Aphredoderus sayanus*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, and *Micropterus salmoides*.
63. Wolf Creek (River), 1.5 air miles (2.42 km) north of Pearl River County line, Lamar Co.; T1N, R15W, Sec. 19; DAW 63, 1 Jul 1984; 7 species, 28 specimens. Species: *Notemigonus crysoleucas*, *Lythrurus roseipinnis*, *Minytrema melanops*, *Esox americanus*, *Fundulus olivaceus*, *Lepomis gulosus*, and *L. macrochirus*.
64. St. Louis Bay along west shore at U.S. Highway 90, Hancock Co.; T8S, R13W, Sec. 20; DAW 21, DAW 48, DAW 92; 31 Mar 1984, 17 Jun 1984, 13 Sep 1984; 26 species, 7,547 specimens. Species: *Dasyatis sabina*, *Myrophis punctatus*, *Brevoortia patronus*, *Harengula jaguana*, *Anchoa hepsetus*, *A. mitchilli*, *Arius felis*, *Strongylura marina*, *Membras martinica*, *Syngnathus scovelli*, *Chloroscombrus chrysurus*, *Oligoplites saurus*, *Selene vomer*, *Trachinotus carolinus*, *Archosargus probatocephalus*, *Lagodon rhomboides*, *Cynoscion*

- arenarius*, *Leiostomus xanthurus*, *Menticirrhus americanus*, *Micropogonias undulatus*, *Mugil cephalus*, *M. curema*, *Gobionellus shufeldti*, *Peprilus alepidotus*, *Paralichthys lethostigma*, and *Sphoeroides parvus*.
65. St. Louis Bay along west shore at Cowand Point, Hancock Co.; T8S, R13W, Sec. 18; DAW 104, DAW 114; 12 Aug 1985, 19 Oct 1985; 25 species 643 specimens. Species: *Dasyatis sabina*, *Harengula jaguana*, *Anchoa hepsetus*, *A. mitchilli*, *Arius felis*, *Fundulus grandis*, *F. similis*, *Membras martinica*, *Menidia beryllina*, *Prionotus tribulus*, *Oligoplites saurus*, *Lobotes surinamensis*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Cynoscion arenarius*, *C. nebulosus*, *Leiostomus xanthurus*, *Menticirrhus americanus*, *Pogonias cromis*, *Mugil cephalus*, *Paralichthys lethostigma*, *Achirus lineatus*, *Symphurus plagiusa*, *Monacanthus hispidus*, and *Sphoeroides parvus*.
66. St. Louis Bay, Hancock Co.; T8S, R13W; AP, 11 Sep 1953; 2 species, 2 specimens. Species: *Opsanus beta* and *Chilomycterus schoepfi*.
67. St. Louis Bay at Grassy Point, Harrison Co.; T8S, R13W, Sec. 8; DAW 106, 25 Aug 1985; 11 species, 259 specimens. Species: *Harengula jaguana*, *Anchoa hepsetus*, *A. mitchilli*, *Menidia beryllina*, *Oligoplites saurus*, *Archosargus probatocephalus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Micropogonias undulatus*, *Pogonias cromis*, and *Sphoeroides parvus*.
68. St. Louis Bay along north shore at mouth of creek, Harrison Co.; T8S, R13W, Sec. 5; MH and DEL 68-3, 11 Oct 1968; 6 species, 20 specimens. Species: *Anchoa mitchilli*, *Adinia xenica*, *Fundulus grandis*, *Sciaenops ocellatus*, *Mugil cephalus*, and *Gobionellus boleosoma*.
69. St. Louis Bay at mouth of Brewer Bayou, Hancock Co.; T8S, R14W, Sec. 12; DAW 103, 12 Aug 1985; 8 species, 50 specimens. Species: *Anchoa mitchilli*, *Oligoplites saurus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Leiostomus xanthurus*, *Micropogonias undulatus*, *Mugil cephalus*, and *Sphoeroides parvus*.
70. St. Louis Bay at mouth of tributary just east of Cut-off Bayou, Hancock Co.; T8S, R14W, Sec. 14; DAW 102, 12 Aug 1985; 9 species, 425 specimens. Species: *Brevoortia patronus*, *Anchoa mitchilli*, *Adinia xenica*, *Fundulus grandis*, *F. jenkinsi*, *Oligoplites saurus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, and *Leiostomus xanthurus*.
71. Joes Bayou in north St. Louis Bay, Hancock Co.; T8S, R14W, Sec. 38; RDS 8957, 7 Dec 1985; 1 species, 1 specimen. Species: *Dorosoma cepedianum*.
72. Spring in St. Louis Bay, Hancock Co.; T8S, R14W, Sec. 26; JDW 678, 25 Jul 1962; 3 species, 15 specimens. Species: *Gambusia affinis*, *Poecilia latipinna*, and *Lepomis gulosus*.
73. Jourdan River at mouth of Catfish Bayou, Hancock Co.; T8S, R14W, Sec. 22; DAW 105, 12 Aug 1985; 7 species, 82 specimens. Species: *Dasyatis sabina*, *Elops saurus*, *Brevoortia patronus*, *Arius felis*, *Lagodon rhomboides*, *Mugil cephalus*, and *Paralichthys lethostigma*.
74. Mouth of Bayou La Croix, Hancock Co.; T8S, R14W, Sec. 16; DAW 12, 18 Mar 1984; 14 species, 861 specimens. Species: *Brevoortia patronus*, *Lucania parva*, *Labidesthes sicculus*, *Menidia beryllina*, *Syngnathus scovelli*, *Lepomis macrochirus*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Lagodon rhomboides*, *Leiostomus xanthurus*, *Mugil cephalus*, *Gobiosoma bosc*, and *Trinectes maculatus*.
75. Bayou La Croix at Highway 43, Hancock Co.; T8S, R14W, Sec. 17; DAW 3, DAW 15, DAW 49, DAW 72, DAW 93, DAW 99, DAW 110; 26 Feb 1984, 18 Mar 1984, 17 Jun 1984, 7 Jul 1984, 13 Sep 1984, 6 Aug 1985, 19 Oct 1985; 29 species, 3,710 specimens. Species: *Brevoortia patronus*, *Anchoa hepsetus*, *A. mitchilli*, *Gobiosoma strumosus*, *Fundulus grandis*, *F. jenkinsi*, *Lucania parva*, *Gambusia affinis*, *Poecilia latipinna*, *Labidesthes sicculus*, *Syngnathus louisianae*, *S. scovelli*, *Menidia beryllina*, *Lepomis macrochirus*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Eucinostomus argenteus*, *Archosargus probatocephalus*, *Lagodon rhomboides*, *Bairdiella chrysoura*, *Leiostomus xanthurus*, *Mugil cephalus*, *Gobionellus shufeldti*, *Gobiosoma bosc*, *Micropogonias gulosus*, *Citharichthys spilopterus*, *Paralichthys lethostigma*, and *Trinectes maculatus*.
76. Bayou Philip, 2.5 miles (4.02 km) west of Waveland, Hancock Co.; T8S, R15W, Sec. 36; RDS 2177, RDS 2240, RDS 2296, RDS 2368, RJM 1059, 8 Nov 1951, 22 Feb 1952, 18 May 1952, 9 Mar 1953, 12 Apr 1958; 22 species, 947 specimens. Species: *Notropis chalybaeus*, *N. petersoni*, *Ameiurus natalis*, *Noturus gyrinus*, *Esox americanus*, *Aphredoderus sayanus*, *Fundulus chrysotus*, *F. notti*, *F. olivaceus*, *Gambusia affinis*, *Heterandria formosa*, *Labidesthes sicculus*, *Elassoma zonatum*,

Lepomis gulosus, *L. macrochirus*, *L. marginatus*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Etheostoma fusiforme*, *Gobionellus shufeldti*, and *Trinectes maculatus*.

77. Bayou Marone, west of Highway 43, Hancock Co.; T8S, R15W, Sec. 13; DAW 8, 11 Mar 1984; 15 species, 68 specimens. Species: *Notemigonus crysoleucas*, *Esox americanus*, *E. niger*, *Fundulus chrysotus*, *F. notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. marginatus*, *L. microlophus*, *L. punctatus*, and *Etheostoma fusiforme*.

78. Tributary to Gum Branch, tributary to Bayou La Croix, Hancock Co.; T8S, R15W, Sec. 23; RDS 2307, 31 May 1952; 2 species, 8 specimens. Species: *Erimyzon tenuis* and *Esox americanus*.

79. Tributary to Jourdan River, Hancock Co.; T8S, R14W, Sec. 24, DAW 13, 18 Mar 1984; 8 species, 264 specimens. Species: *Lepisosteus oculatus*, *Brevoortia patronus*, *Fundulus chrysotus*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. microlophus*, *L. punctatus*, and *Micropterus salmoides*.

80. Jourdan River along left (east) bank at Interstate 10, Hancock Co.; T8S, R14W, Sec. 9; DAW 14, RDS 8568, DAW 101, DAW 113; 18 Mar 1984, 23 Nov 1984, 12 Aug 1985, 19 Oct 1985; 26 species, 3,028 specimens. Species: *Anguilla rostrata*, *Brevoortia patronus*, *Anchoa mitchilli*, *Notropis petersoni*, *Adinia xenica*, *Cyprinodon variegatus*, *Fundulus grandis*, *F. jenkinsi*, *F. pulvereus*, *Lucania parva*, *Gambusia affinis*, *Menidia beryllina*, *Syngnathus scovelli*, *Lepomis macrochirus*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Lutjanus griseus*, *Leiostomus xanthurus*, *Sciaenops ocellatus*, *Mugil cephalus*, *Gobionellus boleosoma*, *Gobiosoma bosc*, *Microgobius gulosus*, *Trinectes maculatus*, and *Sphoeroides parvus*.

81. Jourdan River at mouth of Rotten Bayou, Hancock Co.; T8S, R14W, Sec. 4; DAW 109, DAW 112; 25 Aug 1985, 19 Oct 1985; 20 species, 540 specimens. Species: *Lepisosteus oculatus*, *Elops saurus*, *Anguilla rostrata*, *Anchoa mitchilli*, *Esox niger*, *Lucania parva*, *Menidia beryllina*, *Syngnathus scovelli*, *Lepomis gulosus*, *L. macrochirus*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Oligoplites saurus*, *Archosargus probatocephalus*, *Lagodon rhomboides*, *Gobiosoma bosc*, *Microgobius gulosus*, *Paralichthys lethostigma*, and *Trinectes maculatus*.

82. Bayou La Terre at Fenton, Hancock Co.; T7S, R14W, Sec. 37; DAW 70, 7 Jul 1984; 16 species, 856 specimens. Species: *Cyprinella venusta*, *Notropis petersoni*, *Notropis winchelli*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Esox niger*, *Fundulus chrysotus*, *F. olivaceus*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma stigmaeum*, and *Trinectes maculatus*.

83. Bayou La Terre at Old Joe Morane Road, Hancock Co.; T7S, R14W, Sec. 9; DAW 9, 11 Mar 1984; 11 species, 302 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis signipinnis*, *N. texanus*, *Erimyzon tenuis*, *Fundulus olivaceus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.

84. Bayou La Terre at Fire Tower Road, Hancock Co.; T7S, R14W, Sec. 9; DAW 10, RDS 9934; 11 Mar 1984, 10 Sep 1989; 16 species, 308 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *N. texanus*, *Opsopoeodus emiliae*, *Noturus funebris*, *N. leptacanthus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma swaini*, and *Percina nigrofasciata*.

85. Tributary to Bayou La Terre, 8.0 miles (12.87 km) northeast of Kiln, Hancock Co.; T6S, R14W, Sec. 26; DAW 20, 31 Mar 1984; 4 species, 40 specimens. Species: *Esox niger*, *Notropis signipinnis*, *Lepomis megalotis*, and *Percina nigrofasciata*.

86. Tributary to Bayou La Salle, just north of Diamondhead, Hancock Co.; T7S, R14W, Sec. 24; DAW 69, 7 Jul 1984; 5 species, 20 specimens. Species: *Aphredoderus sayanus*, *Gambusia affinis*, *Lepomis marginatus*, *L. punctatus*, and *Micropterus salmoides*.

87. Rotten Bayou, tributary to Jourdan River 4.5 miles (7.24 km) east of Kiln, Hancock Co.; T7S, R14W, Sec. 23; RDS 3159, 21 Aug 1962; 15 species, 489 specimens. Species: *Cyprinella venusta*, *Notropis petersoni*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Fundulus chrysotus*, *F. notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, and *Trinectes maculatus*.

88. Mill Creek, tributary to Rotten Bayou, south of Diamondhead, Hancock Co.; T7S, R14W, Sec. 25; DAW

11, 11 Mar 1984; 13 species, 110 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *N. texanus*, *Erimyzon tenuis*, *Noturus funebris*, *N. leptacanthus*, *Esox niger*, *Fundulus olivaceus*, *Lepomis megalotis*, *Micropterus punctulatus*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.

89. Bayou La Salle just north of Diamondhead, Hancock Co.; T7S, R14W, Sec. 24; DAW 68, DAW 90; 7 Jul 1984, 13 Sep 1984; 15 species, 345 specimens. Species: *Notropis texanus*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Noturus gyrinus*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus salmoides*, *Etheostoma fusiforme*, and *Trinectes maculatus*.

90. Tributary to Bayou La Salle, Harrison Co.; T7S, R13W, Sec. 19; DAW 67, 7 Jul 1984; 9 species, 107 specimens. Species: *Notropis signipinnis*, *N. texanus*, *Erimyzon tenuis*, *Esox niger*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, and *Micropterus salmoides*.

91. Jourdan River along right (west) bank above mouth of Rotten Bayou, Hancock Co.; T8S, R14W, Sec. 4; DAW 100, 12 Aug 1985; 16 species, 863 specimens. Species: *Anchoa mitchilli*, *Ictalurus punctatus*, *Esox niger*, *Lucania parva*, *Menidia beryllina*, *Syngnathus scovelli*, *Lepomis macrochirus*, *L. microlophus*, *L. punctatus*, *Micropterus salmoides*, *Oligoplites saurus*, *Archosargus probatocephalus*, *Lagodon rhomboides*, *Leiostomus xanthurus*, *Sciaenops ocellatus*, and *Gobiosoma bosc*.

92. Bayou Coco, about 1 mile (1.61 km) east of Kiln, Hancock Co.; T7S, R14W, Sec. 38; DAW 71, 7 Jul 1984; 8 species and 1 hybrid combination, 65 specimens. Species: *Aphredoderus sayanus*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis macrochirus*, *Lepomis* sp. x *Lepomis* sp., *Micropterus salmoides*, and *Etheostoma fusiforme*.

93. Jourdan River along right (west) bank about 1 mile (1.61 km) downstream of Highway 43, Hancock Co.; T7S, R14W, Sec. 31; DAW 111, 19 Oct 1985; 17 species, 831 specimens. Species: *Lepisosteus osseus*, *Aloa chrysochloris*, *Anchoa mitchilli*, *Cyprinella venusta*, *Notropis petersoni*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Fundulus olivaceus*, *Lucania parva*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis gulosus*, *L.*

macrochirus, *L. microlophus*, *Micropterus punctulatus*, *M. salmoides*, and *Trinectes maculatus*.

94. Bayou Talla at Highway 43, Hancock Co.; T7S, R15W, Sec. 25; DAW 74, 10 Jul 1984; 12 species, 161 specimens. Species: *Notropis petersoni*, *Opsopoeodus emiliae*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. microlophus*, *Micropterus salmoides*, *Etheostoma fusiforme*, *Gobionellus shufeldtii*, and *Trinectes maculatus*.

95. Tributary to Bayou Talla near Kiln, Hancock Co.; T7S, R15W, Sec. 25; RJM 1060, DAW 75; 12 Apr 1958, 10 Jul 1984; 12 species, 91 specimens. Species: *Erimyzon tenuis*, *Noturus funebris*, *Esox niger*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis macrochirus*, *L. megalotis*, *Etheostoma parvipinne*, *E. swaini*, and *Percina nigrofasciata*.

96. Bayou Talla, about 2 air miles (3.22 km) northwest of Kiln, Hancock Co.; T7S, R15W, Sec. 23; DAW 81, 10 Jul 1984; 5 species, 165 specimens. Species: *Notropis texanus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis megalotis*, and *Micropterus salmoides*.

97. Jourdan River at Highway 43, Hancock Co.; T7S, R14W, Sec. 31; DAW 73, 10 Jul 1984; 12 species, 187 specimens. Species: *Dorosoma petenense*, *Anchoa mitchilli*, *Cyprinella venusta*, *Notropis petersoni*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, and *Trinectes maculatus*.

98. Jourdan River along right bank, 2.0 miles (3.22 km) west of Highway 43, Hancock Co.; T7S, R15W, Sec. 35; DAW 1, 12 Feb 1984; 12 species, 77 specimens. Species: *Cyprinella venusta*, *Notemigonus crysoleucas*, *Notropis texanus*, *N. winchelli*, *Opsopoeodus emiliae*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. microlophus*, *Micropterus salmoides*, *Ammocrypta beani*, and *Etheostoma stigmaeum*.

99. Orphan Bayou, about 3 air miles (4.83 km) northwest of Kiln, Hancock Co.; T7S, R15W, Sec. 10; DAW 76, 10 Jul 1984; 15 species, 774 specimens. Species: *Lythrurus roseipinnis*, *N. signipinnis*, *N. texanus*, *Erimyzon tenuis*, *Esox americanus*, *E. niger*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus salmoides*, *Etheostoma fusiforme*, and *Percina nigrofasciata*.

100. Orphan Bayou at Highway 43, 2.0 miles (3.22 km) northwest of Kiln, Hancock Co.; T7S, R15W, Sec. 11; DCH 175, DCH 188, DCH 225, DAW 77; 29 Apr 1973, 22 May 1973, 11 Jan 1974, 10 Jul 1984; 19 species, 677 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *N. signipinnis*, *N. texanus*, *N. welaka*, *Erimyzon tenuis*, *Minytrema melanops*, *Noturus leptacanthus*, *Esox niger*, *Aphredoderus sayanus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *Micropterus salmoides*, *Ammocrypta beani*, and *Percina nigrofasciata*.
101. Orphan Bayou at Highway 603, Hancock Co.; T6S, R14W, Sec. 30; DAW 16, 31 Mar 1984; 8 species, 49 specimens. Species: *Esox niger*, *Aphredoderus sayanus*, *Fundulus notti*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, and *Etheostoma fusiforme*.
102. Bayou Bacon downstream from Highway 43 at Old Kiln Road, Hancock Co.; T7S, R15W, Sec. 3; DAW 80, 10 Jul 1984; 8 species, 142 specimens. Species: *Lythrurus roseipinnis*, *N. signipinnis*, *N. texanus*, *Noturus funebris*, *Fundulus olivaceus*, *Lepomis megalotis*, *Micropterus punctulatus*, and *Percina nigrofasciata*.
103. Bayou Bacon at Highway 43, 4.5 miles (7.24 km) northwest of Kiln, Hancock Co.; T7S, R15W, Sec. 3; DCH 168, DCH 174, DCH 187, DCH 189, DCH 202, DCH 211, DCH 214, DCH 217, DCH 220, DCH 289, DCH 300, DCH 302, DAW 78; 24 Feb 1973, 2 Mar 1973, 29 Apr 1973, 22 May 1973, 9 Jun 1973, 30 Jul 1973, 25 Aug 1973, 7 Oct 1973, 10 Nov 1973, 15 Dec 1973, 16 Sep 1974, 15 Oct 1974, 2 Nov 1974, 10 Jul 1984; 21 species, 3,229 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *N. signipinnis*, *N. texanus*, *N. welaka*, *Erimyzon tenuis*, *Minytrema melanops*, *Noturus leptacanthus*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma swaini*, and *Percina nigrofasciata*.
104. Bayou Bacon at Highway 603, Hancock Co.; T6S, R14W, Sec. 18; DAW 17, 31 Mar 1984; 7 species, 199 specimens. Species: *Esox niger*, *Fundulus notti*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, and *Etheostoma fusiforme*.
105. Lion Branch at Three Notch Road, Hancock Co.; T7S, R15W, Sec. 31; DAW 2, 12 Feb 1984; 10 species, 38 specimens. Species: *Cyprinella venusta*, *Ameiurus melas*, *Aphredoderus sayanus*, *Elassoma zonatum*, *Lepomis cyanellus*, *L. gulosus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, and *Percina nigrofasciata*.
106. Wolf Branch of Jourdan River, 4.5 miles (7.24 km) east of Santa Rosa, Hancock Co.; T7S, R16W, Sec. 25; RDS 2308, 31 May 1952; 4 species, 57 specimens. Species: *Cyprinella venusta*, *Notropis chalybaeus*, *N. signipinnis*, and *N. texanus*.
107. Dead Tiger Creek, 12.0 miles (19.31 km) west of Kiln, Hancock Co.; T7S, R16W, Sec. 15; DAW 4, 26 Feb 1984; 5 species, 12 specimens. Species: *Esox americanus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, and *L. marginatus*.
108. Mill Branch at Lott McCarty Road, Hancock Co.; T6S, R16W, Sec. 25; DAW 5, 26 Feb 1984; 12 species, 506 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Lepomis macrochirus*, *L. megalotis*, *Micropterus salmoides*, *Pomoxis nigromaculatus*, *Ammocrypta beani*, and *Percina nigrofasciata*.
109. Mill Creek at Highway 43, 5.7 miles (9.17 km) east of Interstate 59, Hancock Co.; T6S, R16W, Sec. 23; RDS 8405, 23 May 1984; 5 species, 48 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notemigonus crysoleucas*, *Fundulus olivaceus*, and *Lepomis macrochirus*.
110. Blacksnake Branch at Highway 43, 5.0 miles (8.05 km) east of Interstate 59, Hancock Co.; T6S, R16W, Sec. 22; RDS 8404, 23 May 1984; 8 species, 104 specimens. Species: *Notemigonus crysoleucas*, *Ameiurus melas*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis cyanellus*, *L. macrochirus*, *L. marginatus*, and *Micropterus salmoides*.
111. Hickory Creek, 7.8 miles (12.55 km) southeast of Caesar, Highway 43, Hancock Co.; T6S, R15W, Sec. 21; RDS 5318, DAW 7, RDS 8406; 23 Sep 1972, 26 Feb 1984, 23 May 1984; 22 species, 2,148 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *N. welaka*, *N. winchelli*, *Erimyzon tenuis*, *Moxostoma poecilurum*, *Noturus leptacanthus*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L.*

- megalotis*, *L. punctatus*, *Micropterus punctulatus*, *Ammocrypta beani*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.
112. White Cypress Creek, about 8 air miles (12.87 km) southwest of Nacaise, Hancock Co.; T6S, R15W, Sec. 14; DAW 79, 10 Jul 1984; 11 species, 422 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Moxostoma poecilurum*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis megalotis*, *Micropterus punctulatus*, *M. salmoides*, and *Pomoxis nigromaculatus*.
113. Tributary to White Cypress Creek at Highway 603, Hancock Co.; T6S, R14W, Sec. 5; DAW 18, 31 Mar 1984; 9 species, 1 hybrid combination, 314 specimens. Species: *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Heterandria formosa*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. macrochirus*, *L. marginatus*, *Lepomis* sp. x *Lepomis* sp., and *Etheostoma fusiforme*.
114. Tributary to Hickory Creek, 1.0 mile (1.61 km) east of Leetown Road at Caesar Road, Hancock Co.; T5S, R15W, Sec. 28; RDS 8407, 23 May 1984; 8 species, 1 hybrid combination, 104 specimens. Species: *Erimyzon tenuis*, *Esox niger*, *Aphredoderus sayanus*, *Fundulus notti*, *Gambusia affinis*, *Elassoma zonatum*, *Lepomis gulosus*, *Lepomis* sp. x *Lepomis* sp., and *Etheostoma fusiforme*.
115. Hickory Creek at Caesar-Nacaise Road, about 5 air miles (8.05 km) west southwest of Nacaise, Hancock Co.; T5S, R15W, Sec. 27; DAW 53, 24 Jun 1984; 20 species, 271 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *N. welaka*, *N. winchelli*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Minytrema melanops*, *Noturus funebris*, *N. leptacanthus*, *Fundulus notti*, *F. olivaceus*, *Labidesthes sicculus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus salmoides*, *Etheostoma parvipinne*, *E. swaini*, and *Percina nigrofasciata*.
116. Tributary to Hickory Creek, 5.0 air miles (8.05) west northwest of Nacaise, Hancock Co.; T5S, R15W, Sec. 11; RDS 8410, 23 May 1984; 11 species, 203 specimens. Species: *Erimyzon tenuis*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Elassoma zonatum*, *Lepomis gulosus*, *L. macrochirus*, *L. megalotis*, and *Micropterus salmoides*.
117. Tributary to Hickory Creek, 2.0 air miles (3.22 km) west of Nacaise, Hancock Co.; T5S, R14W, Sec. 18; RDS 8408, 23 May 1984; 8 species, 33 specimens. Species: *Notemigonus crysoleucas*, *Erimyzon sucetta*, *Esox niger*, *Aphredoderus sayanus*, *Gambusia affinis*, *Lepomis gulosus*, *L. macrochirus*, and *L. marginatus*.
118. Hickory Creek, 3.0 air miles (4.83 km) northwest of Nacaise, Hancock Co.; T5S, R15W, Sec. 12; RDS 8409, 23 May 1984; 9 species, 69 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis signipinnis*, *Noturus leptacanthus*, *Fundulus olivaceus*, *Elassoma zonatum*, *Lepomis megalotis*, *Etheostoma swaini*, and *Percina nigrofasciata*.
119. Catahoula Creek at Lott McCarty Road, 10.0 miles (16.09 km) northwest of Kiln, Hancock Co.; T6S, R15W, Sec. 30; DAW 6, 26 Feb 1984; 13 species, 156 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis longirostris*, *N. texanus*, *Noturus miurus*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis cyanellus*, *L. macrochirus*, *L. megalotis*, *Ammocrypta beani*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.
120. Catahoula Creek at Highway 43, Hancock Co.; T6S, R15W, Sec. 18; DAW 50, DAW 89; 24 Jun 1984, 2 Sep 1984; 21 species, 777 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *N. welaka*, *N. winchelli*, *Erimyzon tenuis*, *Hypentelium nigricans*, *Minytrema melanops*, *Moxostoma poecilurum*, *Esox niger*, *Fundulus notti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma stigmaeum*, and *Percina nigrofasciata*.
121. Catahoula Creek at Old Kiln Road, about 0.5 mile (0.8 km) east of Rester Road, Hancock Co.; T6S, R15W, Sec. 8; DAW 51, 24 Jun 1984; 17 species, 336 specimens. Species: *Cyprinella venusta*, *Lythrurus roseipinnis*, *Notropis texanus*, *N. winchelli*, *Minytrema melanops*, *Moxostoma poecilurum*, *Noturus funebris*, *Esox niger*, *Fundulus olivaceus*, *Labidesthes sicculus*, *Lepomis gulosus*, *L. megalotis*, *Micropterus punctulatus*, *M. salmoides*, *Ammocrypta beani*, *Etheostoma swaini*, and *Percina nigrofasciata*.
122. Catahoula Creek, 1.3 miles (2.09 km) east of Caesar, Hancock Co.; T5S, R15W, Sec. 29; RDS 5317, DAW 52; 23 Sep 1972, 24 Jun 1984; 24 species, 483 specimens. Species: *Ichthyomyzon gagei*, *Cyprinella venusta*,

Lythrurus roseipinnis, *Notropis texanus*, *N. winchelli*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Minytrema melanops*, *Moxostoma poecilurum*, *Noturus funebris*, *N. leptacanthus*, *Esox niger*, *Fundulus olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *Ambloplites ariommus*, *Lepomis macrochirus*, *L. megalotis*, *L. punctatus*, *Micropterus punctulatus*, *M. salmoides*, *Etheostoma stigmaeum*, *E. swaini*, and *Percina nigrofasciata*.

123. Catahoula Creek at county road, 6.0 air miles (9.65 km) west of Nacaise, Pearl River Co.; T5S, R15W, Sec. 17; DAW 36, 16 Jun 1984; 19 species, 1 hybrid combination, 133 specimens. Species: *Lythrurus roseipinnis*, *Notropis signipinnis*, *N. texanus*, *N. welaka*, *Opsopoeodus emiliae*, *Erimyzon tenuis*, *Minytrema melanops*, *Ameiurus natalis*, *Esox niger*, *Aphredoderus sayanus*, *Fundulus nolti*, *F. olivaceus*, *Gambusia affinis*, *Labidesthes sicculus*, *L. macrochirus*, *L. megalotis*, *L. punctatus*, *Lepomis* sp. x *Lepomis* sp., *Micropterus salmoides*, and *Percina nigrofasciata*.

124. Catahoula Creek, about 5 air miles (8.05 km) south of Savannah, Pearl River Co.; T4S, R15W, Sec. 29; DAW 56, 24 Jun 1984; 11 species, 1 hybrid combination, 278 specimens. Species: *Notemigonus crysoleucas*, *Lythrurus roseipinnis*, *Notropis texanus*, *Esox niger*, *Fundulus olivaceus*, *Gambusia affinis*, *L. macrochirus*, *L. megalotis*, *Lepomis* sp. x *L.* sp., *Micropterus salmoides*, *Etheostoma fusiforme*, and *Percina nigrofasciata*.

125. Tributary to Catahoula Creek, about 2 miles (3.22 km) south of Savannah, Pearl River Co.; T4S, R15W, Sec. 9; DAW 37, 16 Jun 1984; 7 species 77 specimens. Species: *Notemigonus crysoleucas*, *Erimyzon sucetta*, *Ameiurus natalis*, *Aphredoderus sayanus*, *Gambusia affinis*, *Lepomis cyanellus*, and *L. marginatus*.

126. Catahoula Creek, about 2 miles (3.22 km) south of Savannah, Pearl River Co.; T4S, R15W, Sec. 10; DAW 38, 16 Jun 1984; 5 species, 147 specimens. Species: *Notropis signipinnis*, *Esox niger*, *Gambusia affinis*, *Lepomis macrochirus*, and *L. punctatus*.

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APPENDIX

Checklist of fishes collected in the St. Louis Bay drainage, with map numbers, number of sites, and specimens collected per species.

Family, Scientific, and Common Names	Map Number	Sites Collected	Specimens Collected
Petromyzontidae—lampreys			
<i>Ichthyomyzon gagei</i> Hubbs and Trautman, 1937 southern brook lamprey	1	5	72
Dasyatidae—stingrays			
<i>Dasyatis sabina</i> (Lesueur, 1824) Atlantic stingray	2	5	5
Lepisosteidae—gars			
<i>Lepisosteus oculatus</i> (Winchell, 1864) spotted gar	3	6	6
<i>L. osseus</i> (Linnaeus, 1758) longnose gar	4	3	3
Elopidae—tarpons			
<i>Elops saurus</i> Linnaeus, 1766 ladyfish	5	3	7
Anguillidae—freshwater eels			
<i>Anguilla rostrata</i> (Lesueur, 1817) American eel	6	6	6
Ophichthyidae—snake eels			
<i>Myrophis punctatus</i> Lütken, 1851 speckled worm eel	7	1	1
Clupeidae—herrings			
<i>Alosa chrysochloris</i> (Rafinesque, 1820) skipjack herring	8	1	1
<i>Brevoortia patronus</i> Goode, 1878 gulf menhaden	9	11	7,203
<i>Dorosoma cepedianum</i> (Lesueur, 1818) gizzard shad	10	1	1
<i>D. petenense</i> (Günther, 1866) threadfin shad	11	3	8
<i>Harengula jaguana</i> Poey, 1865 scaled sardine	12	5	23
Engraulidae—anchovies			
<i>Anchoa hepsetus</i> (Linnaeus, 1758) striped anchovy	13	8	76
<i>A. mitchilli</i> (Valenciennes, 1848) bay anchovy	14	21	10,901
Cyprinidae—minnows			
<i>Cyprinella venusta</i> Girard, 1856 blacktail shiner	15	58	7,524
<i>Lythrurus roseipinnis</i> (Hay, 1885) cherryfin shiner	16	57	7,260
<i>Notemigonus crysoleucas</i> (Mitchill, 1814) golden shiner	17	12	108
<i>Notropis chalybaeus</i> (Cope, 1869) ironcolor shiner	18	6	282
<i>N. longirostris</i> (Hay, 1881) longnose shiner	19	27	4,440
<i>N. petersoni</i> Fowler, 1942 coastal shiner	20	13	1,732
<i>N. signipinnis</i> Bailey and Suttkus, 1952 flagfin shiner	21	27	1,462
<i>N. texanus</i> (Girard, 1856) weed shiner	22	53	2,104
<i>N. volucellus</i> (Cope, 1865) mimic shiner	23	9	154
<i>N. welaka</i> (Evermann and Kendall, 1898) bluenose shiner	24	6	95

APPENDIX (CONTINUED)

Family, Scientific, and Common Names	Map Number	Sites Collected	Specimens Collected
<i>N. winchelli</i> (Girard, 1856) clear chub	25	22	176
<i>Opsopoeodus emiliae</i> Hay, 1881 pugnose minnow	26	23	290
Catostomidae—suckers			
<i>Erimyzon sucetta</i> (Lacepède, 1803) lake chubsucker	27	6	8
<i>E. tenuis</i> (Agassiz, 1855) sharpfin chubsucker	28	35	701
<i>Hypentelium nigricans</i> (Lesueur, 1817) northern hog sucker	29	16	9
<i>Minytrema melanops</i> (Rafinesque, 1820) spotted sucker	30	18	103
<i>Moxostoma poecilurum</i> (Jordan, 1877) blacktail redhorse	31	23	187
Ictaluridae—bullhead catfishes			
<i>Ameiurus melas</i> (Rafinesque, 1820) black bullhead	32	2	3
<i>A. natalis</i> (Lesueur, 1819) yellow bullhead	33	7	8
<i>Ictalurus punctatus</i> (Rafinesque, 1818) channel catfish	34	4	10
<i>Noturus funebris</i> Gilbert and Swain, 1891 black madtom	35	22	47
<i>N. gyrinus</i> (Mitchill, 1817) tadpole madtom	36	2	8
<i>N. leptacanthus</i> Jordan, 1877 speckled madtom	37	28	205
<i>N. miurus</i> Jordan, 1877 brindled madtom	38	14	65
<i>N. nocturnus</i> Jordan and Gilbert, 1886 freckled madtom	39	1	1
Ariidae—sea catfishes			
<i>Arius felis</i> (Linnaeus, 1766) hardhead catfish	40	7	70
Esocidae—pikes			
<i>Esox americanus</i> Gmelin, 1788 redfin pickerel	41	17	36
<i>E. niger</i> Lesueur, 1818 chain pickerel	42	37	153
Synodontidae—lizardfishes			
<i>Synodus foetens</i> (Linnaeus, 1766) inshore lizardfish	43	1	14
Aphredoderidae—pirate perches			
<i>Aphredoderus sayanus</i> (Gilliams, 1824) pirate perch	44	20	120
Batrachoididae—toadfishes			
<i>Opsanus beta</i> (Goode and Bean, 1879) gulf toadfish	45	1	1
Gobiesocidae—clingfishes			
<i>Gobiesox strumosus</i> Cope, 1870 skilletfish	46	4	18
Belonidae—needlefishes			
<i>Strongylura marina</i> (Walbaum, 1792) Atlantic needlefish	47	5	13
Cyprinodontidae—killifishes			
<i>Adinia xenica</i> (Jordan and Gilbert, 1882) diamond killifish	48	5	31
<i>Cyprinodon variegatus</i> Lacepède, 1803 sheepshead minnow	49	5	70

ATLAS OF ST. LOUIS BAY FISHES

APPENDIX (CONTINUED)

Family, Scientific, and Common Names	Map Number	Sites Collected	Specimens Collected
<i>Fundulus chrysotus</i> (Günther, 1866) golden topminnow	50	8	158
<i>F. grandis</i> Baird and Girard, 1853 gulf killifish	51	11	136
<i>F. jenkinsi</i> (Evermann, 1892) saltmarsh topminnow	52	8	393
<i>F. notti</i> (Agassiz, 1854) bayou topminnow	53	33	730
<i>F. olivaceus</i> (Storer, 1845) blackspotted topminnow	54	80	2,383
<i>F. pulvereus</i> (Evermann, 1892) bayou killifish	55	5	180
<i>F. similis</i> (Baird and Girard, 1853) longnose killifish	56	6	41
<i>Lucania parva</i> (Baird and Girard, 1855) rainwater killifish	57	13	1,107
Poeciliidae—livebearers			
<i>Gambusia affinis</i> (Baird and Girard, 1853) mosquitofish	58	46	1,300
<i>Heterandria formosa</i> Agassiz, 1855 least killifish	59	5	58
<i>Poecilia latipinna</i> (Lesueur, 1821) sailfin molly	60	9	403
Atherinidae—silversides			
<i>Labidesthes sicculus</i> (Cope, 1865) brook silverside	61	59	3,882
<i>Membras martinica</i> (Valenciennes, 1835) rough silverside	62	6	1,522
<i>Menidia beryllina</i> (Cope, 1866) inland silverside	63	19	3,426
Syngnathidae—pipefishes			
<i>Syngnathus louisianae</i> Günther, 1870 chain pipefish	64	5	12
<i>S. scovelli</i> Evermann and Kendall, 1896 gulf pipefish	65	11	101
Triglidae—searobins			
<i>Prionotus scitulus</i> Jordan and Gilbert, 1882 leopard searobin	66	1	1
<i>P. tribulus</i> Cuvier, 1829 bighead searobin	67	3	6
Centrarchidae—sunfishes			
<i>Ambloplites ariommus</i> Viosca, 1936 shadow bass	68	21	124
<i>Elassoma zonatum</i> Jordan, 1877 banded pygmy sunfish	69	24	97
<i>Enneacanthus gloriosus</i> (Holbrook, 1855) bluespotted sunfish	70	2	10
<i>Lepomis cyanellus</i> Rafinesque, 1819 green sunfish	71	9	22
<i>L. gulosus</i> (Cuvier, 1829) warmouth	72	39	181
<i>L. macrochirus</i> Rafinesque, 1819 bluegill	73	80	1,584
<i>L. marginatus</i> (Holbrook, 1855) dollar sunfish	74	9	44
<i>L. megalotis</i> (Rafinesque, 1820) longear sunfish	75	77	2,068
<i>L. microlophus</i> (Günther, 1859) redear sunfish	76	23	508
<i>L. punctatus</i> (Valenciennes, 1831) spotted sunfish	77	36	225
<i>Lepomis</i> sp. x <i>Lepomis</i> sp.	78	5	6
<i>Micropterus punctulatus</i> (Rafinesque, 1819) spotted bass	79	37	322

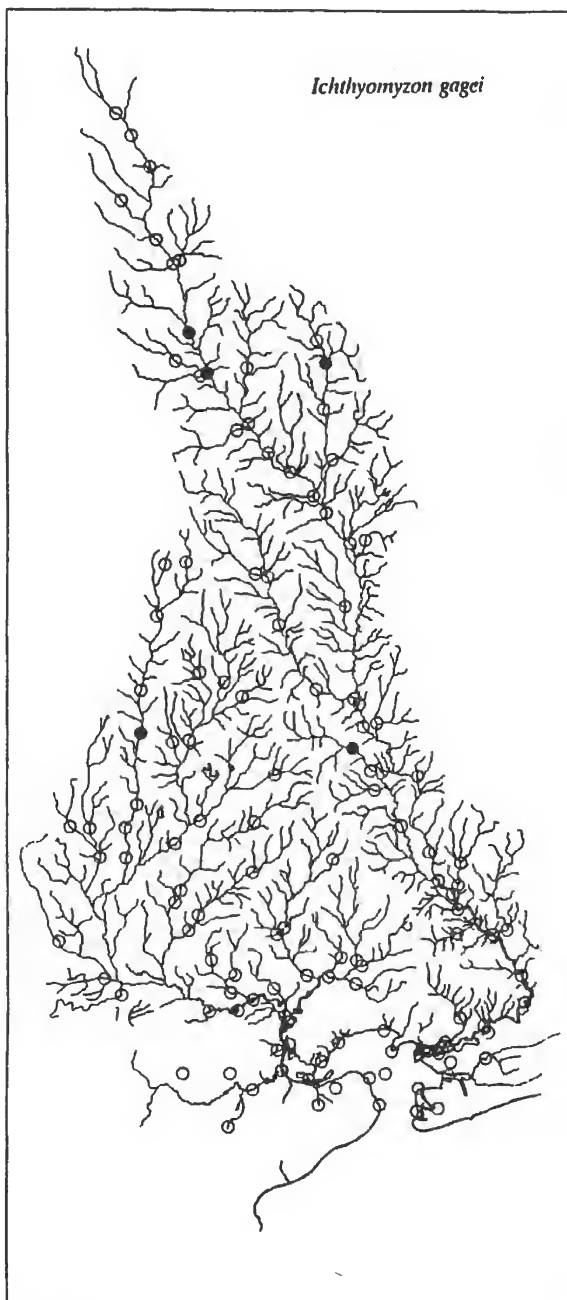
APPENDIX (CONTINUED)

Family, Scientific, and Common Names	Map Number	Sites Collected	Specimens Collected
<i>M. salmoides</i> (Lacepède, 1802) largemouth bass	80	59	657
<i>Pomoxis nigromaculatus</i> (Lesueur, 1829) black crappie	81	4	6
Percidae—perches			
<i>Ammocrypta beani</i> Jordan, 1877 naked sand darter	82	26	930
<i>Etheostoma fusiforme</i> (Girard, 1854) swamp darter	83	21	64
<i>E. lynceum</i> Hay, 1885 brighteye darter	84	14	98
<i>E. parvipinne</i> Gilbert and Swain, 1887 goldstripe darter	85	3	15
<i>E. stigmaeum</i> (Jordan, 1877) speckled darter	86	33	315
<i>E. swaini</i> (Jordan, 1884) gulf darter	87	32	287
<i>Percina nigrofasciata</i> (Agassiz, 1854) blackbanded darter	88	61	1,889
Carangidae—jacks			
<i>Chloroscombrus chrysurus</i> (Linnaeus, 1766) Atlantic bumper	89	2	4
<i>Oligoplites saurus</i> (Schneider, 1801) leatherjack	90	11	30
<i>Selene vomer</i> (Linnaeus, 1758) lookdown	91	1	2
<i>Trachinotus carolinus</i> (Linnaeus, 1766) Florida pompano	92	2	19
<i>T. falcatus</i> (Linnaeus, 1758) permit	93	1	6
Lutjanidae—snappers			
<i>Lutjanus griseus</i> (Linnaeus, 1758) gray snapper	94	1	1
Lobotidae—triple tails			
<i>Lobotes surinamensis</i> (Bloch, 1790) triple tail	95	1	14
Gerreidae—mojarra			
<i>Eucinostomus argenteus</i> (Baird and Girard, 1855) spotfin mojarra	96	4	16
Sparidae—porgies			
<i>Archosargus probatocephalus</i> (Walbaum, 1792) sheepshead	97	6	27
<i>Lagodon rhomboides</i> (Linnaeus, 1766) pinfish	98	17	193
Sciaenidae—drums			
<i>Bairdiella chrysoura</i> (Lacepède, 1802) silver perch	99	10	916
<i>Cynoscion arenarius</i> Ginsburg, 1929 sand seatrout	100	5	143
<i>C. nebulosus</i> (Cuvier, 1830) spotted seatrout	101	6	20
<i>Leiostomus xanthurus</i> Lacepède, 1802 spot	102	13	1,225
<i>Menticirrhus americanus</i> (Linnaeus, 1758) southern kingfish	103	4	74
<i>Micropogonias undulatus</i> (Linnaeus, 1766) Atlantic croaker	104	6	171
<i>Pogonias cromis</i> (Linnaeus, 1766) black drum	105	3	4
<i>Sciaenops ocellatus</i> (Linnaeus, 1766) red drum	106	6	11

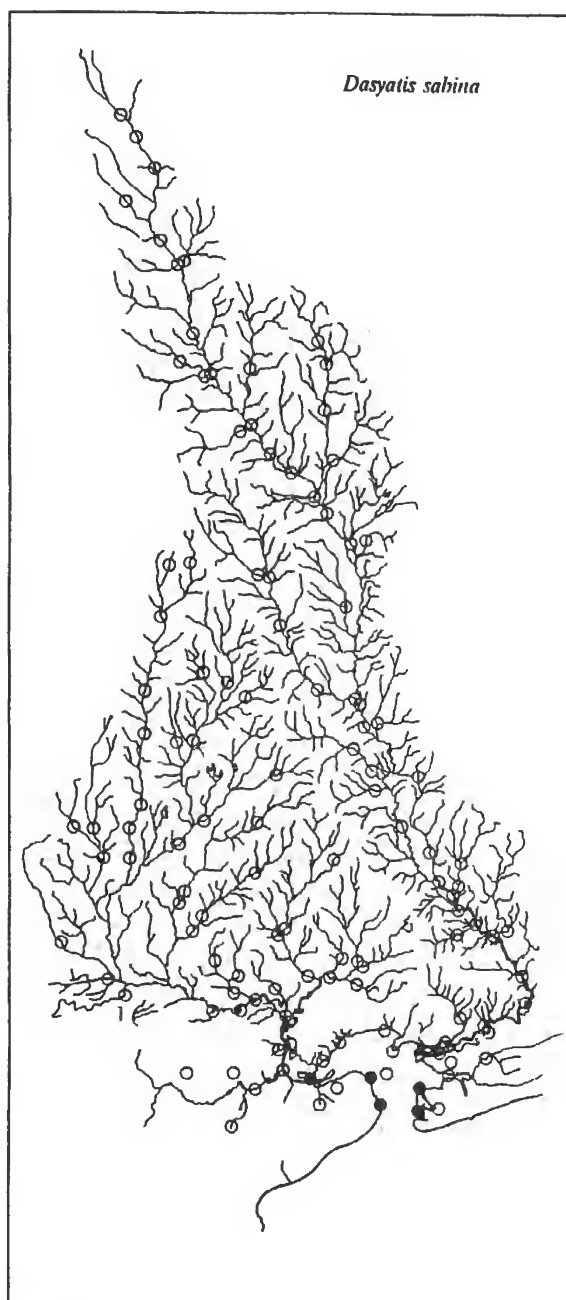
ATLAS OF ST. LOUIS BAY FISHES

APPENDIX (CONTINUED)

Family, Scientific, and Common Names	Map Number	Sites Collected	Specimens Collected
Ehippididae—spadefishes			
<i>Chaetodipterus faber</i> (Broussonet, 1782) Atlantic spadefish	107	1	1
Mugilidae—mulletts			
<i>Mugil cephalus</i> Linnaeus, 1758 striped mullet	108	13	368
<i>M. curema</i> Valenciennes, 1836 white mullet	109	3	13
Blenniidae—combtooth blennies			
<i>Hypsoblennius ionthas</i> (Jordan and Gilbert, 1882) freckled blenny	110	1	1
Eleotridae—sleepers			
<i>Dormitator maculatus</i> (Bloch, 1785) fat sleeper	111	1	2
Gobiidae—gobies			
<i>Gobionellus boleosoma</i> (Jordan and Gilbert, 1882) darter goby	112	4	30
<i>G. oceanicus</i> (Pallas, 1770) highfin goby	113	1	1
<i>G. shufeldti</i> (Jordan and Eigenmann, 1886) freshwater goby	114	7	36
<i>Gobiosoma bosc</i> (Lacepède, 1800) naked goby	115	1187	
<i>Microgobius gulosus</i> (Girard, 1858) clown goby	116	6	23
Stromateidae—butterfishes			
<i>Peprilus alepidotus</i> (Linnaeus, 1766) harvestfish	117	1	1
Bothidae—lefteye flounders			
<i>Citharichthys spilopterus</i> Günther, 1862 bay whiff	118	3	6
<i>Paralichthys lethostigma</i> Jordan and Gilbert, 1884 southern flounder	119	10	16
Soleidae—soles			
<i>Achirus lineatus</i> (Linnaeus, 1758) lined sole	120	4	405
<i>Symphurus plagiusa</i> (Linnaeus, 1766) blackcheek tonguefish	121	4	27
<i>Trinectes maculatus</i> (Bloch and Schneider, 1801) hogchoker	122	26	309
Balistidae—leatherjackets			
<i>Monacanthus hispidus</i> (Linnaeus, 1766) planehead filefish	123	1	2
Tetraodontidae—puffers			
<i>Chilomycterus schoepfi</i> (Walbaum, 1792) striped burrfish	124	1	1
<i>Sphoeroides parvus</i> Shipp and Yerger, 1969 least puffer	125	10	225



Map 1
 Petromyzontidae lampreys
Ichthyomyzon gagei Hubbs and Trautman, 1937
 southern brook lamprey
 5 sites 72 specimens



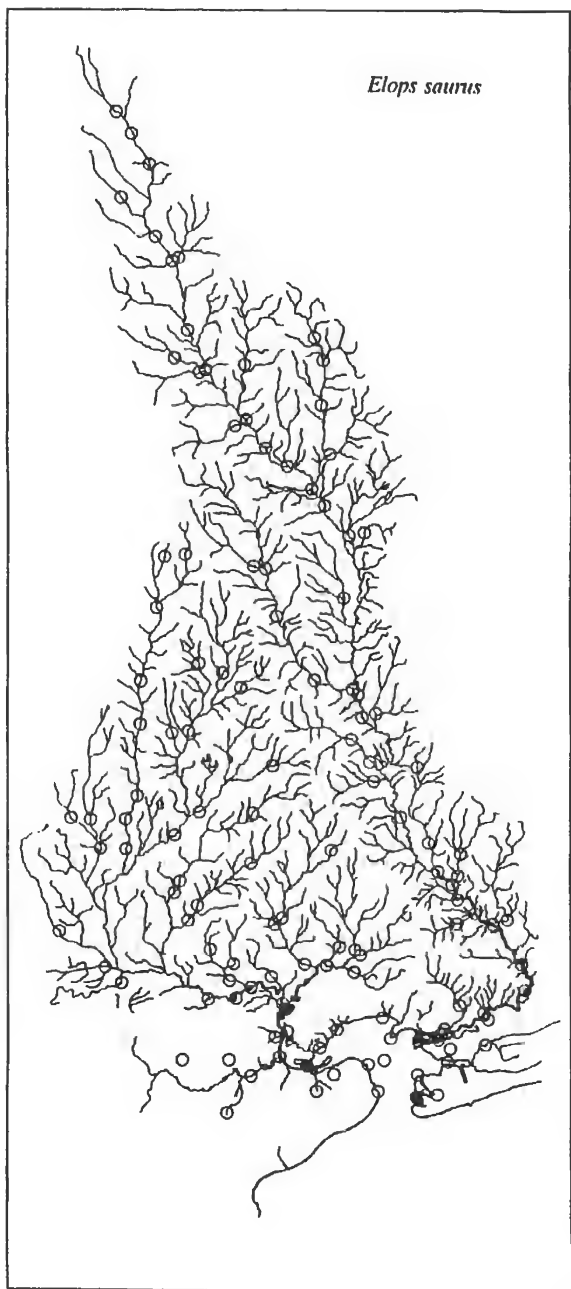
Map 2
 Dasyatidae stingrays
Dasyatis sabina (Lesueur, 1824)
 Atlantic stingray
 5 sites 5 specimens



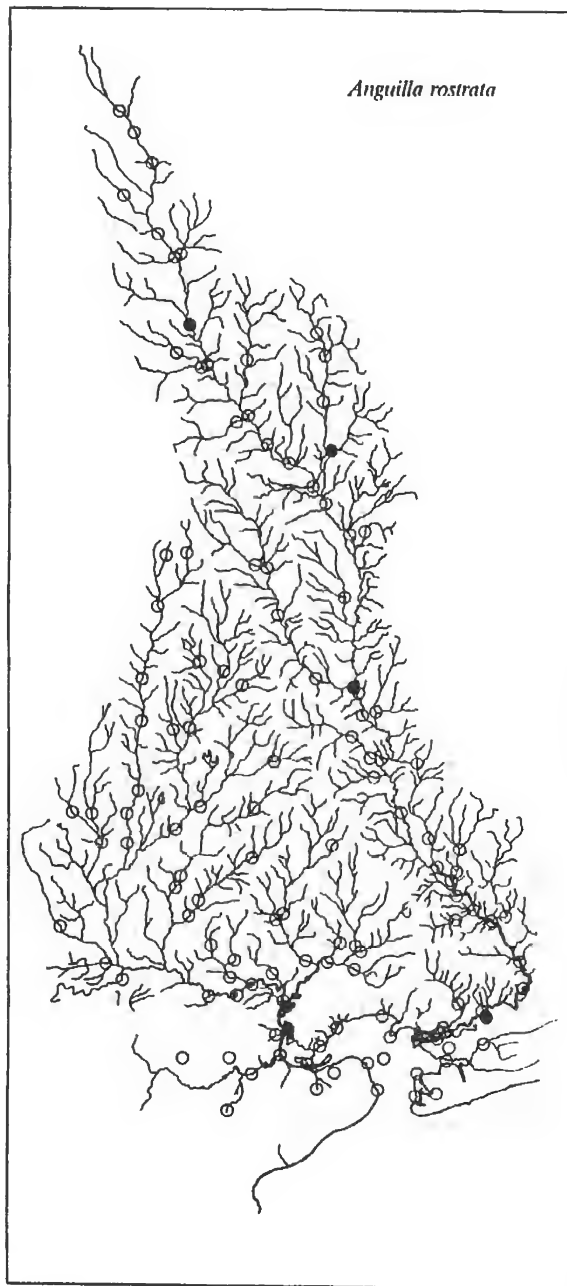
Map 3
Lepisosteidae gars
Lepisosteus oculatus (Winchell, 1864)
spotted gar
6 sites 6 specimens



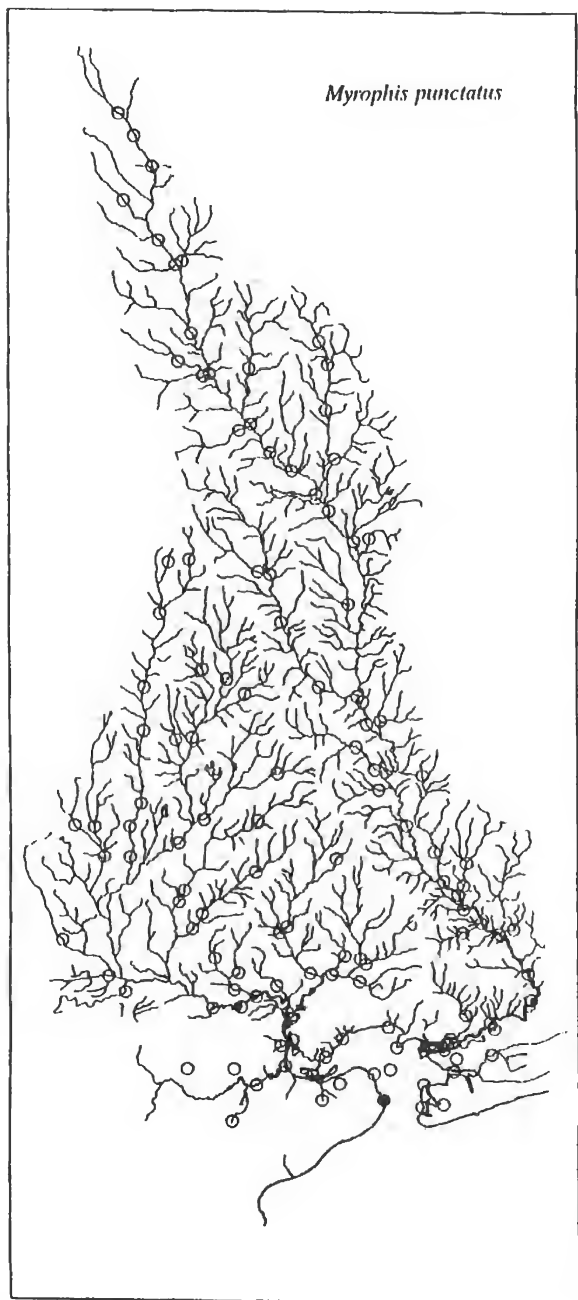
Map 4
Lepisosteidae gars
Lepisosteus osseus (Linnaeus, 1758)
longnose gar
3 sites 3 specimens



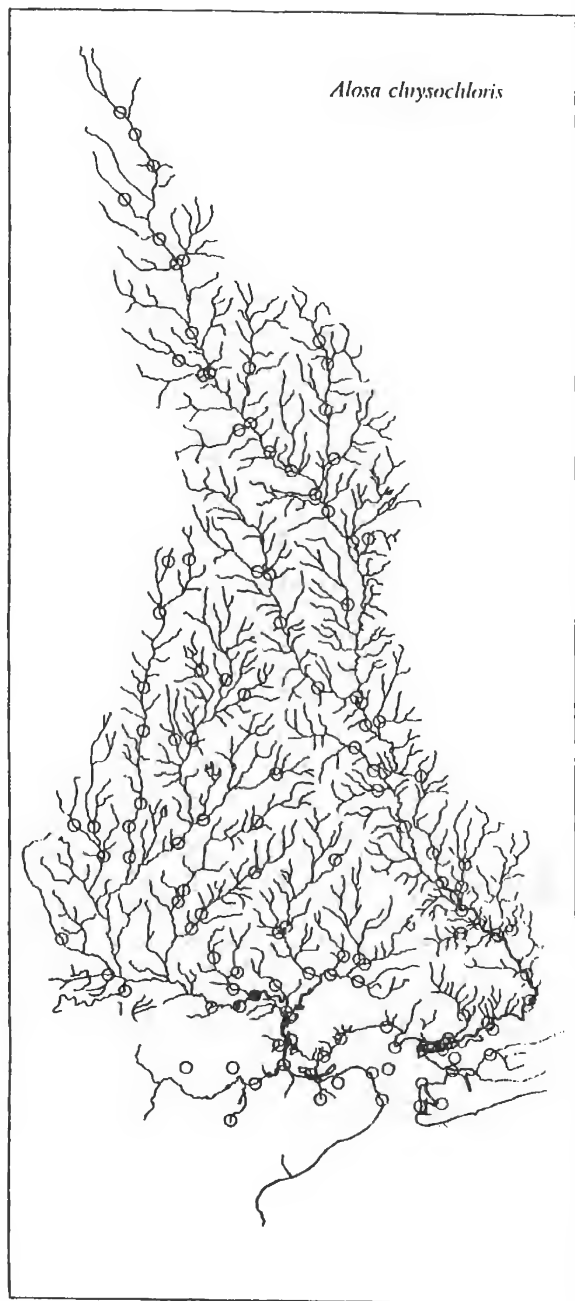
Map 5
 Elopidae tarpons
Elops saurus Linnaeus, 1766
 ladyfish
 3 sites 7 specimens



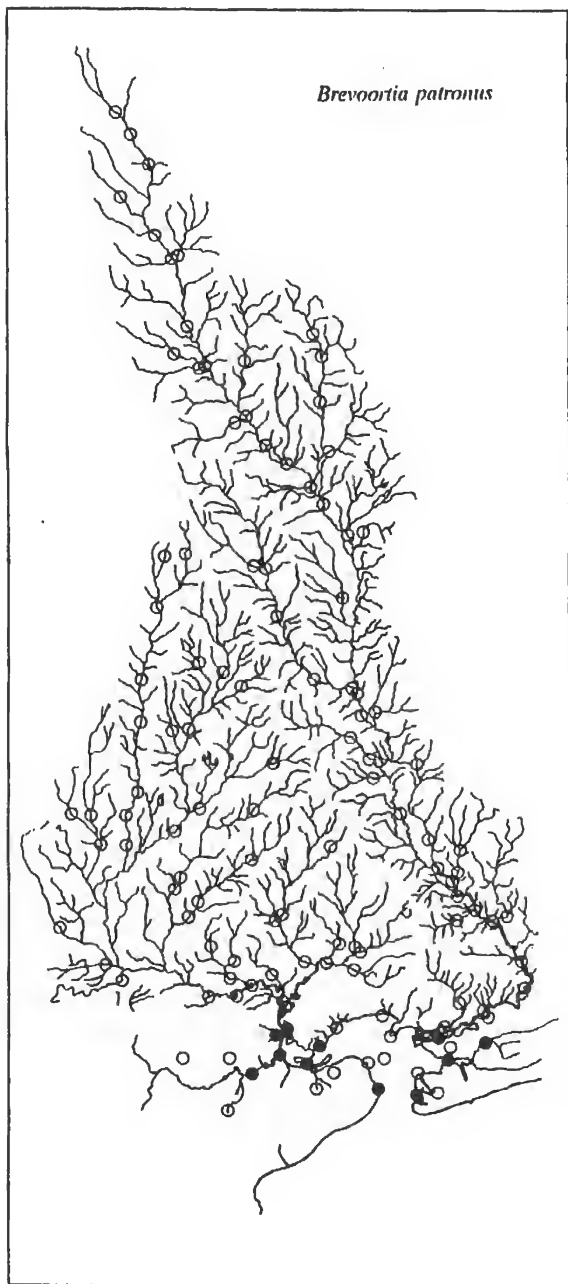
Map 6
 Anguillidae freshwater eels
Anguilla rostrata (Lesueur, 1817)
 American eel
 6 sites 6 specimens



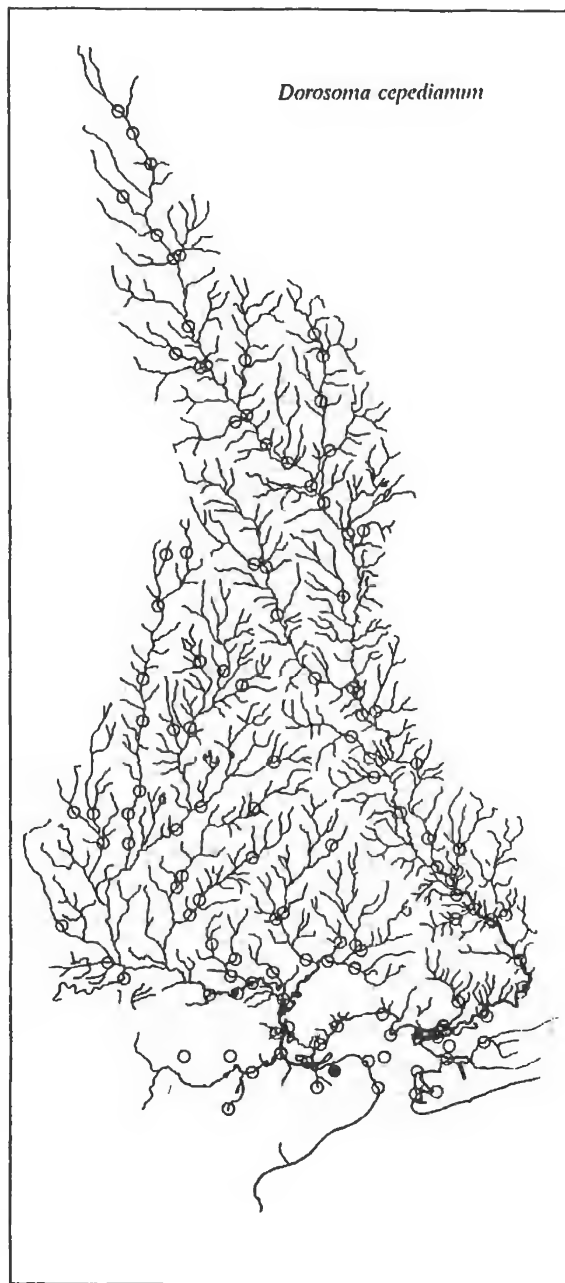
Map 7
 Ophichthidae snake eels
Myrophis punctatus Lütken, 1851
 speckled worm eel
 1 site 1 specimen



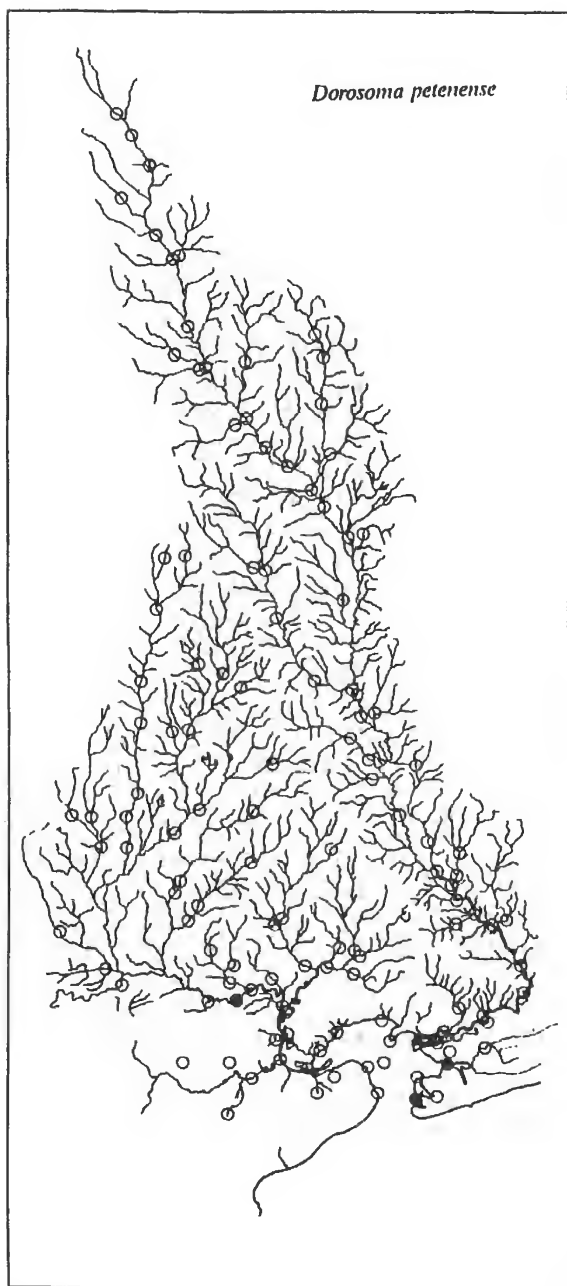
Map 8
 Clupeidae herrings
Alosa chrysochloris (Rafinesque, 1820)
 skipjack herring
 1 site 1 specimen



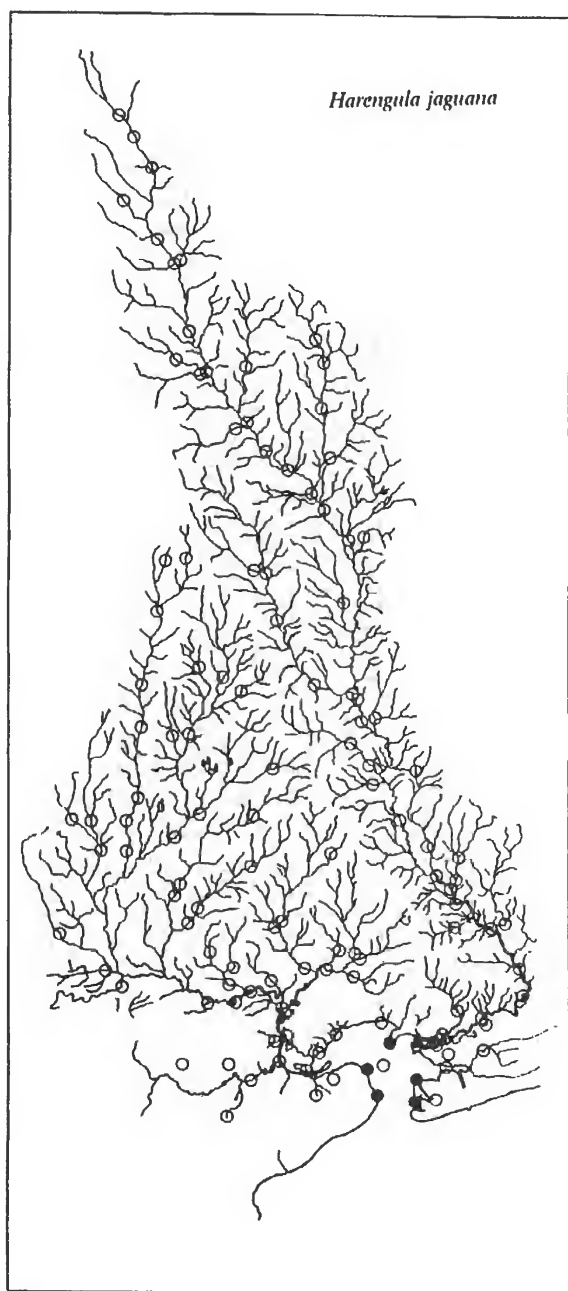
Map 9
 Clupeidae herrings
Brevoortia patronus Goode, 1878
 gulf menhaden
 11 sites 7,203 specimens



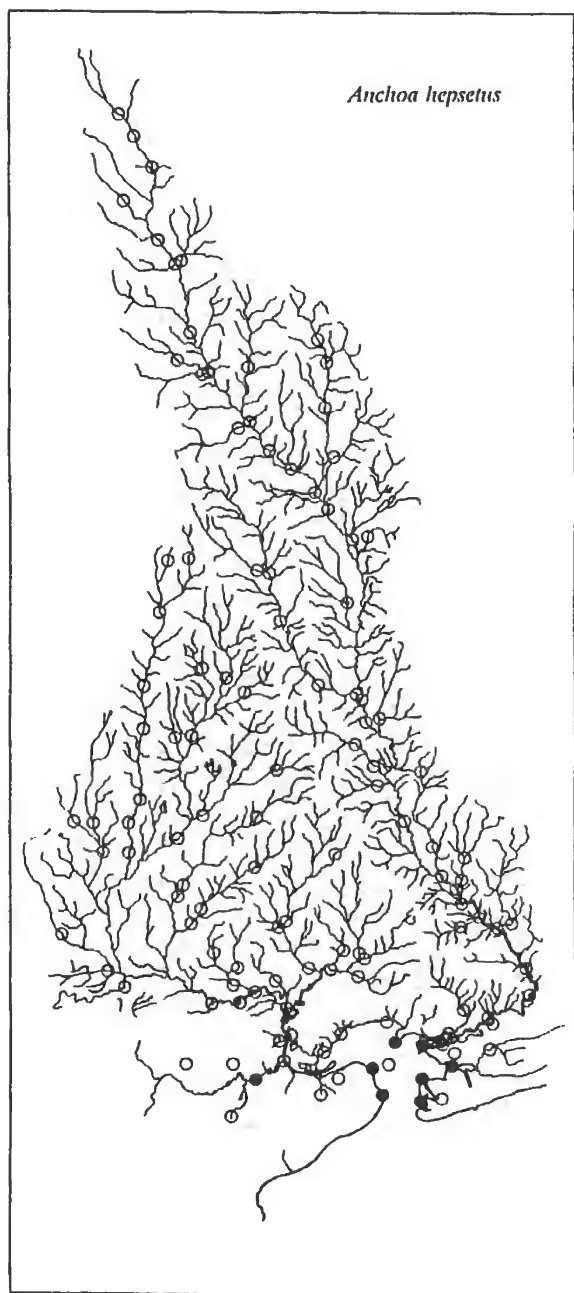
Map 10
 Clupeidae herrings
Dorosoma cepedianum (Lesueur, 1818)
 gizzard shad
 1 site 1 specimen



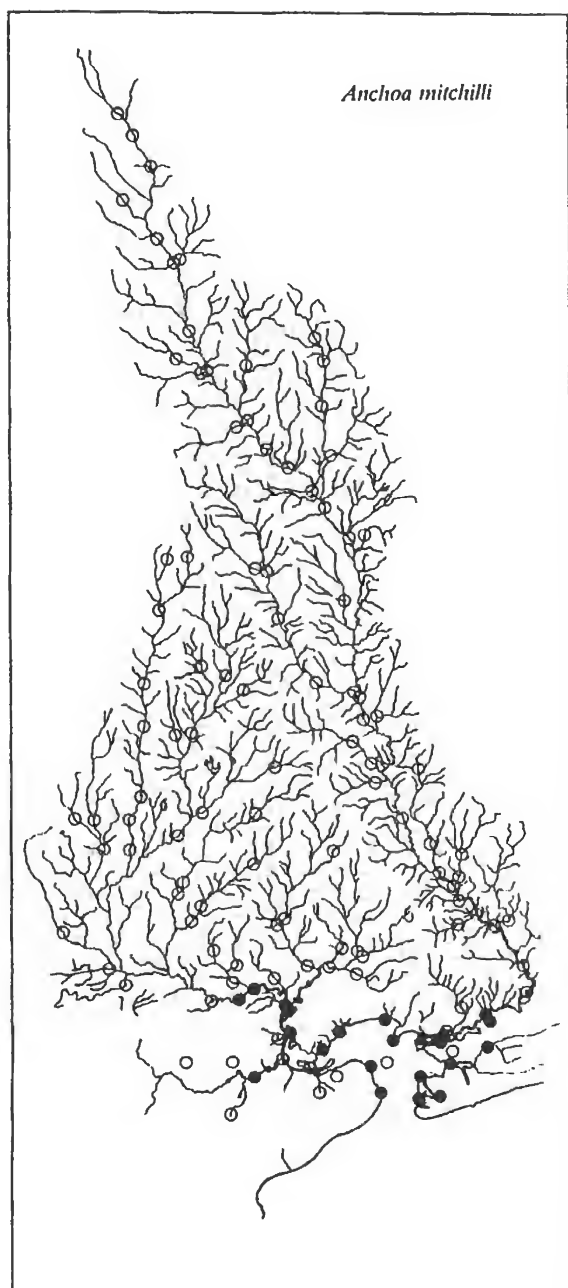
Map 11
Clupeidae herrings
Dorosoma petenense (Günther, 1866)
threadfin shad
3 sites 8 specimens



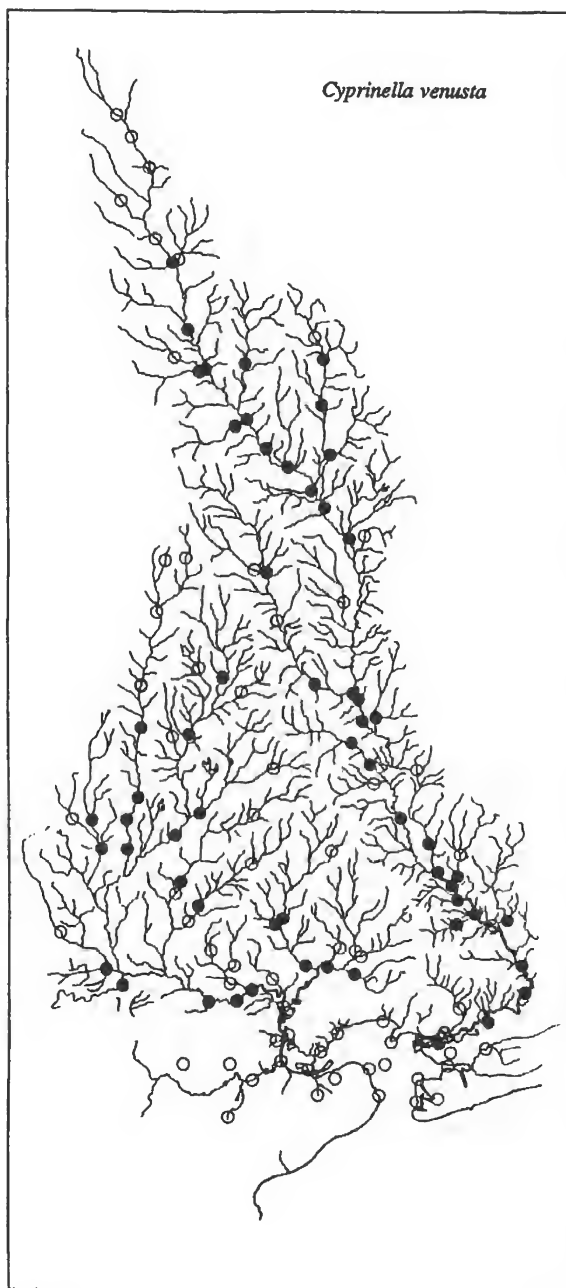
Map 12
Clupeidae herrings
Harengula jaguana Poey, 1865
scaled sardine
5 sites 23 specimens



Map 13
 Engraulidae anchovies
Anchoa hepsetus (Linnaeus, 1758)
 striped anchovy
 8 sites 76 specimens



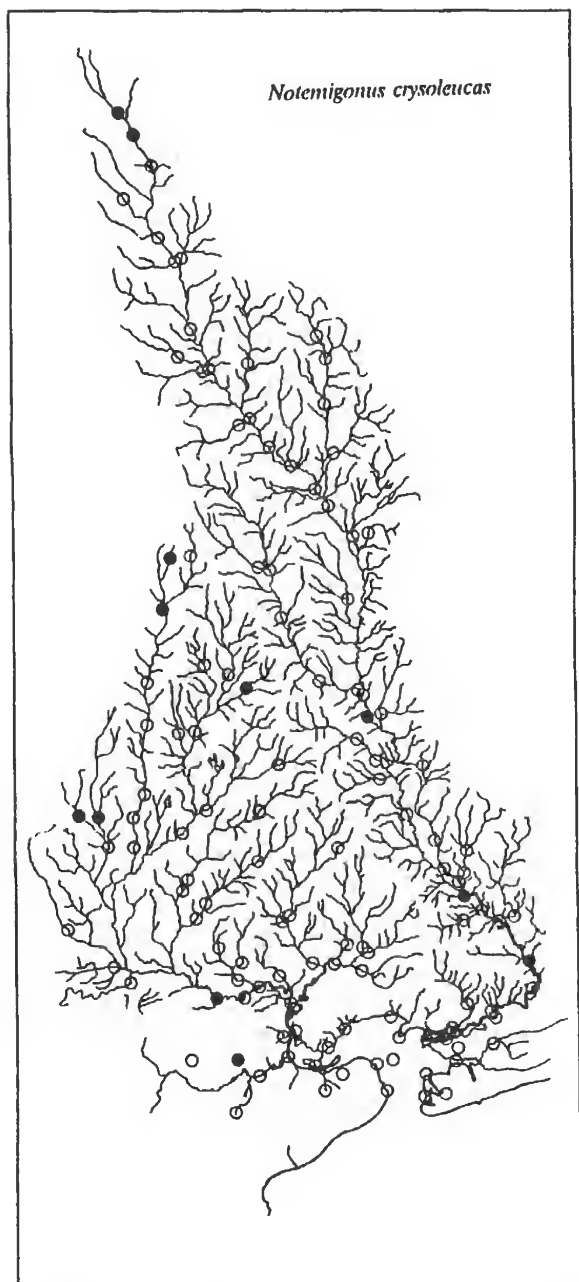
Map 14
 Engraulidae anchovies
Anchoa mitchilli (Valenciennes, 1848)
 bay anchovy
 21 sites 10,901 specimens



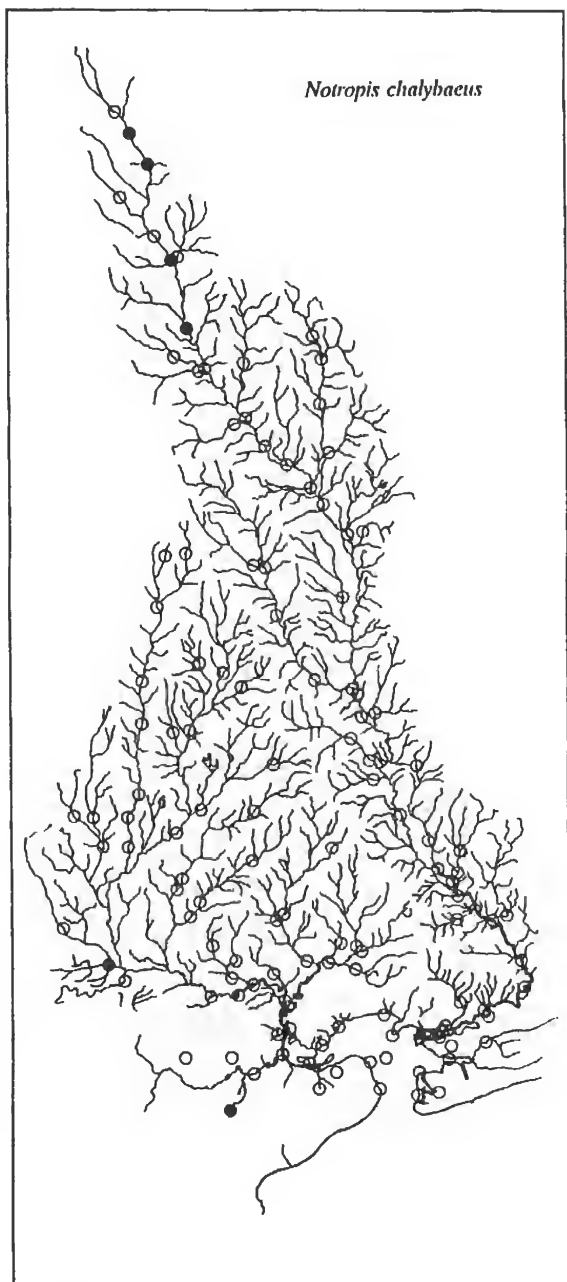
Map 15
 Cyprinidae minnows
Cyprinella venusta Girard, 1856
 blacktail shiner
 58 sites 7,524 specimens



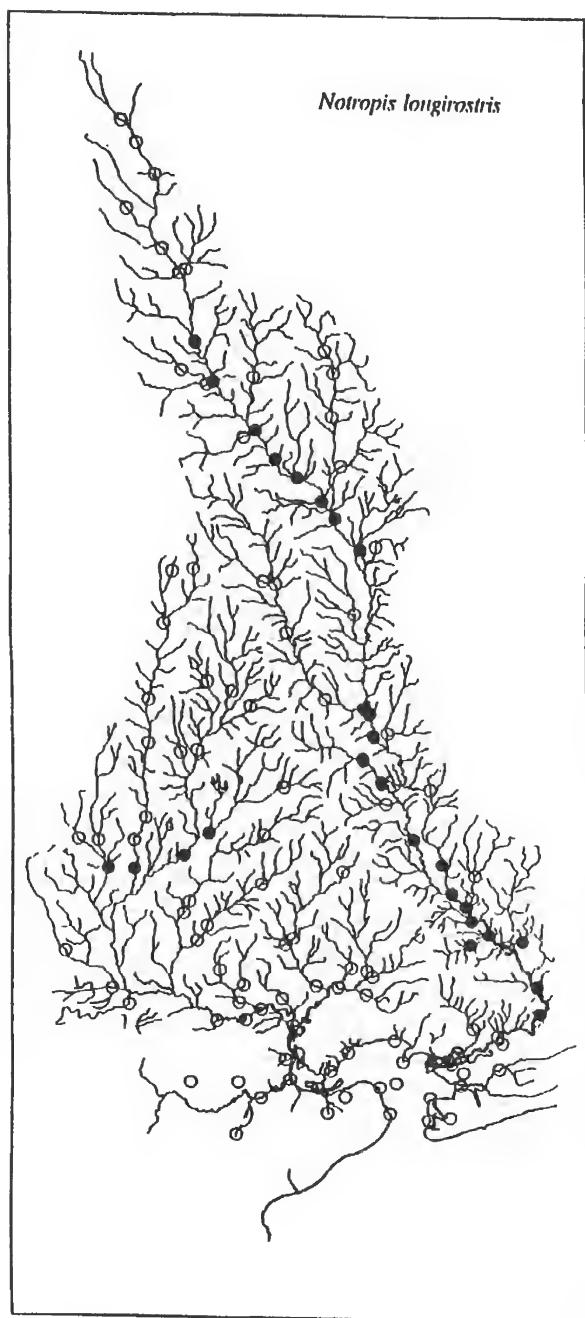
Map 16
 Cyprinidae minnows
Lythrurus roseipinnis (Hay, 1885)
 cherryfin shiner
 57 sites 7,260 specimens



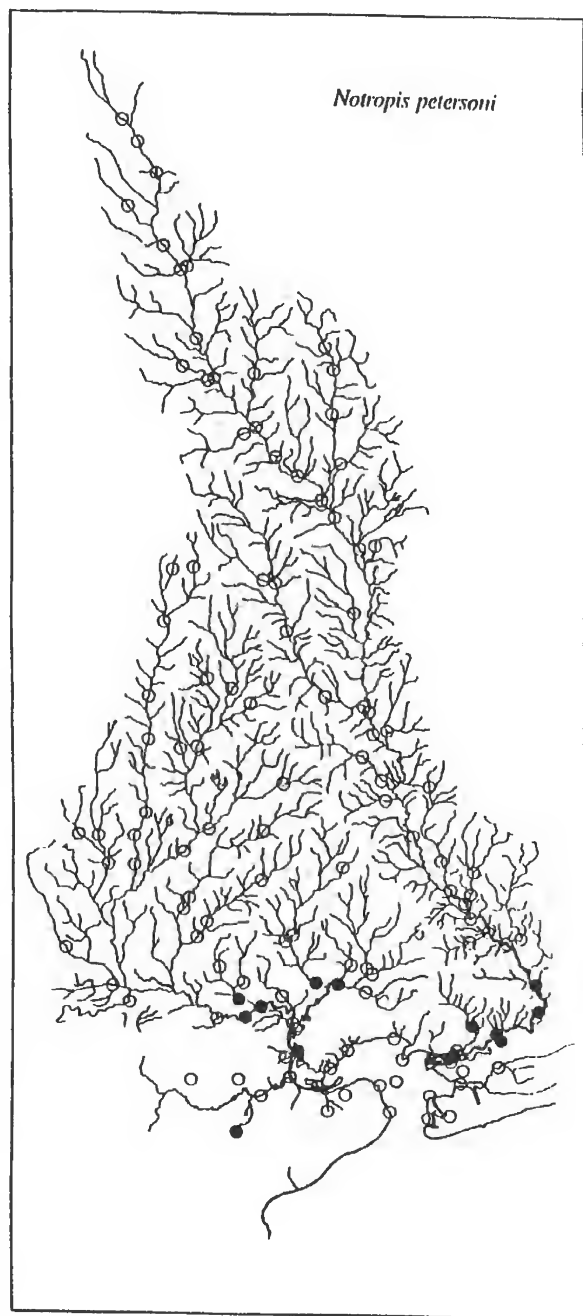
Map 17
 Cyprinidae minnows
Notemigonus crysoleucas (Mitchill, 1814)
 golden shiner
 12 sites 108 specimens



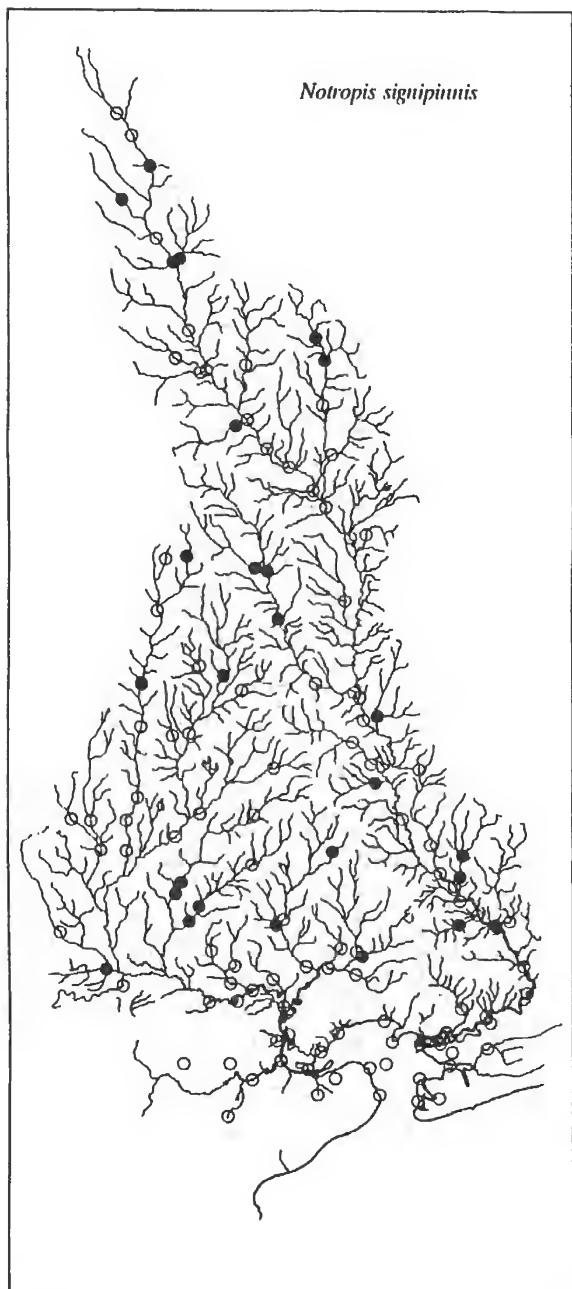
Map 18
 Cyprinidae minnows
Notropis chalybaeus (Cope, 1869)
 ironcolor shiner
 6 sites 282 specimens



Map 19
Cyprinidae minnows
Notropis longirostris (Hay, 1881)
longnose shiner
27 sites 4,440 specimens



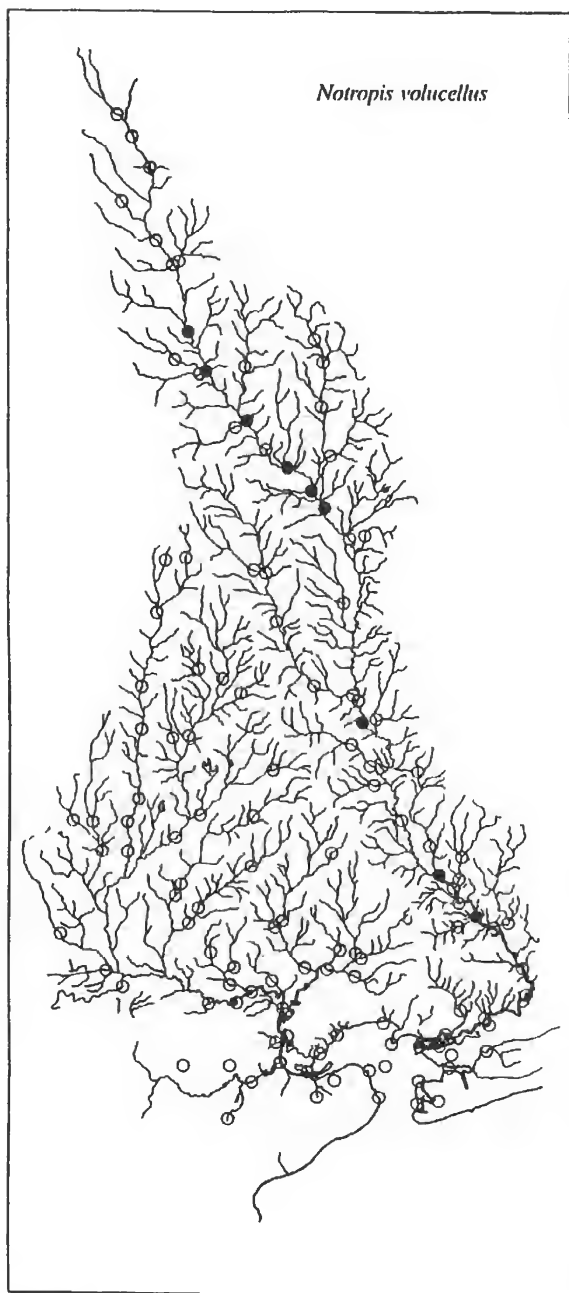
Map 20
Cyprinidae minnows
Notropis petersoni Fowler, 1942
coastal shiner
13 sites 1,732 specimens



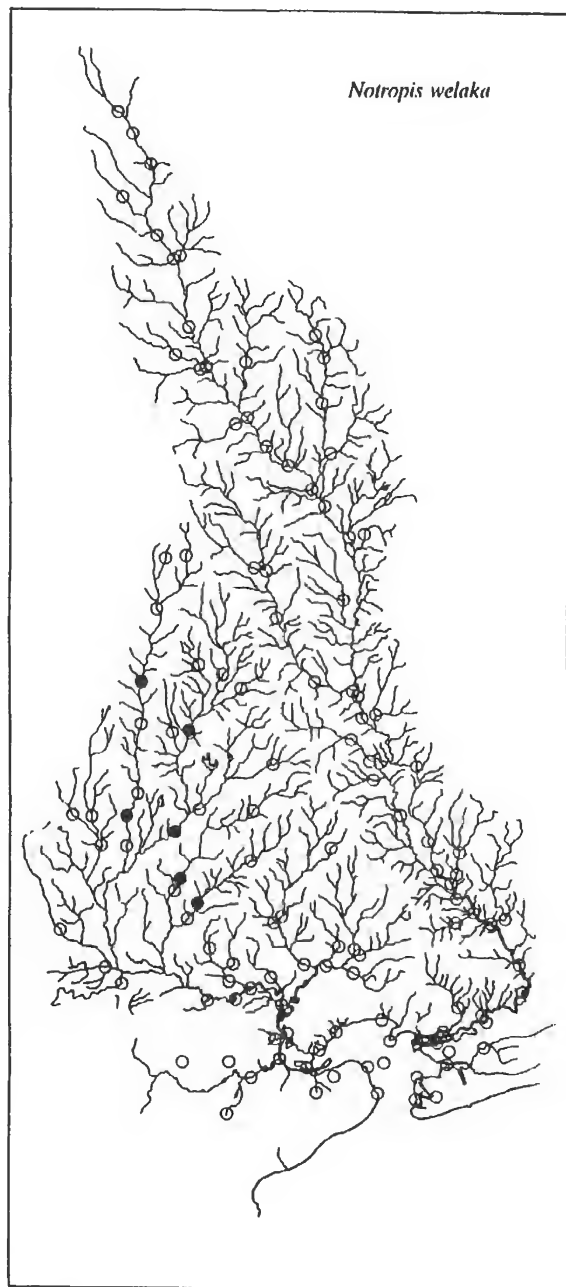
Map 21
 Cyprinidae minnows
Notropis signipinnis Bailey and Suttkus, 1952
 flagfin shiner
 27 sites 1,462 specimens



Map 22
 Cyprinidae minnows
Notropis texanus (Girard, 1856)
 weed shiner
 53 sites 2,104 specimens



Map 23
Cyprinidae minnows
Notropis volucellus (Cope, 1865)
mimic shiner
9 sites 154 specimens



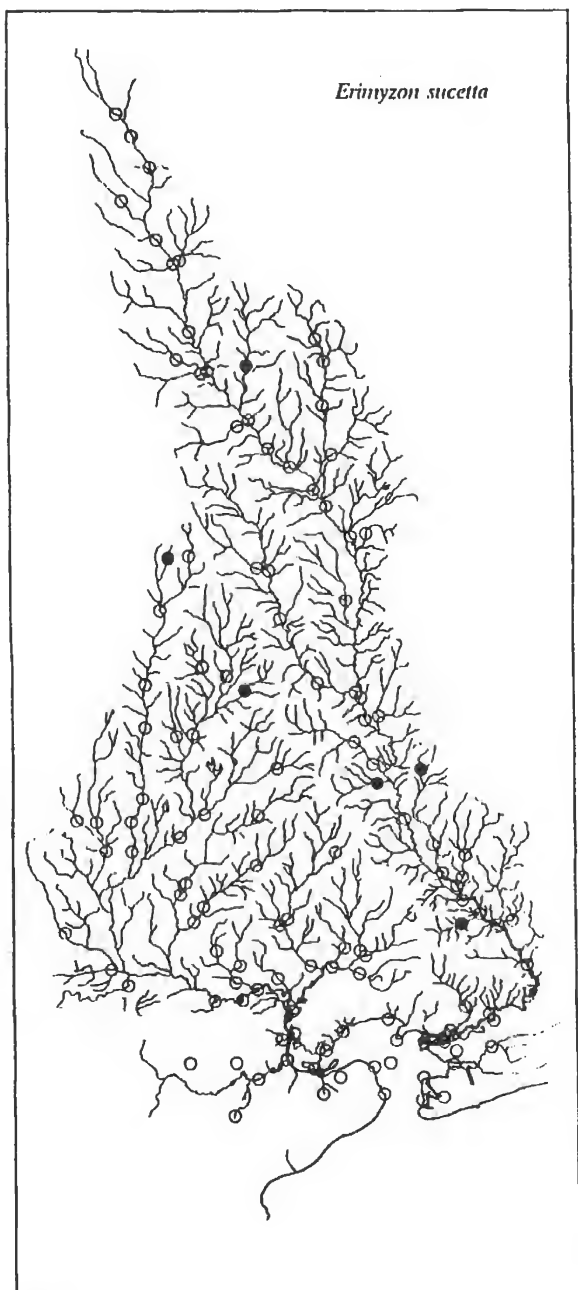
Map 24
Cyprinidae minnows
Notropis welaka Evermann and Kendall, 1898
bluenose shiner
6 sites 95 specimens



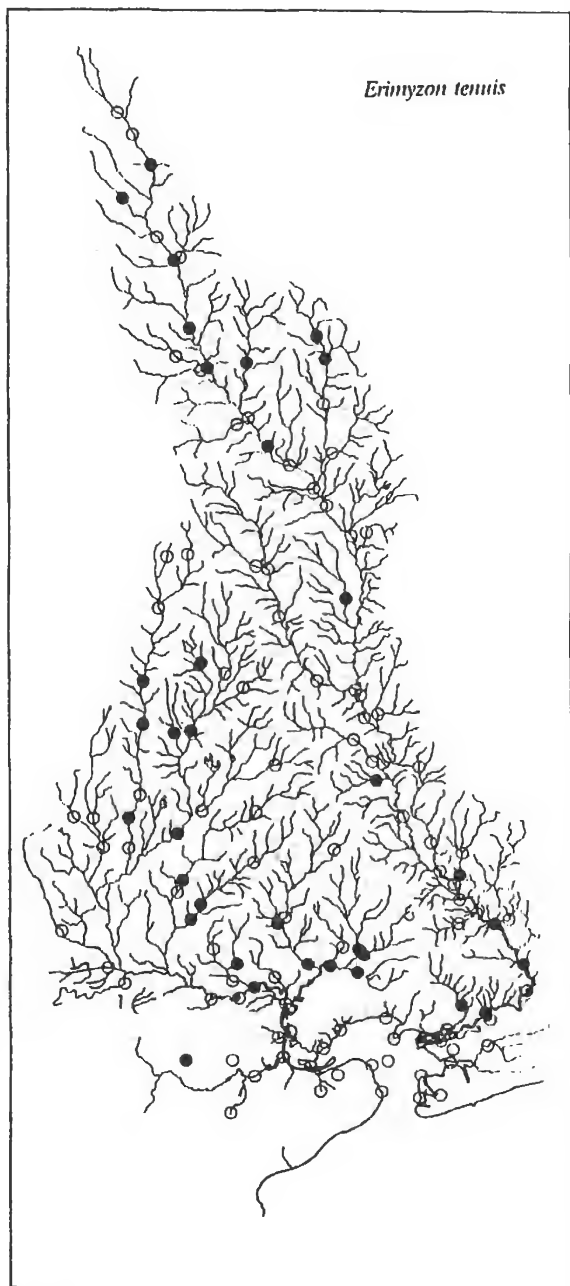
Map 25
 Cyprinidae minnows
Notropis winchelli (Girard, 1856)
 clear chub
 22 sites 176 specimens



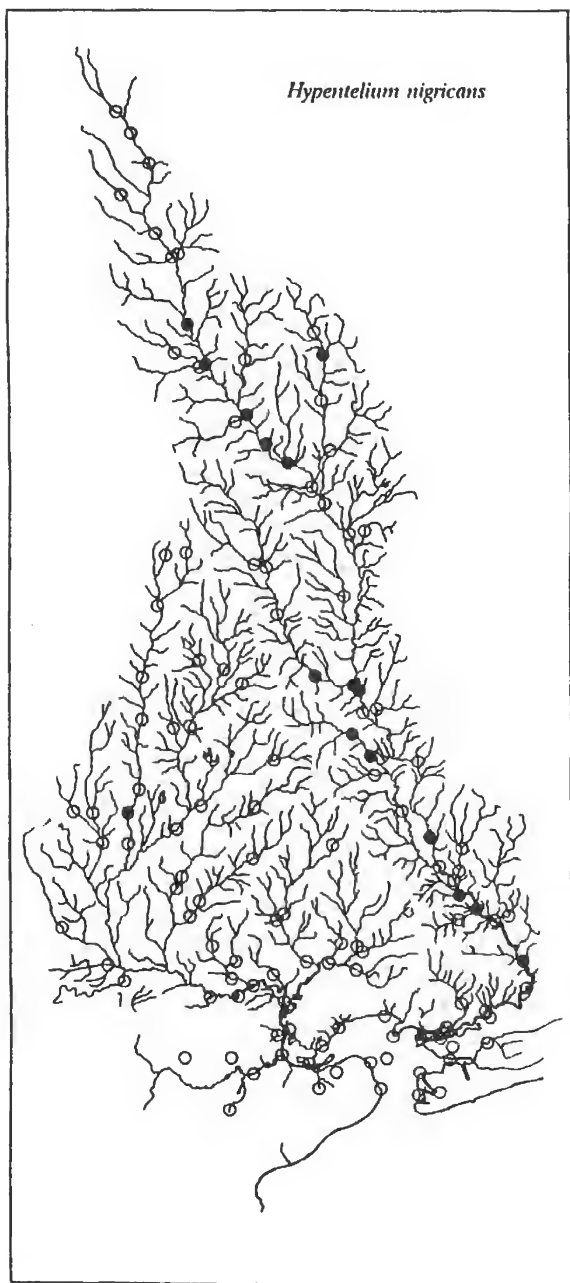
Map 26
 Cyprinidae minnows
Opsopoeodus emiliae Hay, 1881
 pugnose minnow
 23 sites 290 specimens



Map 27
 Catostomidae suckers
Erimyzon sucetta (Lacepède, 1803)
 lake chubsucker
 6 sites 8 specimens



Map 28
 Catostomidae suckers
Erimyzon tenuis (Agassiz, 1855)
 sharpfin chubsucker
 35 sites 701 specimens



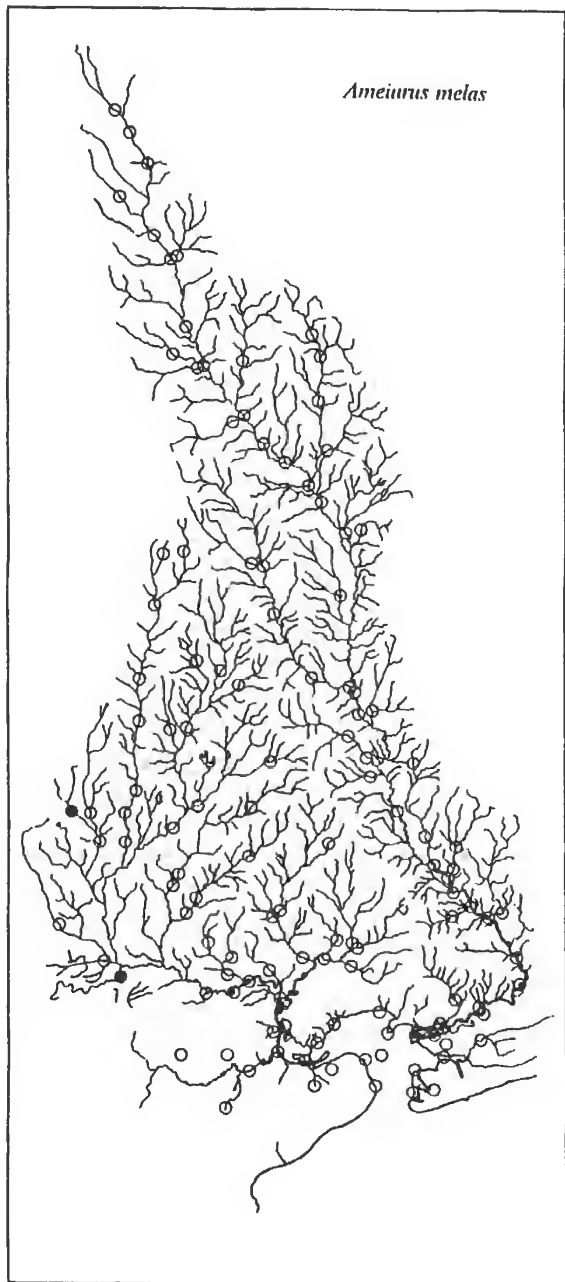
Map 29
 Catostomidae suckers
Hypentelium nigricans (Lesueur, 1817)
 northern hog sucker
 16 sites 92 specimens



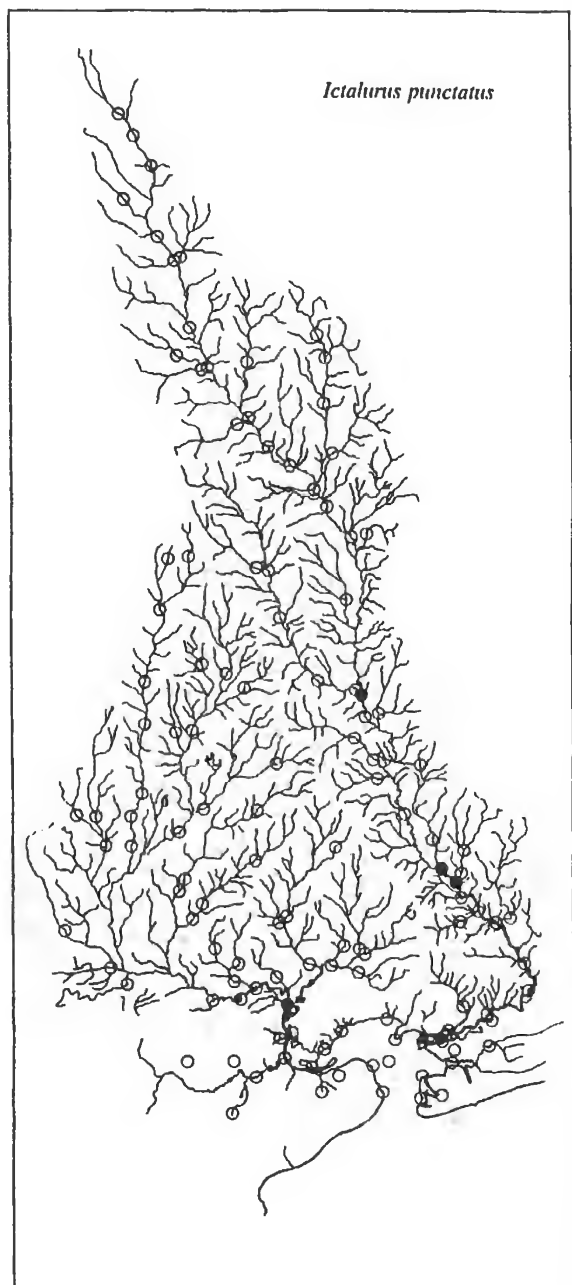
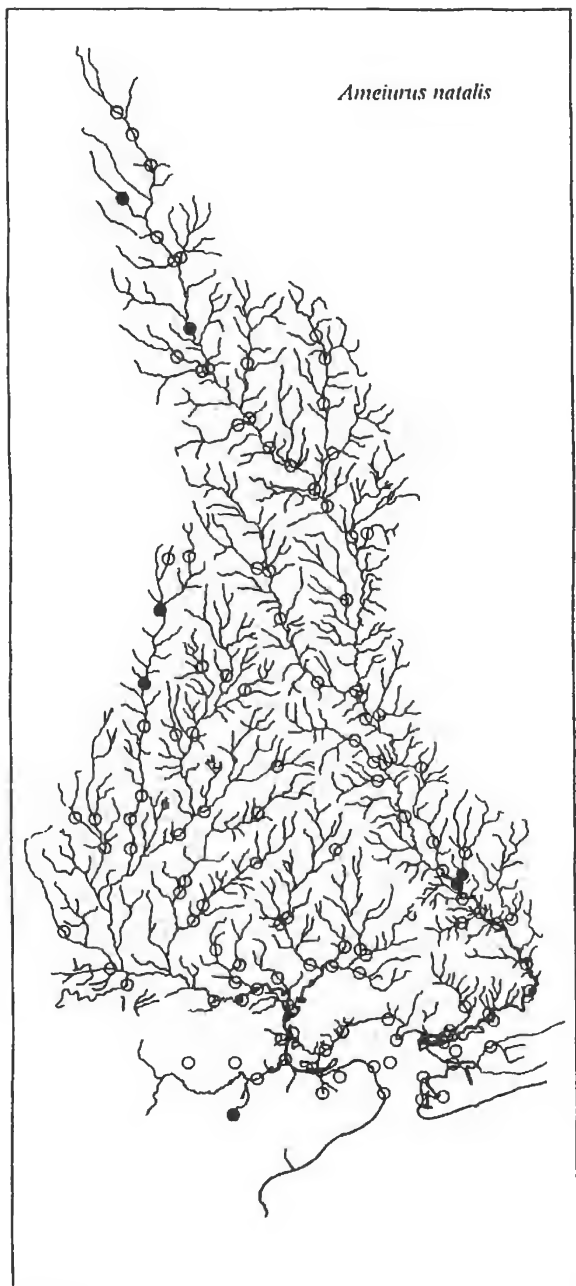
Map 30
 Catostomidae suckers
Minytrema melanops (Rafinesque, 1820)
 spotted sucker
 18 sites 103 specimens



Map 31
Catostomidae suckers
Moxostoma poecilurum Jordan, 1877
blacktail redhorse
23 sites 187 specimens



Map 32
Ictaluridae bullhead catfishes
Ameiurus melas (Rafinesque, 1820)
black bullhead
2 sites 3 specimens



Map 33
 Ictaluridae bullhead catfishes
Ameiurus natalis (Lesueur, 1819)
 yellow bullhead
 7 sites 8 specimens

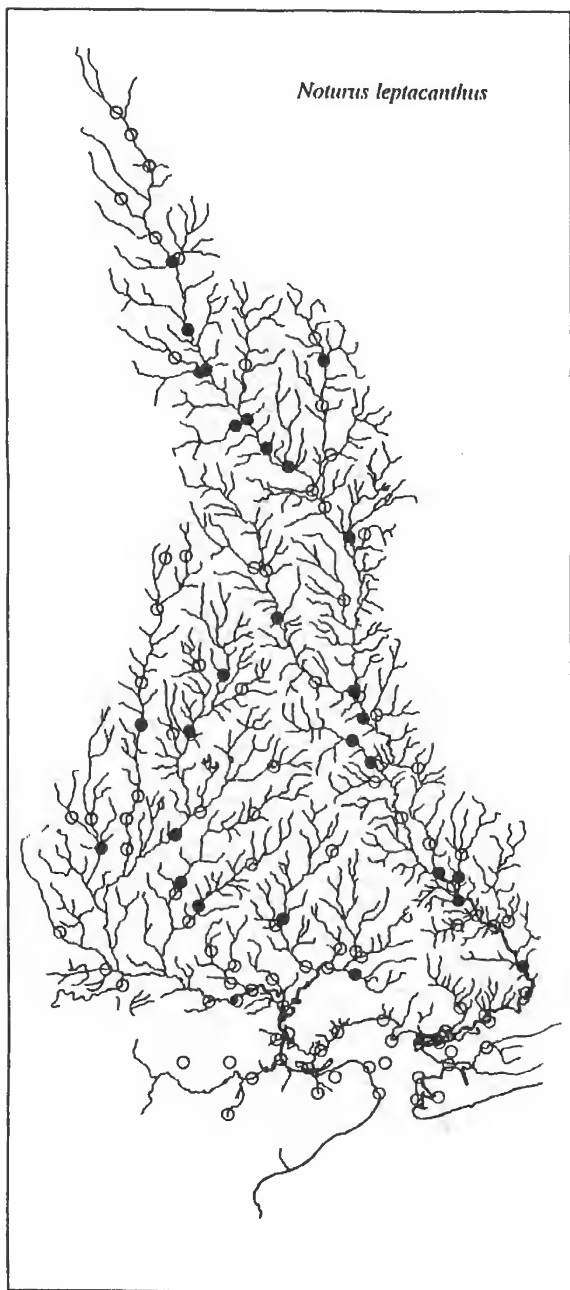
Map 34
 Ictaluridae bullhead catfish
Ictalurus punctatus (Rafinesque, 1818)
 channel catfish
 4 sites 10 specimens



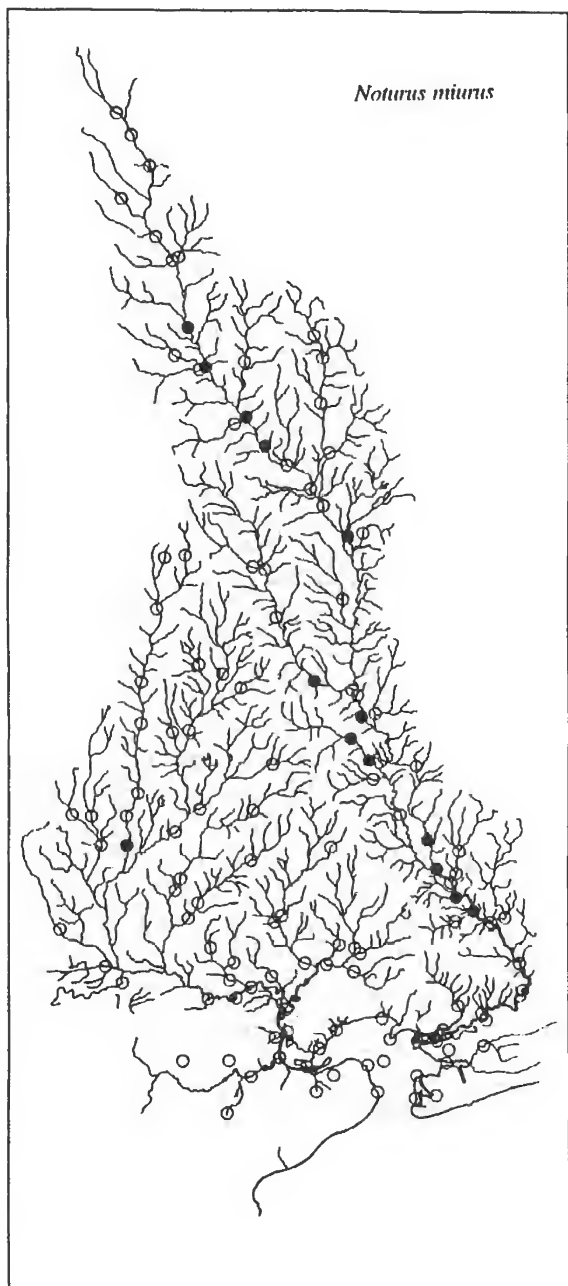
Map 35
 Ictaluridae bullhead catfishes
Noturus funebris Gilbert and Swain, 1891
 black madtom
 22 sites 47 specimens



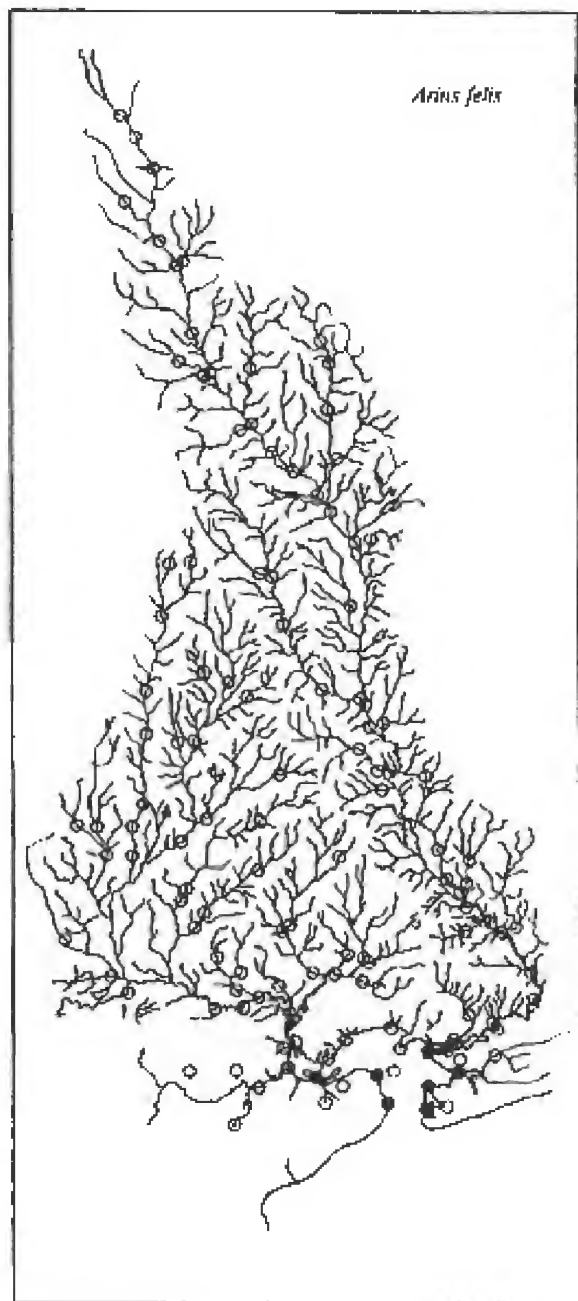
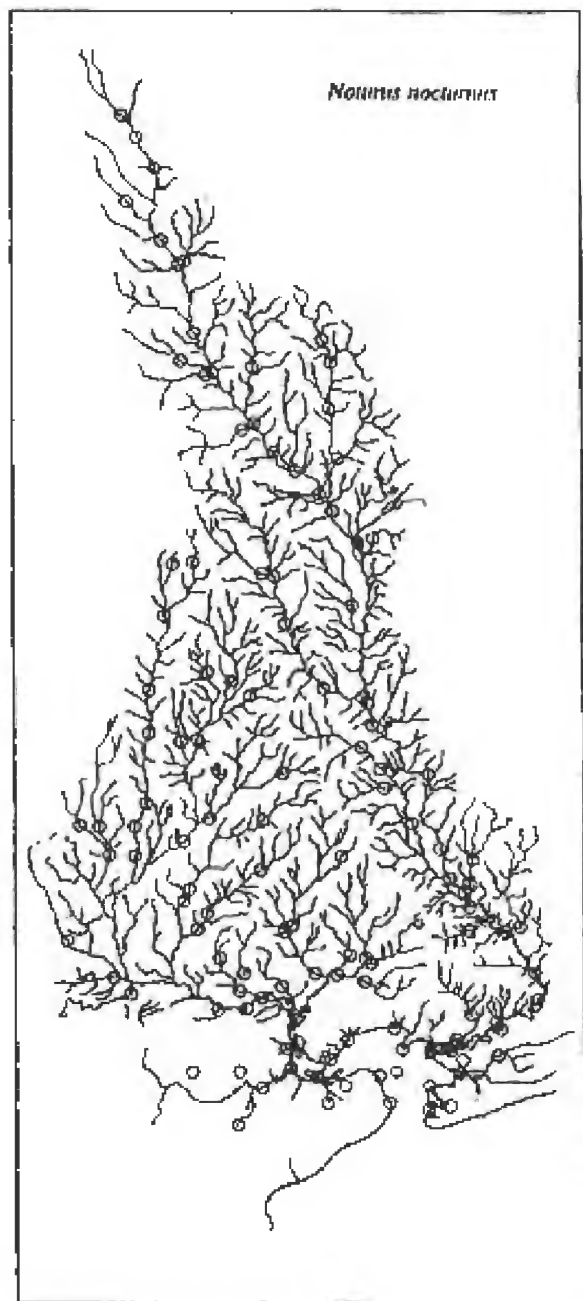
Map 36
 Ictaluridae bullhead catfishes
Noturus gyrinus (Mitchill, 1817)
 tadpole madtom
 2 sites 8 specimens



Map 37
 Ictaluridae bullhead catfishes
Noturus leptacanthus Jordan, 1877
 speckled madtom
 28 sites 205 specimens

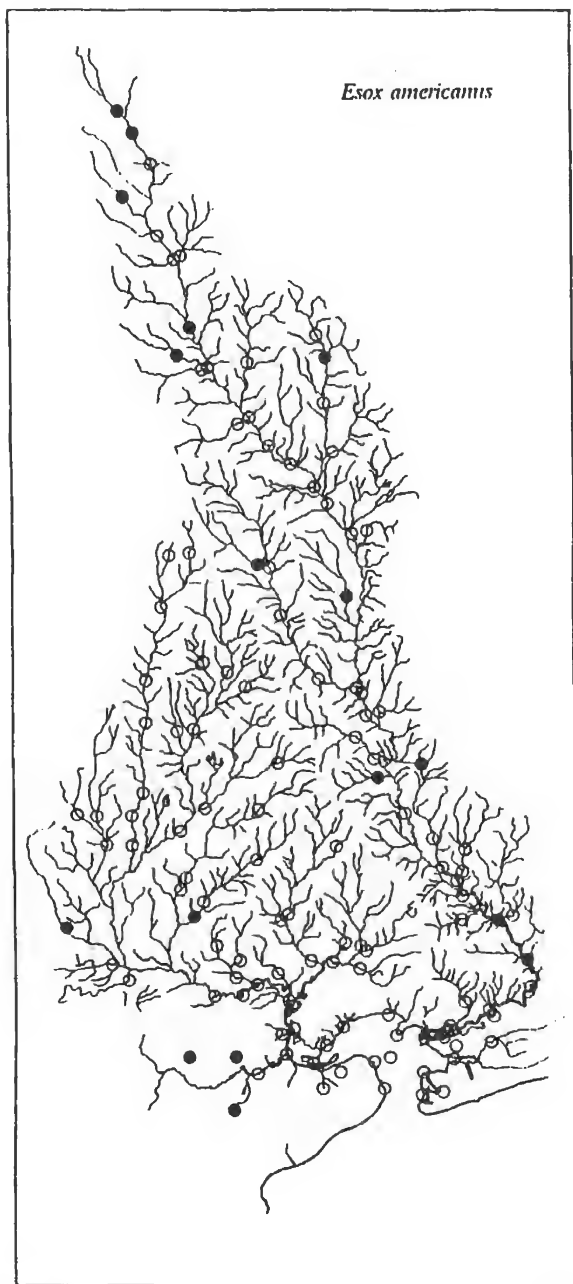


Map 38
 Ictaluridae bullhead catfishes
Noturus miurus Jordan, 1877
 brindled madtom
 14 sites 65 specimens



Map 39
 Ictaluridae bullhead catfishes
Noturus nocturnus Jordan and Gilbert, 1886
 freckled madtom
 1 site 1 specimen

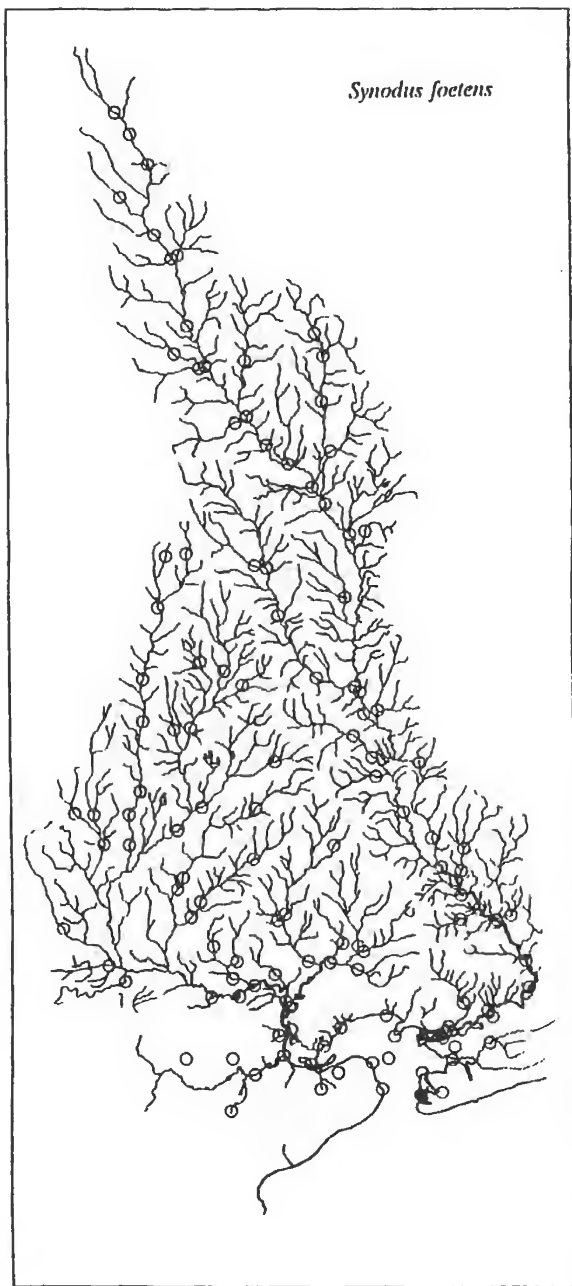
Map 40
 Ariidae sea catfishes
Arius felix (Linnaeus, 1766)
 hardhead catfish
 7 sites 70 specimens



Map 41
 Esocidae pikes
Esoc americanus Gmelin, 1788
 redfin pickerel
 17 sites 36 specimens

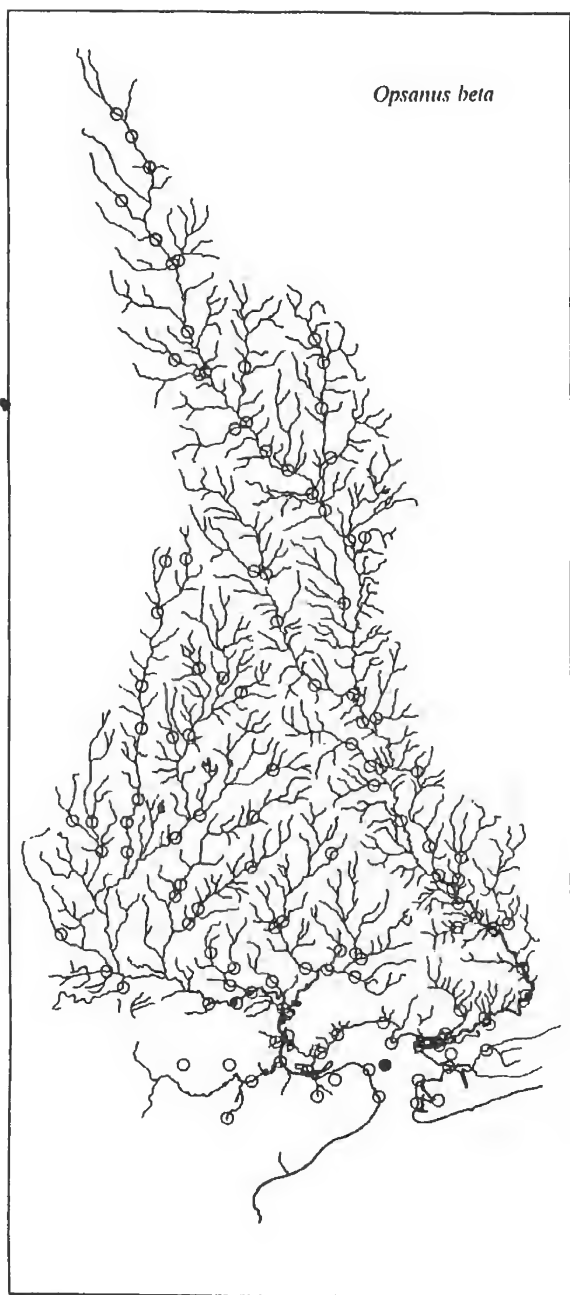


Map 42
 Esocidae pikes
Esoc niger Lesueur, 1818
 chain pickerel
 37 sites 153 specimens



Map 43
 Synodontidae lizardfishes
Synodus foetens (Linnaeus, 1766)
 inshore lizardfish
 1 site 14 specimens

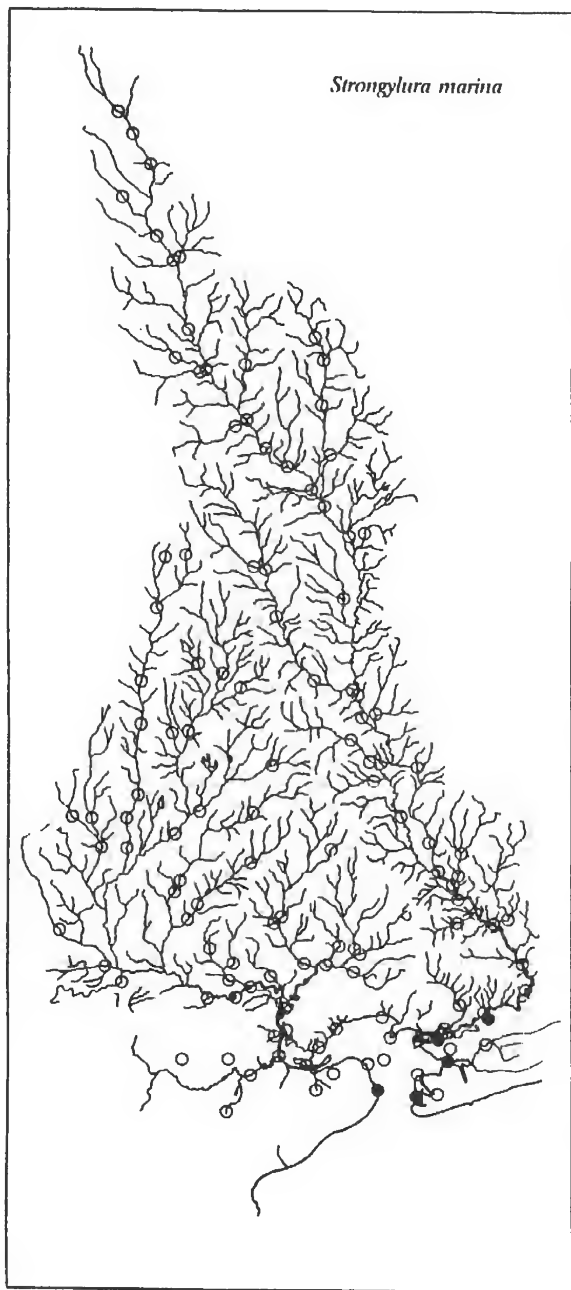
Map 44
 Aphredoderidae pirate perches
Aphredoderus sayanus (Gilliams, 1824)
 pirate perch
 20 sites 120 specimens



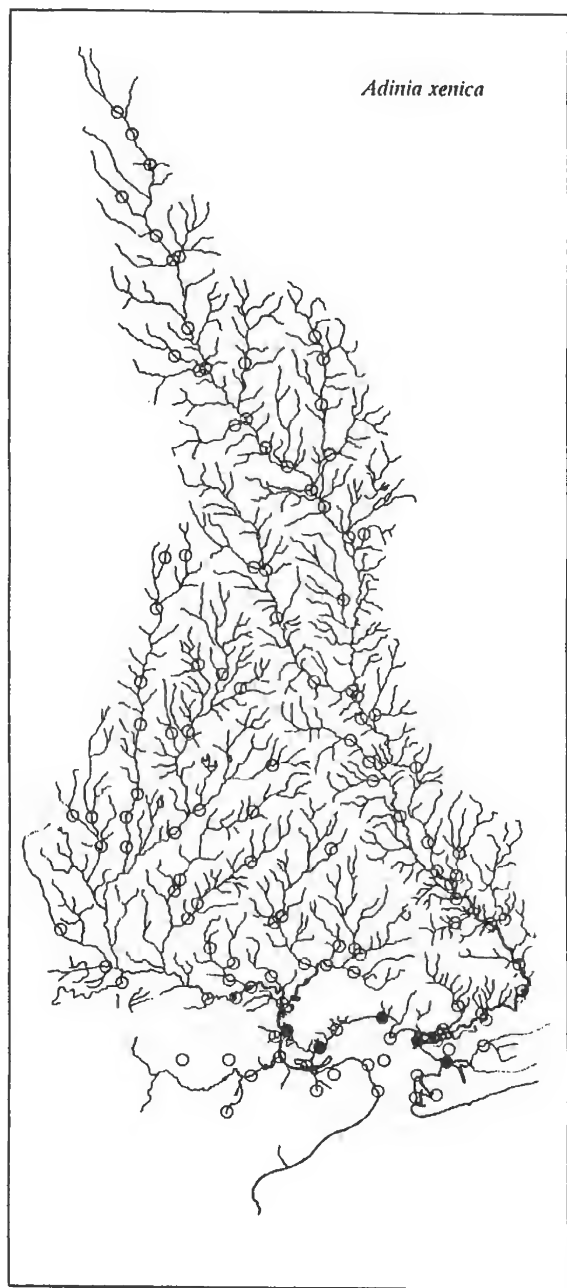
Map 45
 Batrachoididae toadfishes
Opsanus beta (Goode and Bean, 1879)
 gulf toadfish
 1 site 1 specimen



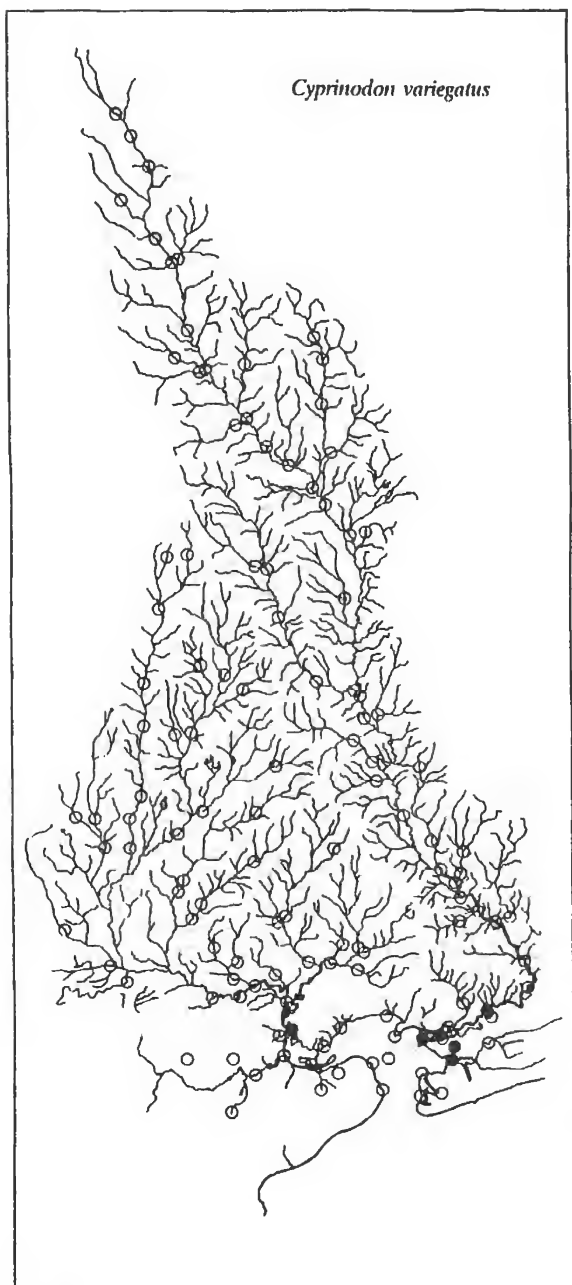
Map 46
 Gobiesocidae clingfishes
Gobiesox strumosus Cope, 1870
 skilletfish
 4 sites 18 specimens



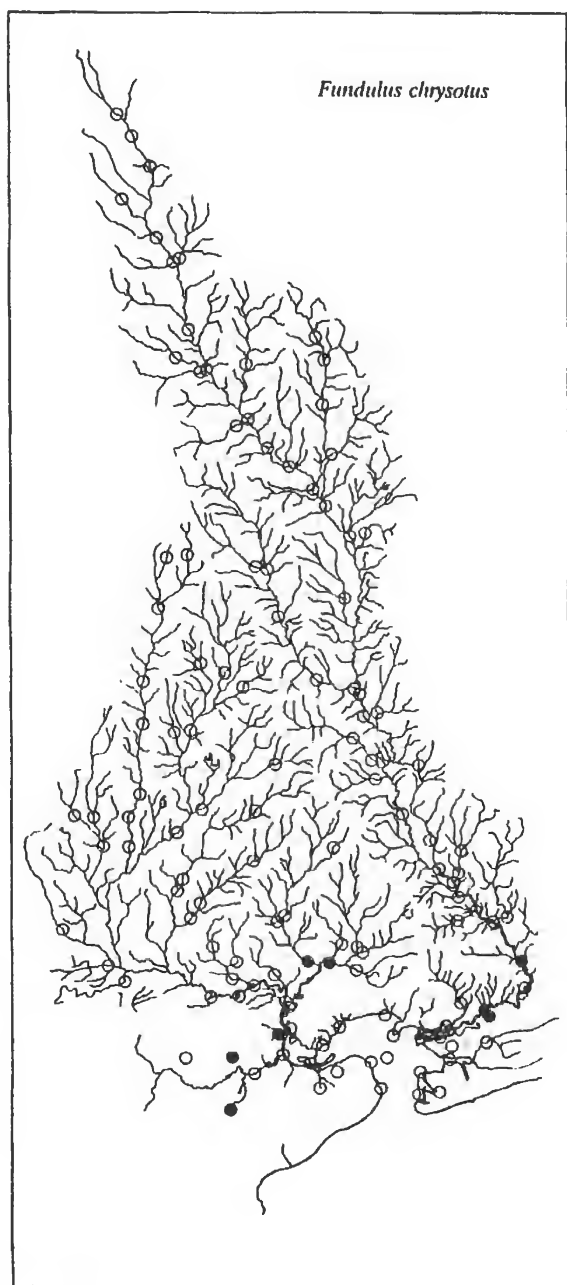
Map 47
Belontiidae needlefishes
Strongylura marina (Walbaum, 1792)
Atlantic needlefish
5 sites 13 specimens



Map 48
Cyprinodontidae killifishes
Adinia xenica (Jordan and Gilbert, 1882)
diamond killifish
5 sites 31 specimens



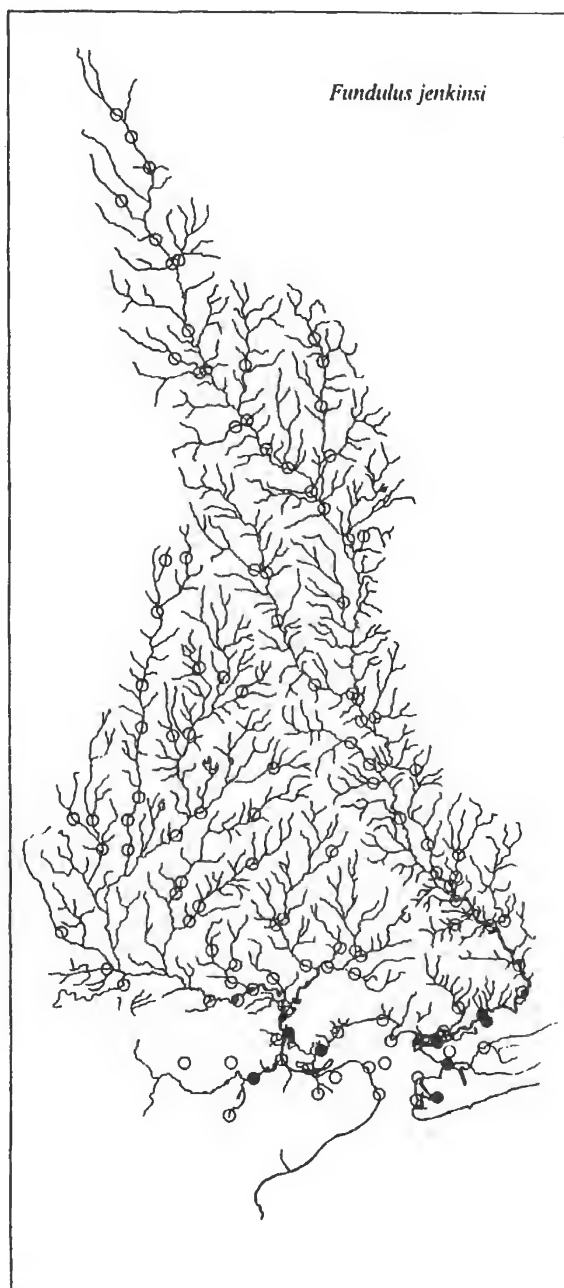
Map 49
 Cyprinodontidae killifishes
Cyprinodon variegatus Lacepède, 1803
 sheepshead minnow
 5 sites 70 specimens



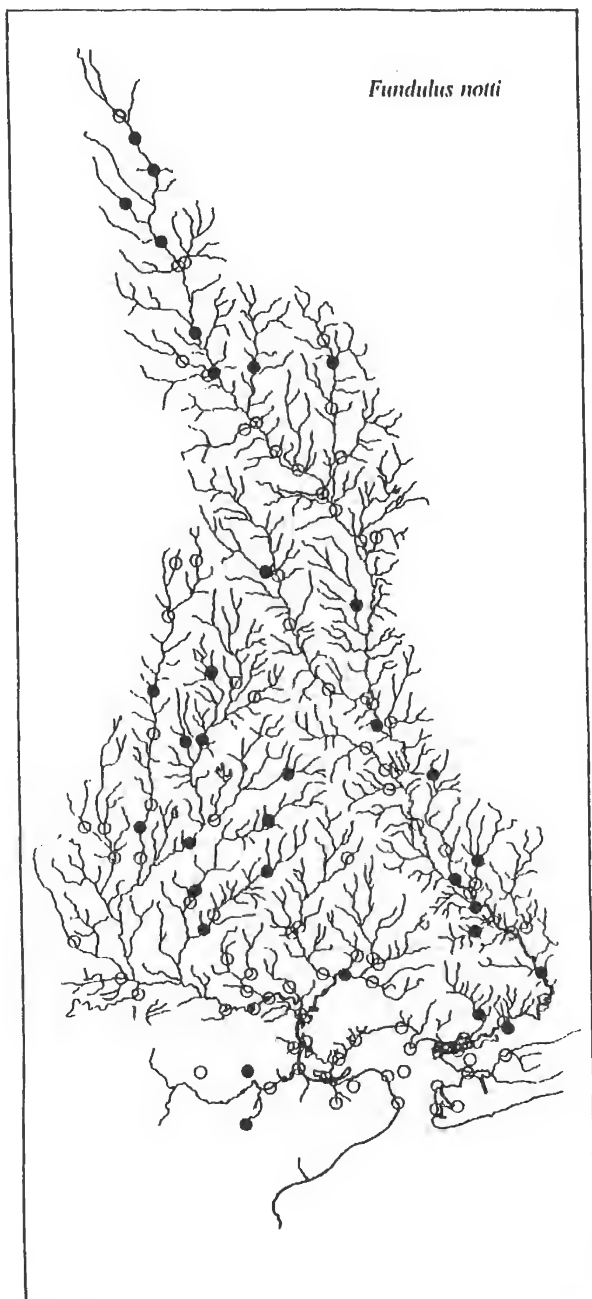
Map 50
 Cyprinodontidae killifishes
Fundulus chrysotus (Günther, 1866)
 golden topminnow
 8 sites 158 specimens



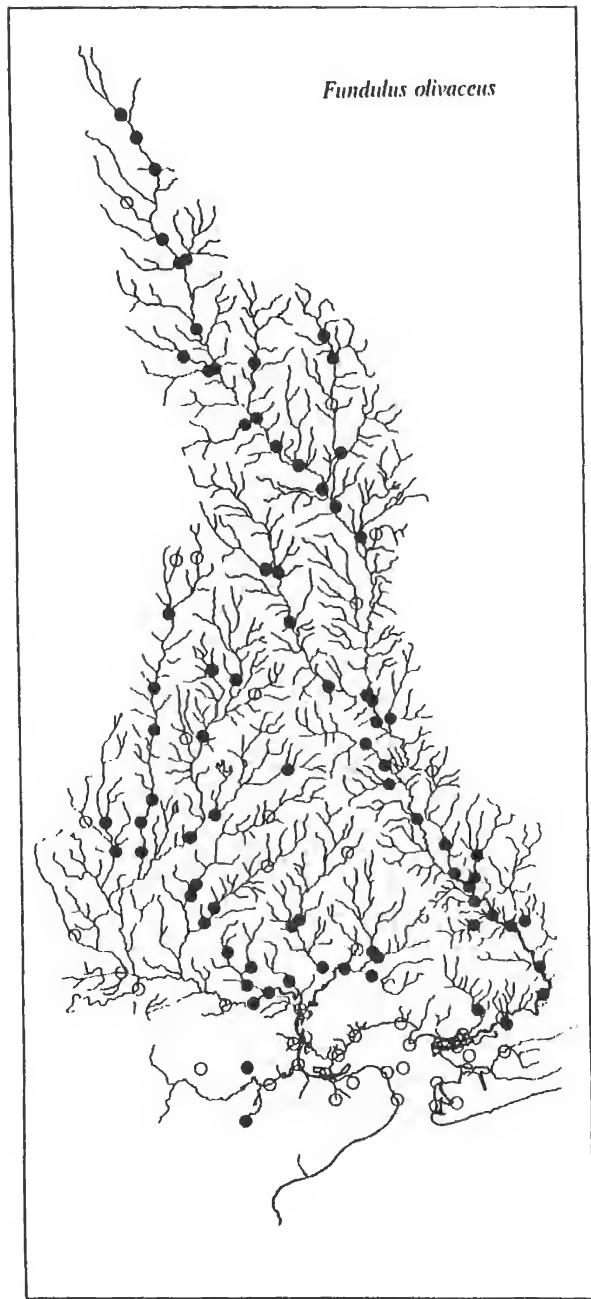
Map 51
Cyprinodontidae killifishes
Fundulus grandis Baird and Girard, 1853
gulf killifish
11 sites 136 specimens



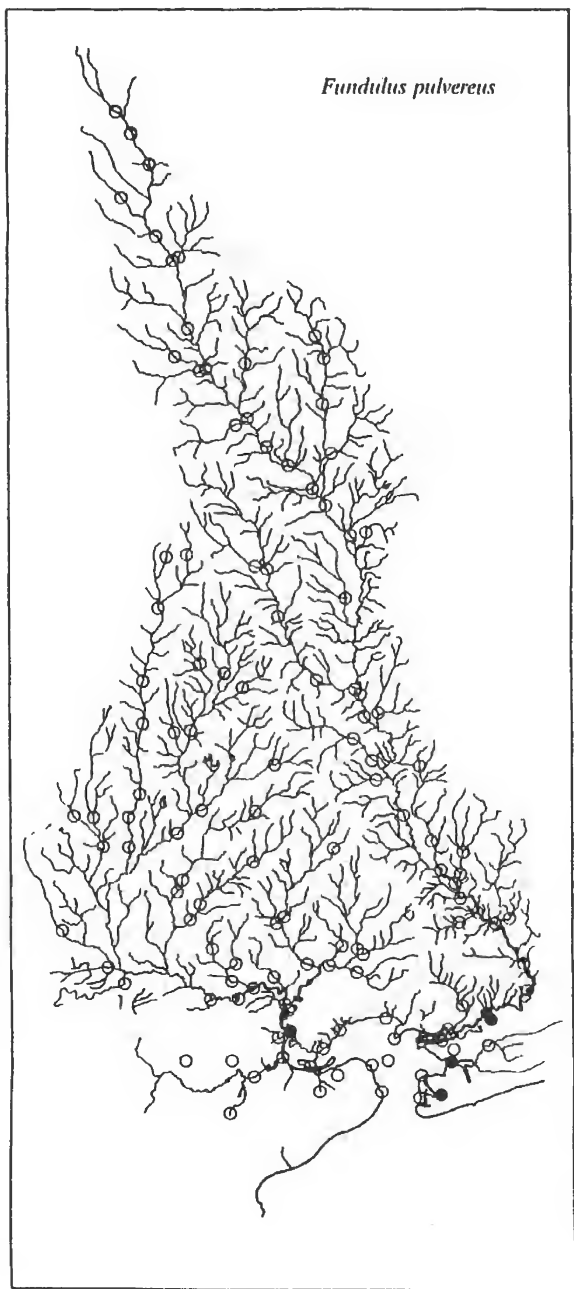
Map 52
Cyprinodontidae killifishes
Fundulus jenkinsi (Evermann, 1892)
saltmarsh topminnow
8 sites 393 specimens



Map 53
 Cyprinodontidae killifishes
Fundulus notti (Agassiz, 1854)
 bayou topminnow
 33 sites 730 specimens



Map 54
 Cyprinodontidae killifishes
Fundulus olivaceus (Storer, 1845)
 blackspotted topminnow
 80 sites 2,383 specimens



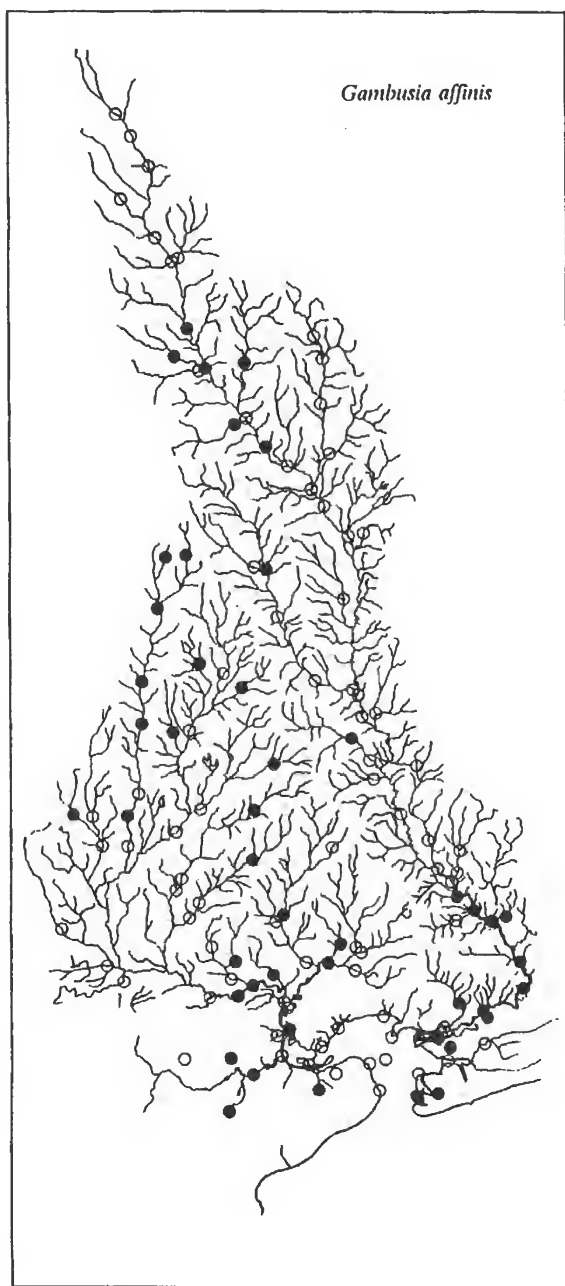
Map 55
 Cyprinodontidae killifishes
Fundulus pulvereus (Evermann, 1892)
 bayou killifish
 5 sites 180 specimens



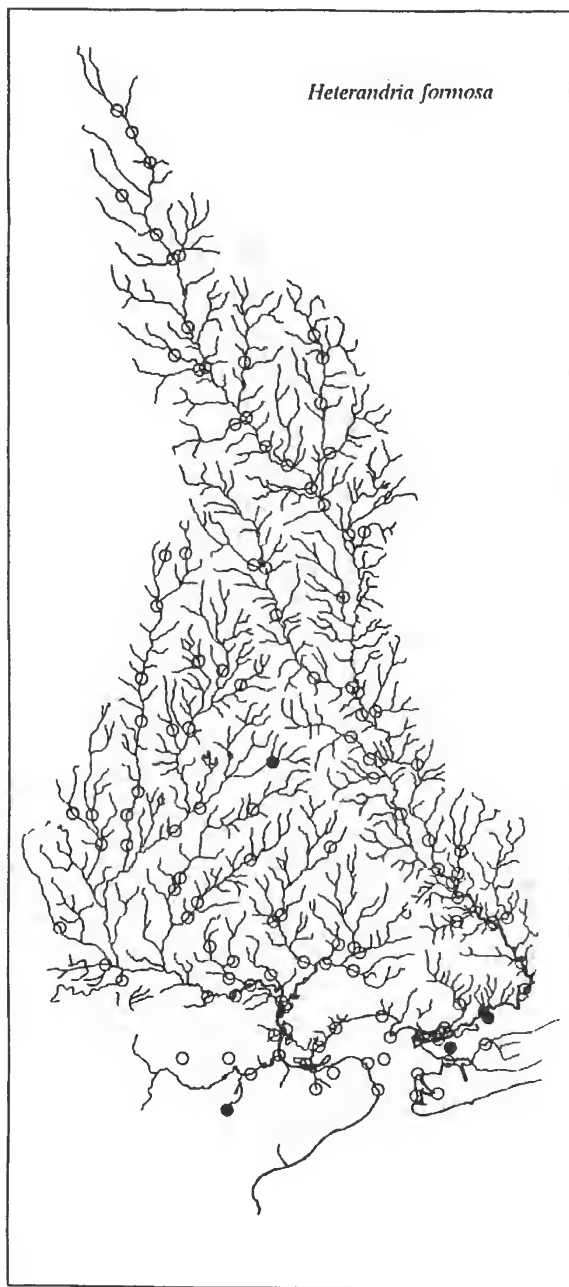
Map 56
 Cyprinodontidae killifishes
Fundulus similis (Baird and Girard, 1853)
 longnose killifish
 6 sites 41 specimens



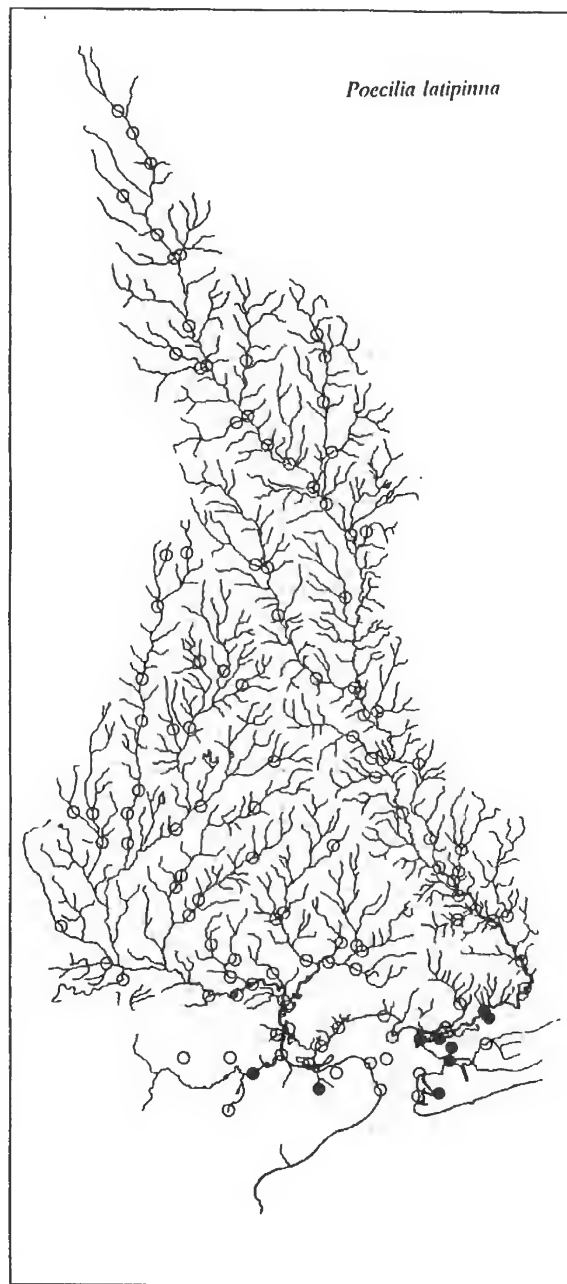
Map 57
 Cyprinodontidae killifishes
Lucania parva (Baird and Girard, 1855)
 rainwater killifish
 13 sites 1,107 specimens



Map 58
 Poeciliidae livebearers
Gambusia affinis (Baird and Girard, 1853)
 mosquitofish
 46 sites 1,300 specimens



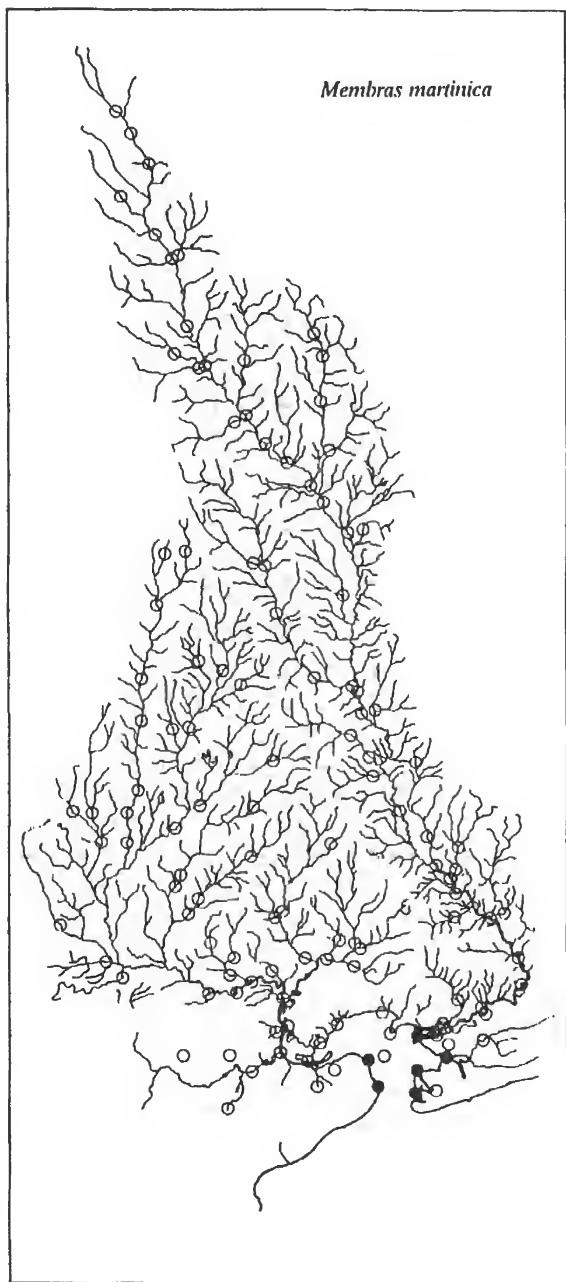
Map 59
 Poeciliidae livebearers
Heterandria formosa Agassiz, 1855
 least killifish
 5 sites 58 specimens



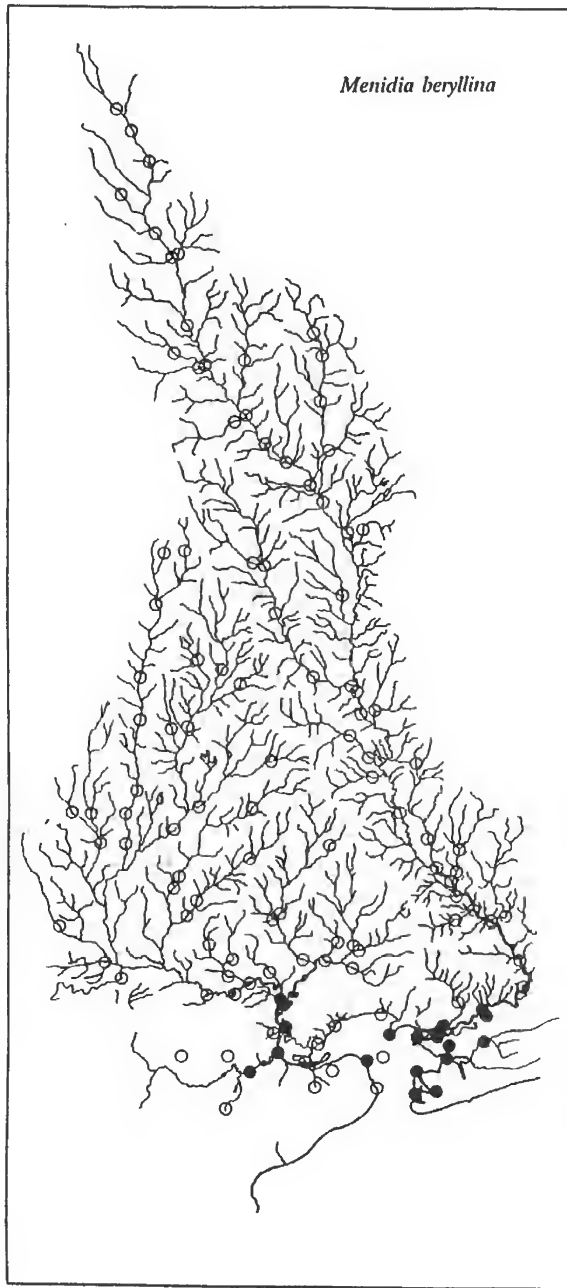
Map 60
 Poeciliidae livebearers
Poecilia latipinna (Lesueur, 1821)
 sailfin molly
 9 sites 403 specimens



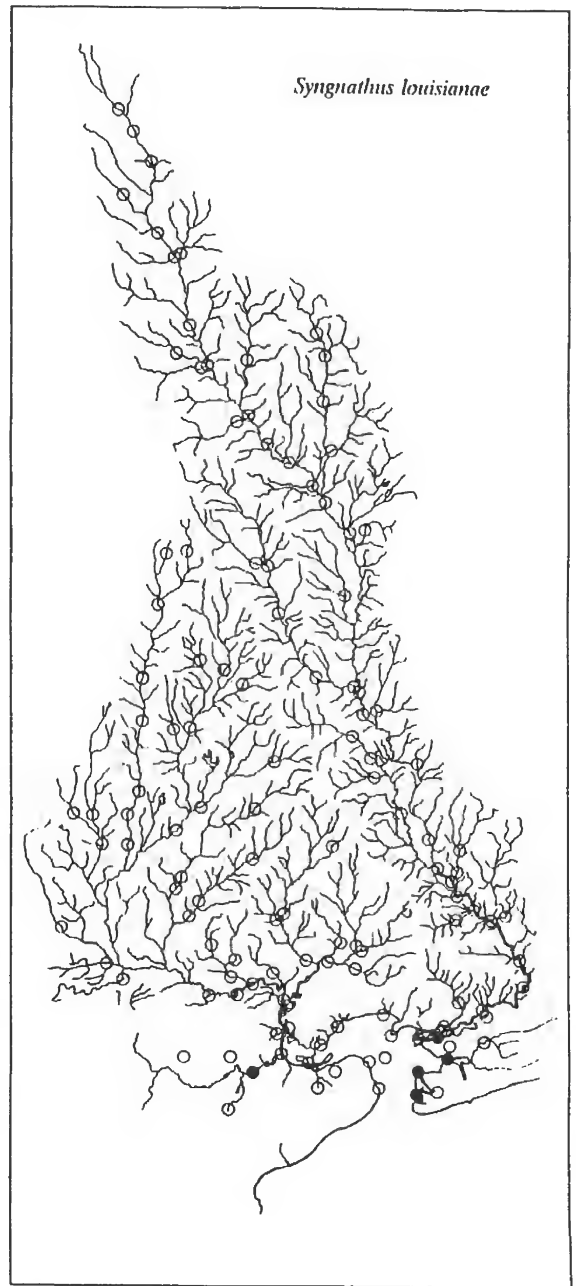
Map 61
 Atherinidae silversides
Labidesthes sicculus (Cope, 1865)
 brook silverside
 59 sites 3,882 specimens



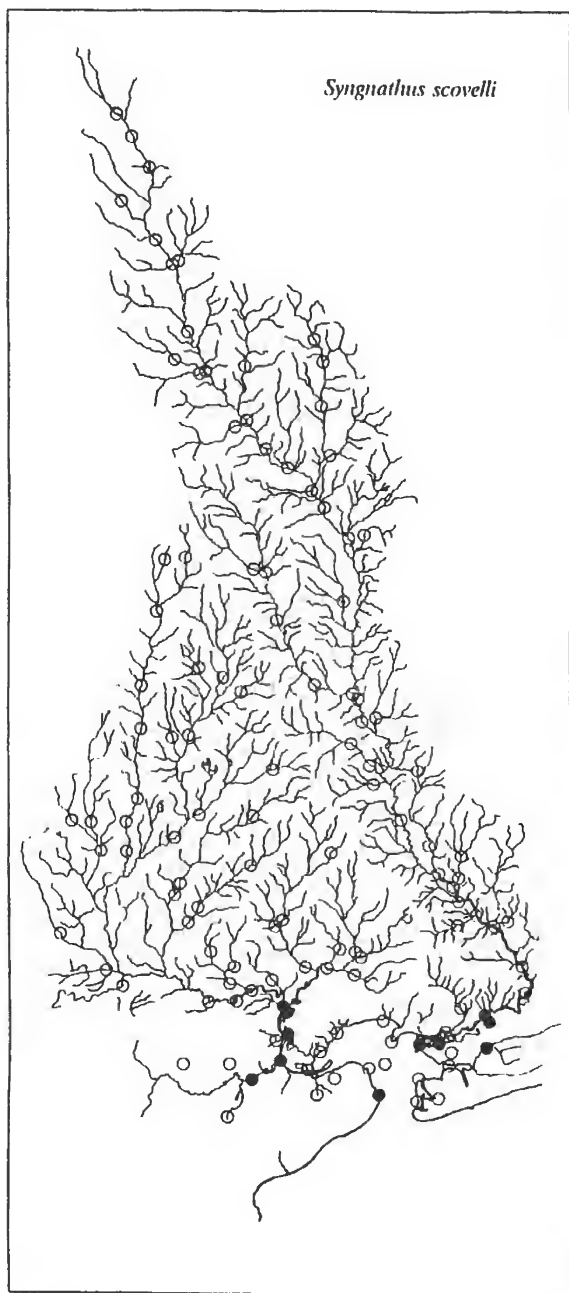
Map 62
 Atherinidae silversides
Membras martinica (Valenciennes, 1835)
 rough silverside
 6 sites 1,522 specimens



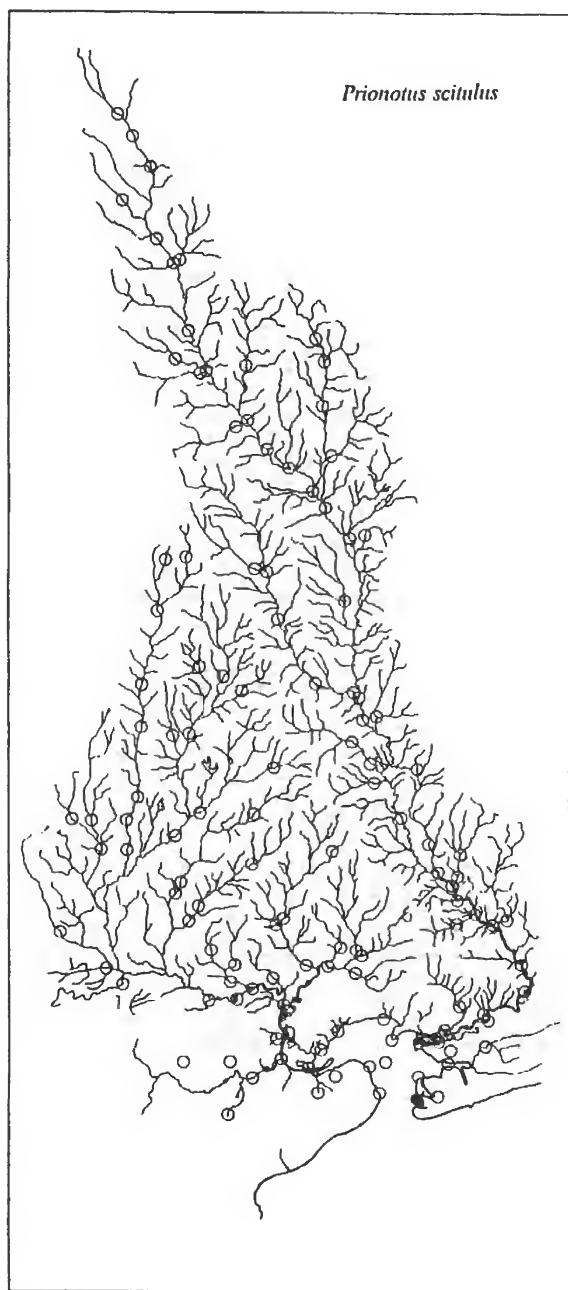
Map 63
 Atherinidae silversides
Menidia beryllina (Cope, 1866)
 inland silverside
 19 sites 3,426 specimens



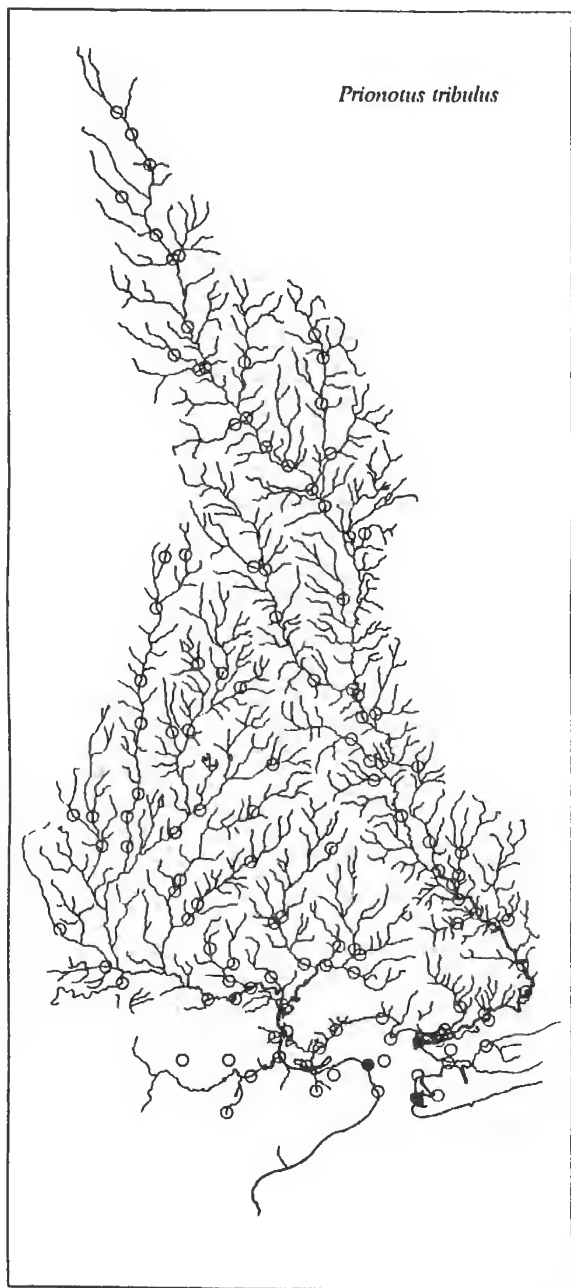
Map 64
 Syngnathidae pipefishes
Syngnathus louisianae Günther, 1870
 chain pipefish
 5 sites 12 specimens



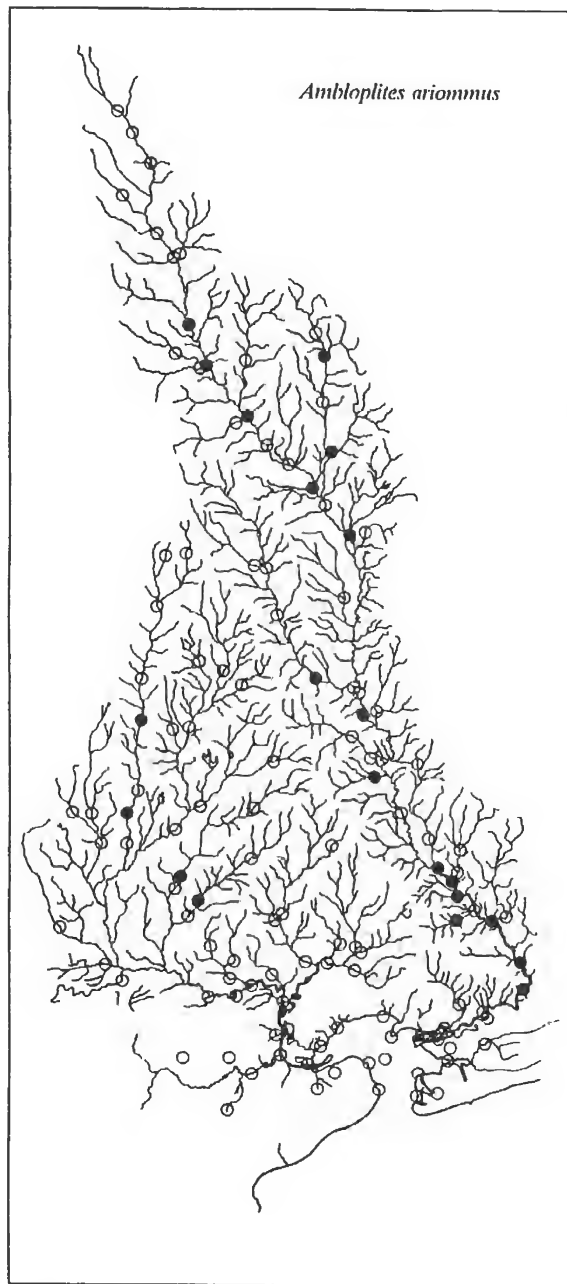
Map 65
 Syngnathidae pipefishes
Syngnathus scovelli Evermann and Kendall, 1896
 gulf pipefish
 11 sites 101 specimens



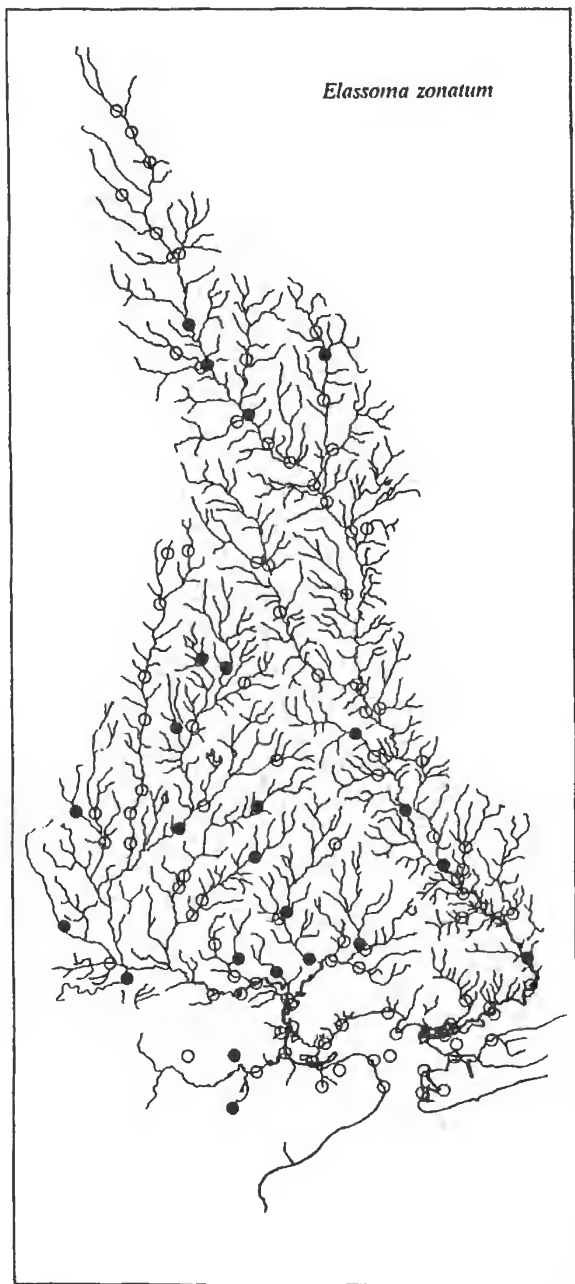
Map 66
 Triglidae searobins
Prionotus scitulus Jordan and Gilbert, 1882
 leopard searobin
 1 site 1 specimen



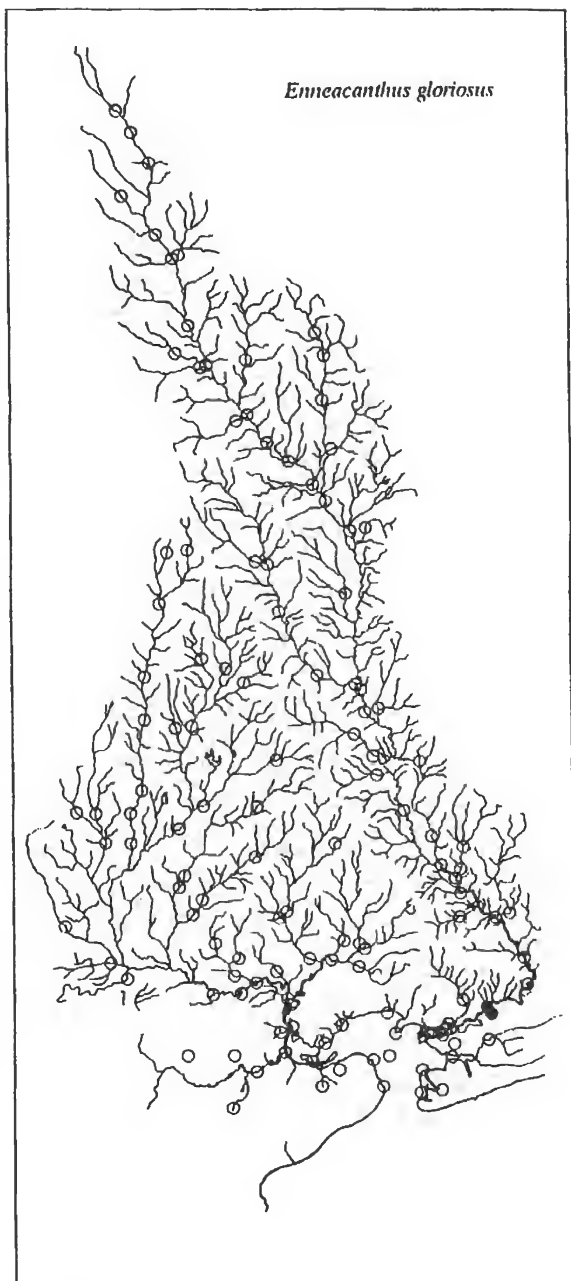
Map 67
 Triglidae searobins
Prionotus tribulus Cuvier, 1829
 bighead searobin
 3 sites 6 specimens



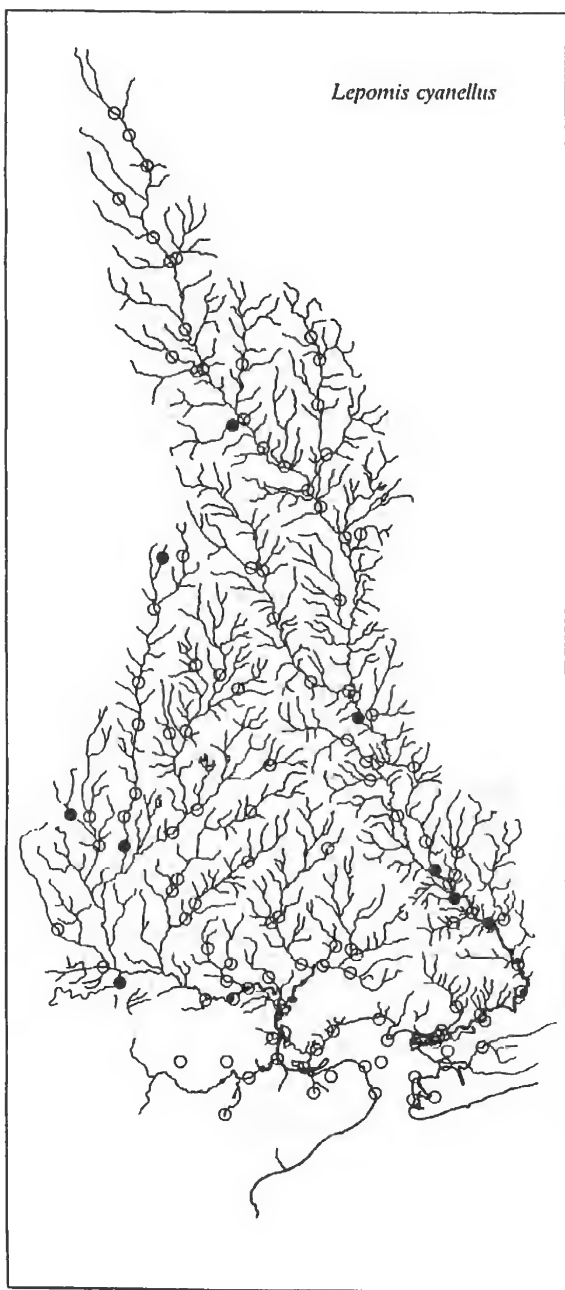
Map 68
 Centrarchidae sunfishes
Ambloplites ariommus Viosca, 1936
 shadow bass
 21 sites 124 specimens



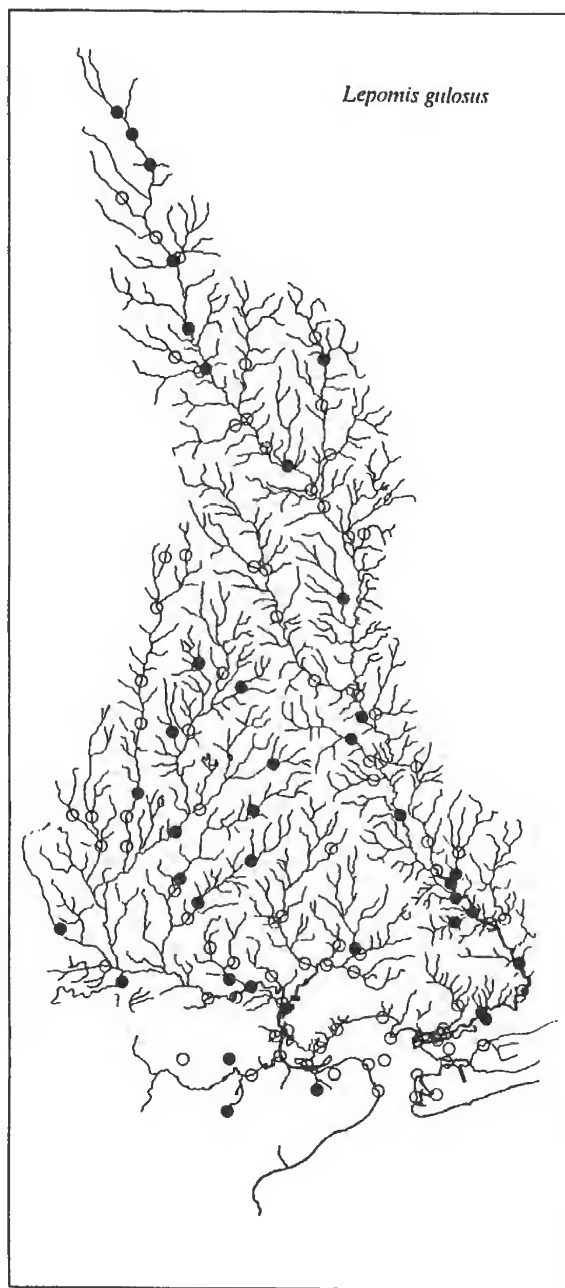
Map 69
 Centrarchidae sunfishes
Ellassoma zonatum Jordan, 1877
 banded pygmy sunfish
 24 sites 97 specimens



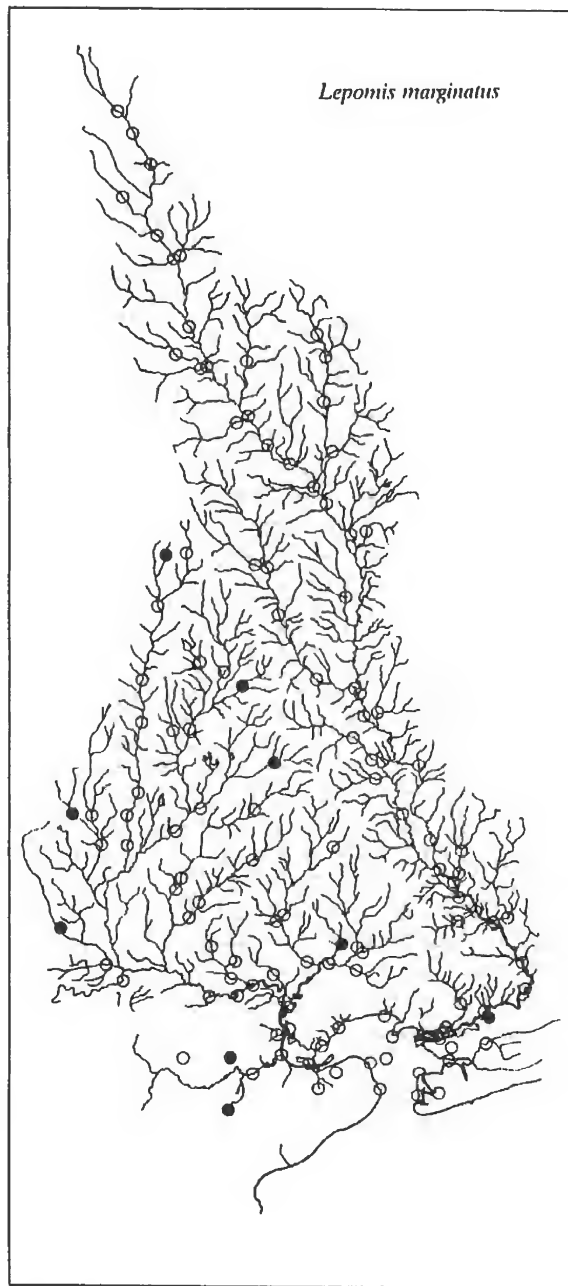
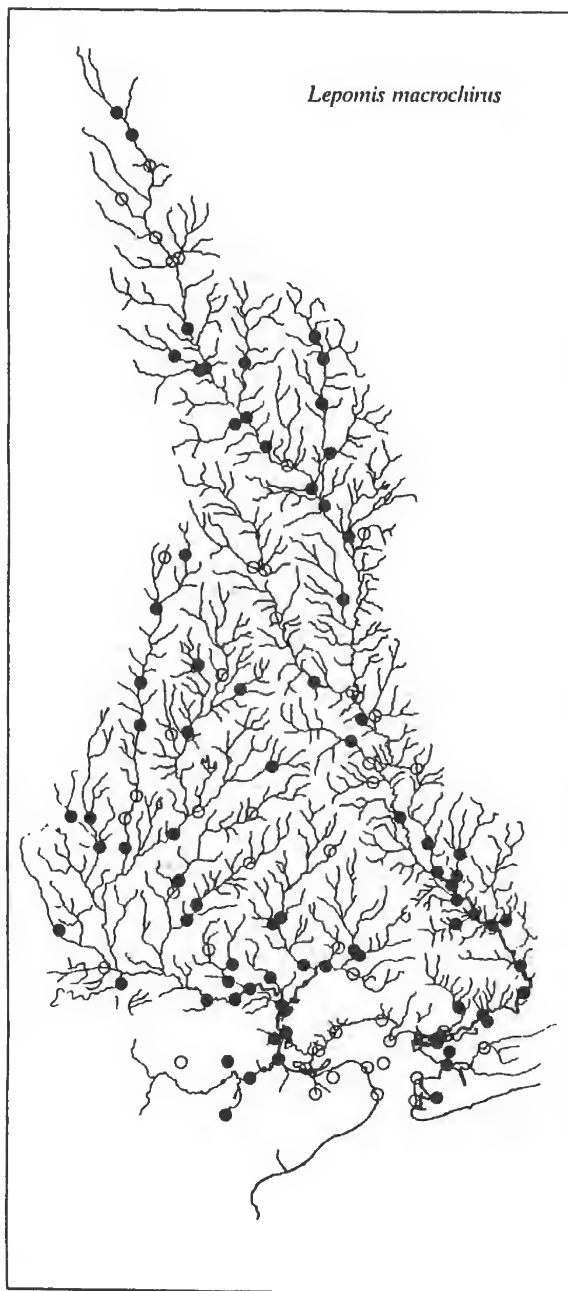
Map 70
 Centrarchidae sunfishes
Emneacanthus gloriosus (Holbrook, 1855)
 bluespotted sunfish
 2 sites 10 specimens



Map 71
 Centrarchidae sunfishes
Lepomis cyanellus Rafinesque, 1819
 green sunfish
 9 sites 22 specimens

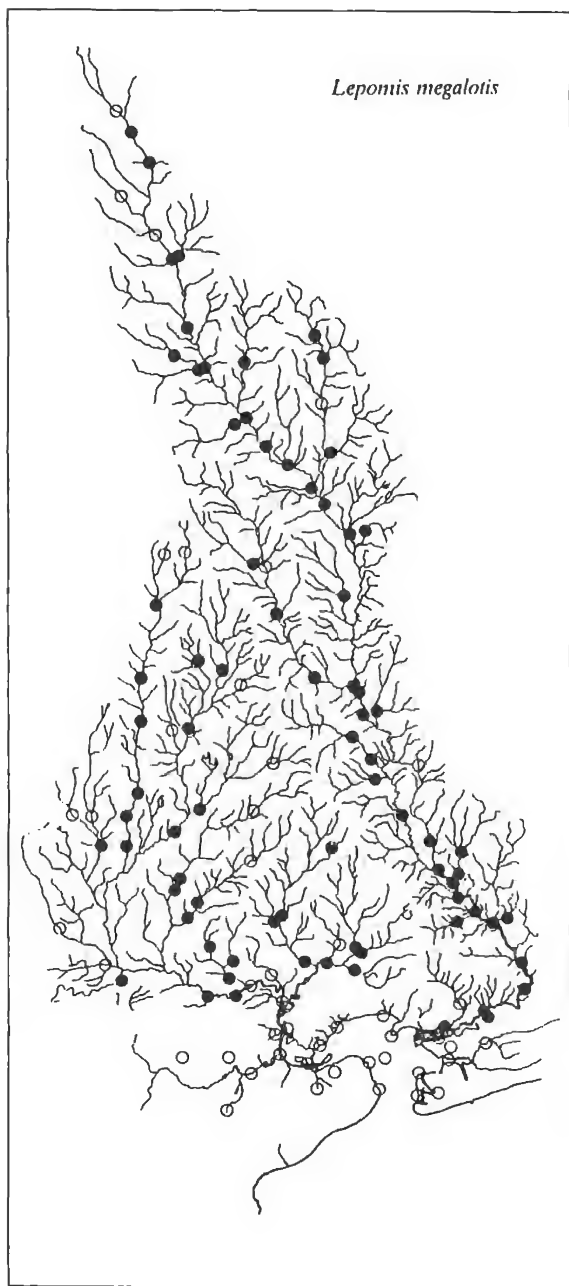


Map 72
 Centrarchidae sunfishes
Lepomis gulosus (Cuvier, 1829)
 warmouth
 39 sites 181 specimens

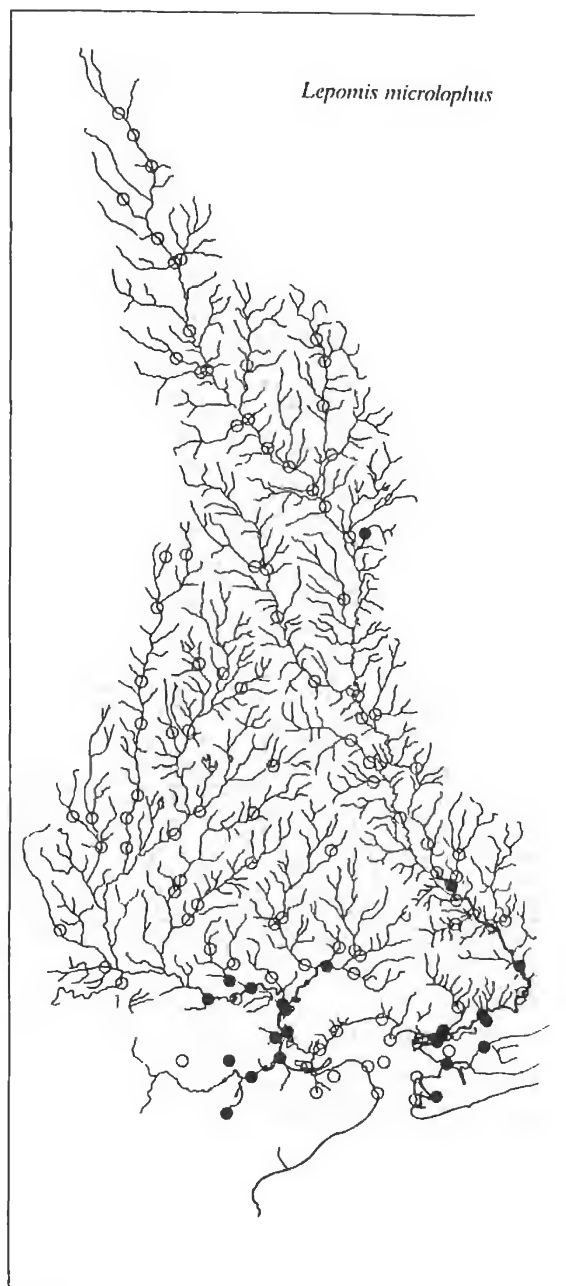


Map 73
 Centrarchidae sunfishes
Lepomis macrochirus Rafinesque, 1819
 bluegill
 80 sites 1,584 specimens

Map 74
 Centrarchidae sunfishes
Lepomis marginatus (Holbrook, 1855)
 dollar sunfish
 9 sites 44 specimens



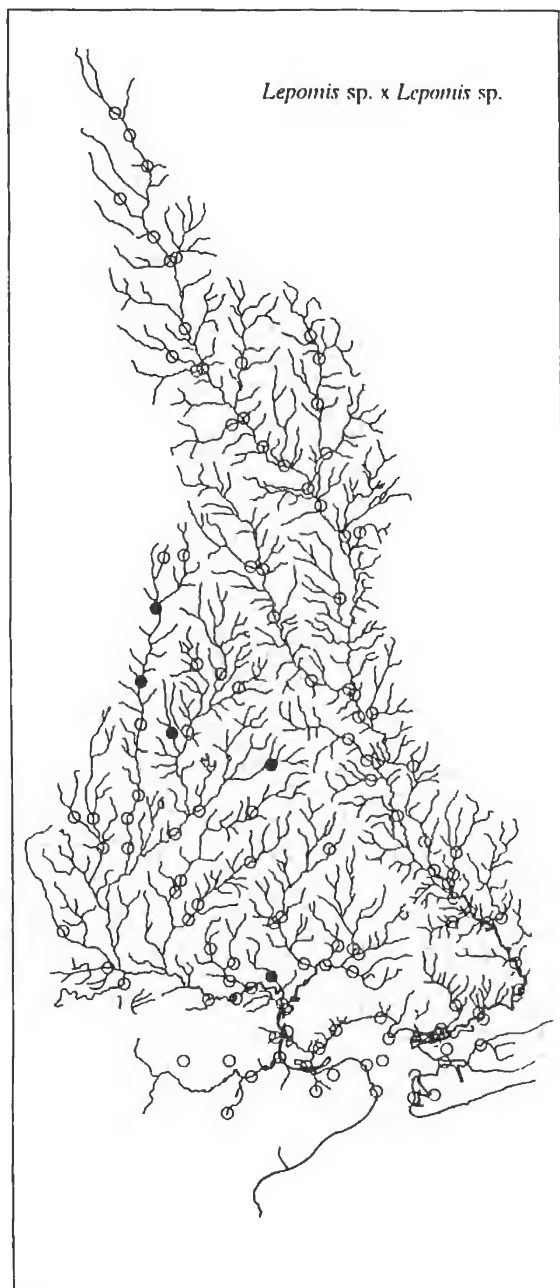
Map 75
Centrarchidae sunfishes
Lepomis megalotis (Rafinesque, 1820)
longear sunfish
77 sites 2,068 specimens



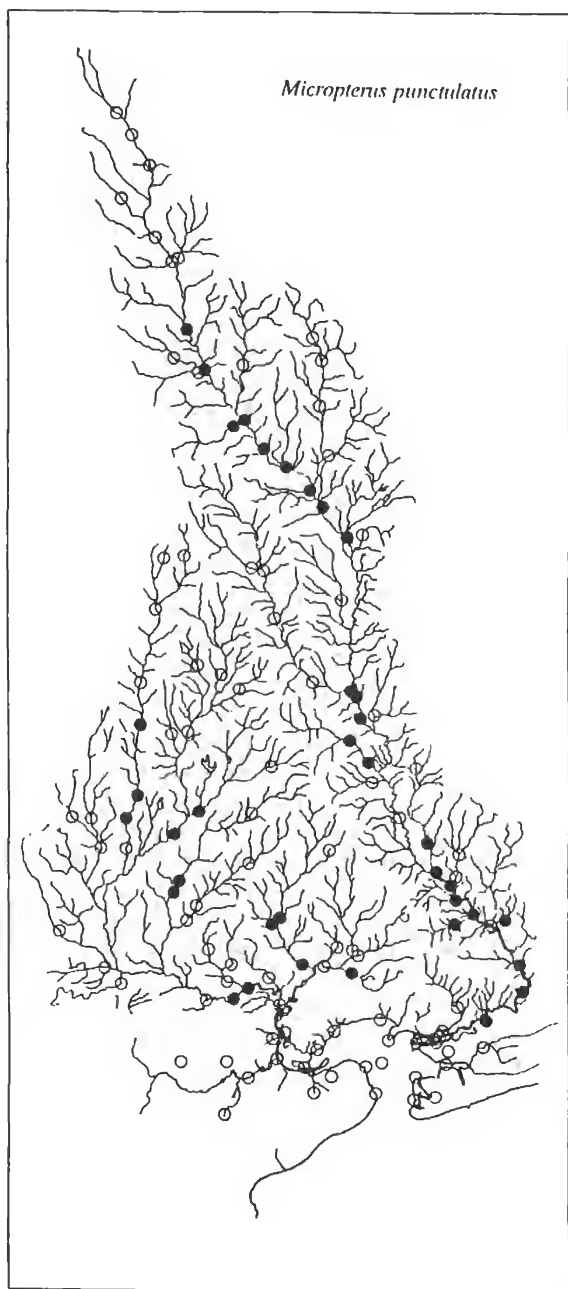
Map 76
Centrarchidae sunfishes
Lepomis microlophus (Günther, 1859)
reardear sunfish
23 sites 508 specimens



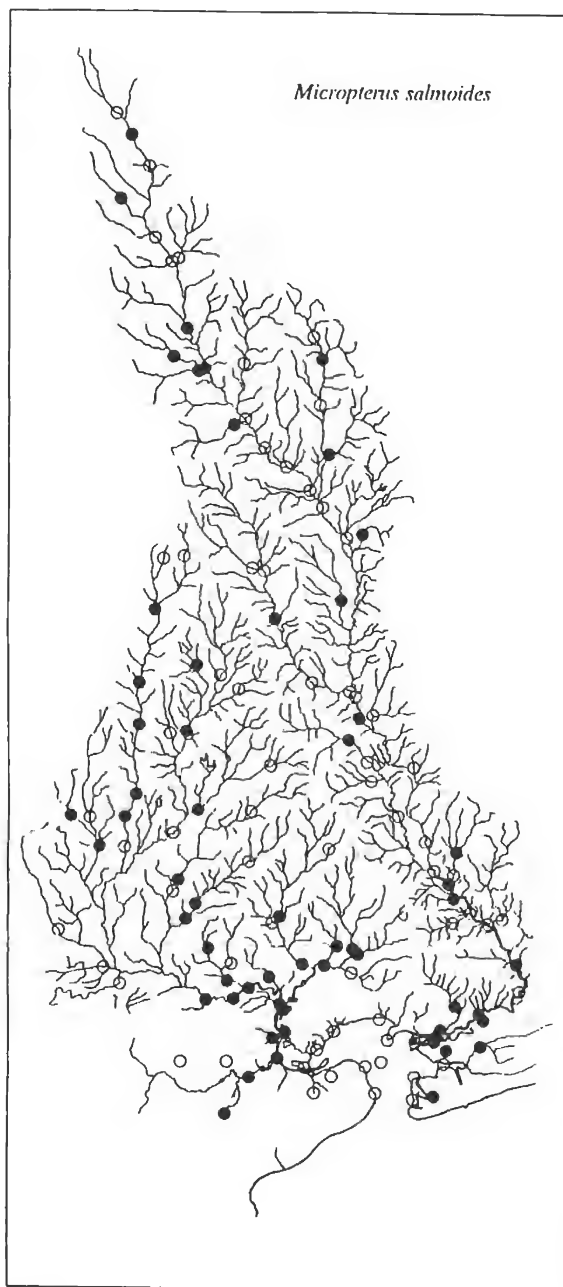
Map 77
 Centrarchidae sunfishes
Lepomis punctatus (Valenciennes, 1831)
 spotted sunfish
 36 sites 225 specimens



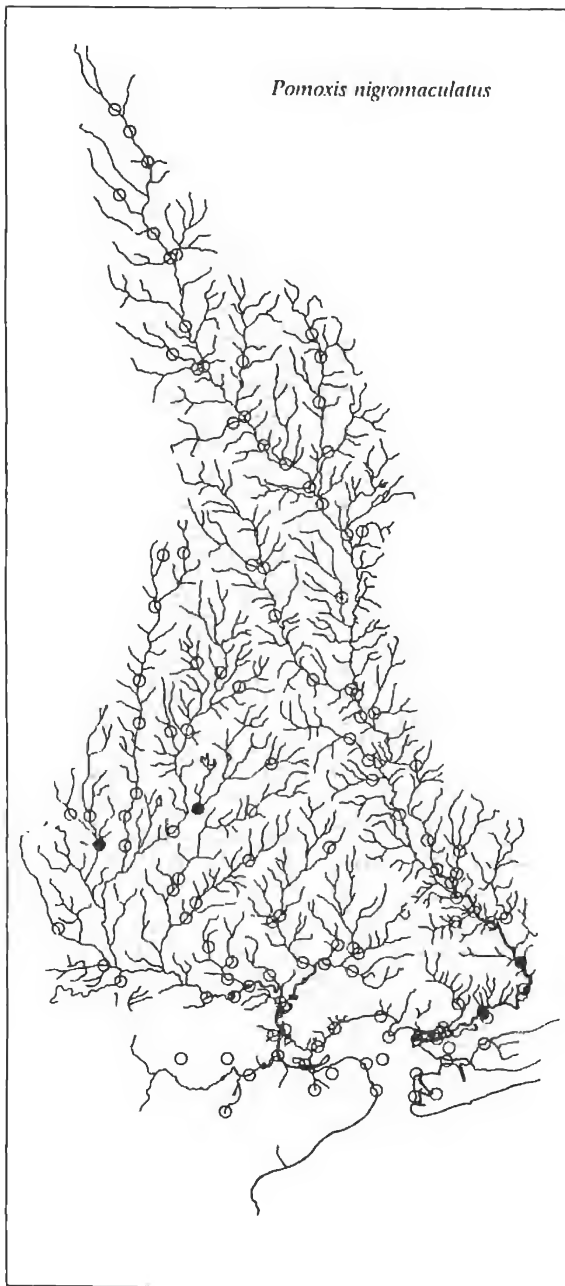
Map 78
 Centrarchidae sunfishes
Lepomis sp. X Lepomis sp.
 hybrid
 5 sites 6 specimens



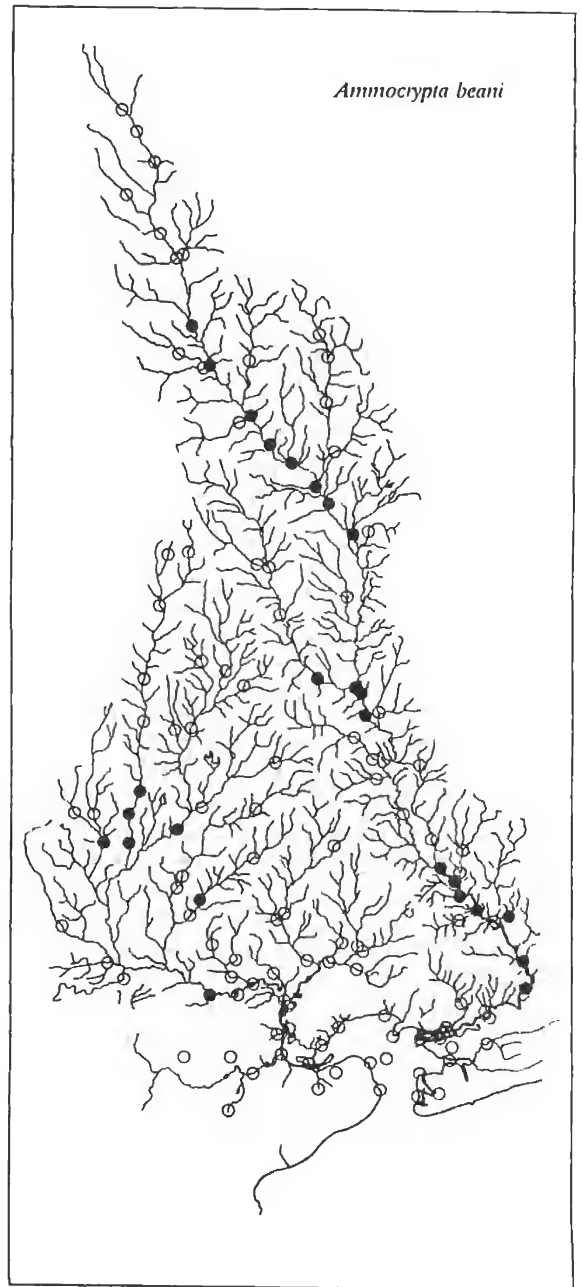
Map 79
 Centrarchidae sunfishes
Micropterus punctulatus (Rafinesque, 1819)
 spotted bass
 37 sites 322 specimens



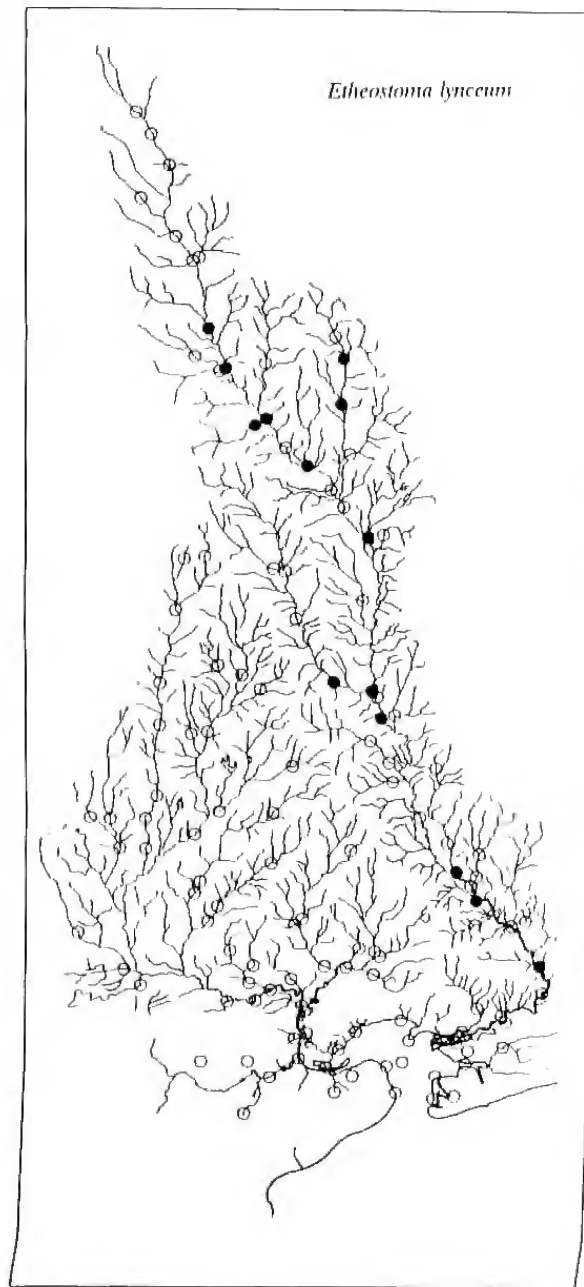
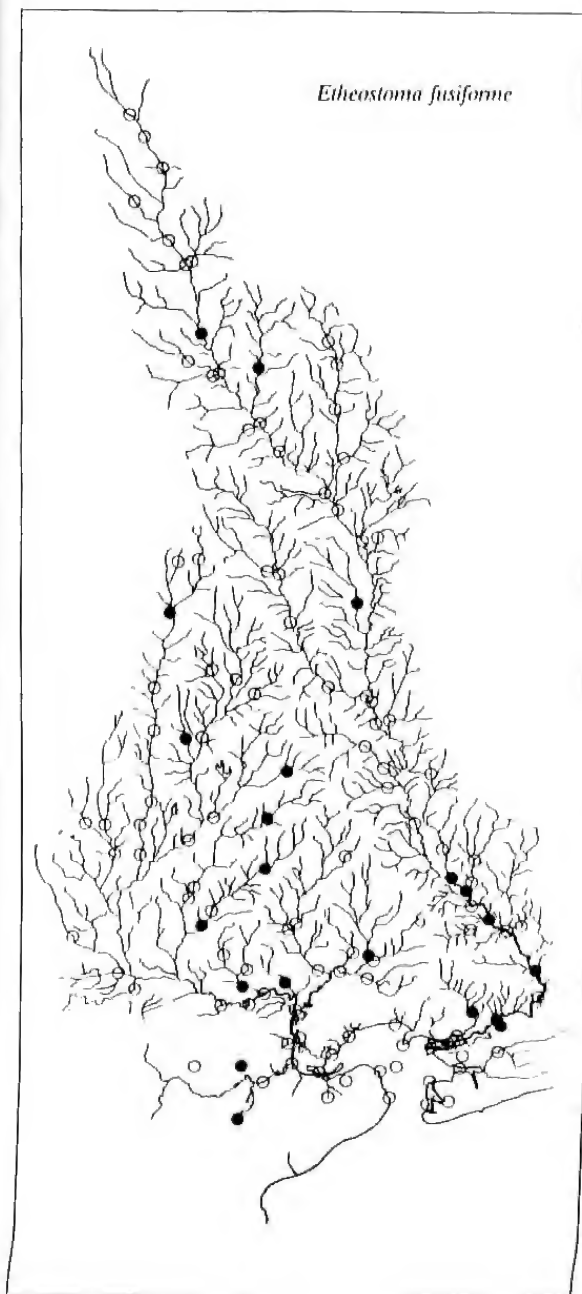
Map 80
 Centrarchidae sunfishes
Micropterus salmoides (Lacepède, 1802)
 largemouth bass
 59 sites 657 specimens



Map 81
 Centrarchidae sunfishes
Pomoxis nigromaculatus (Lesueur, 1829)
 black crappie
 4 sites 6 specimens

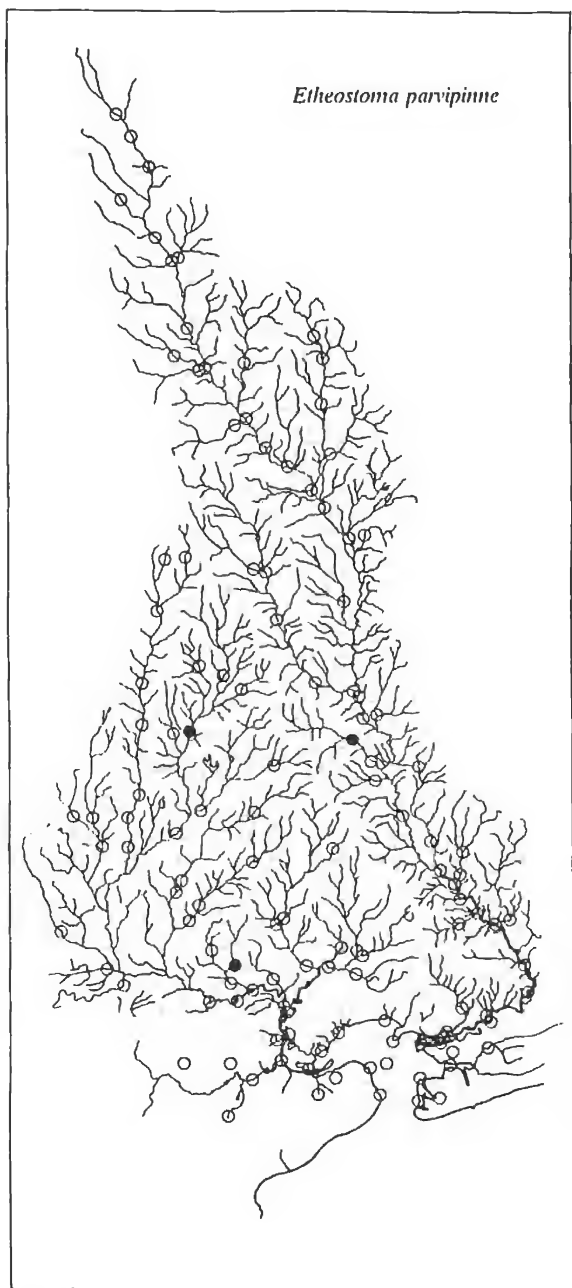


Map 82
 Percidae perches
Ammocrypta beani Jordan, 1877
 naked sand darter
 26 sites 930 specimens



Map 83
Percidae perches
Etheostoma fusiforme (Girard, 1854)
swamp darter
21 sites 64 specimens

Map 84
Percidae perches
Etheostoma lynceum Hay, 1885
brighteye darter
14 sites 98 specimens



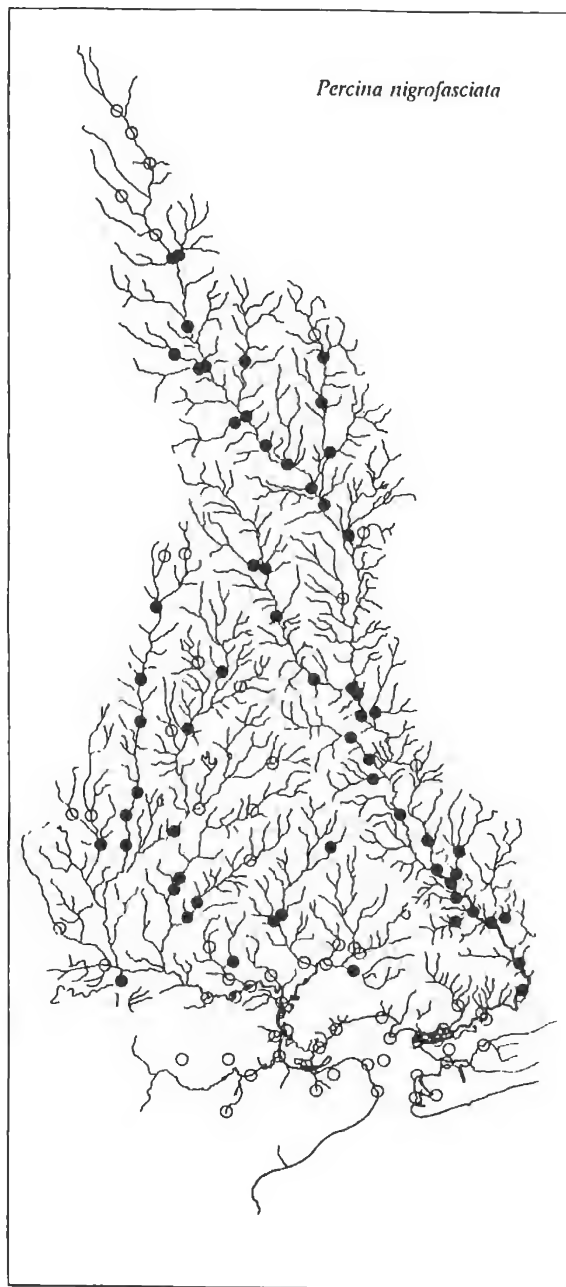
Map 85
 Percidae perches
Etheostoma parvipinne Gilbert and Swain, 1887
 goldstripe darter
 3 sites 15 specimens



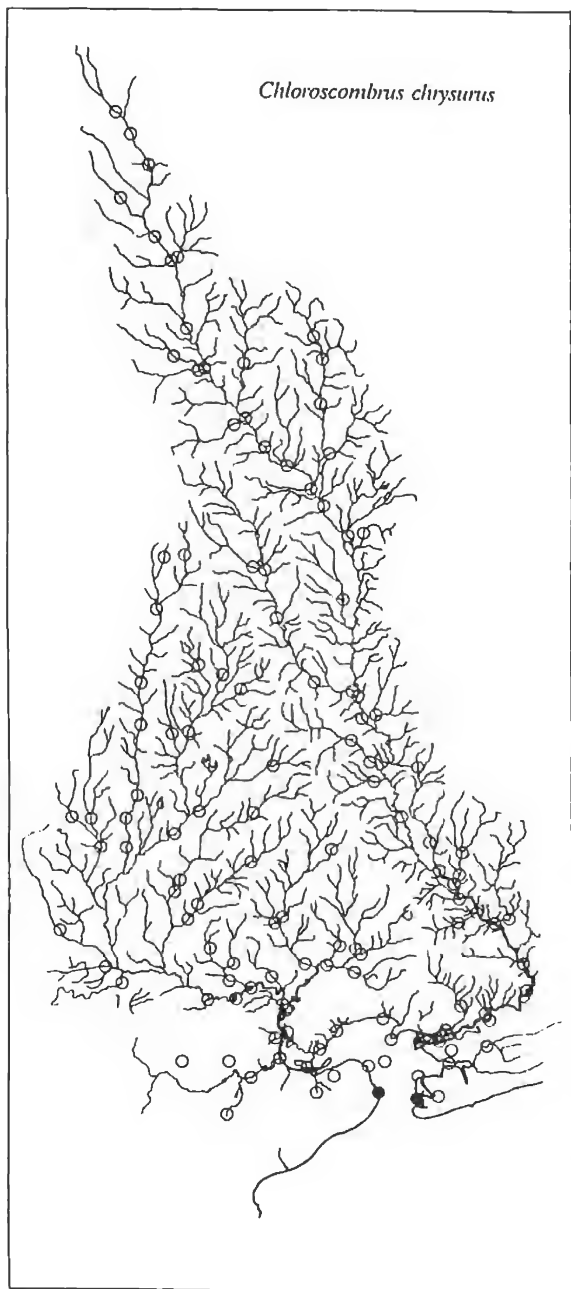
Map 86
 Percidae perches
Etheostoma stigmaeum (Jordan, 1877)
 speckled darter
 33 sites 315 specimens



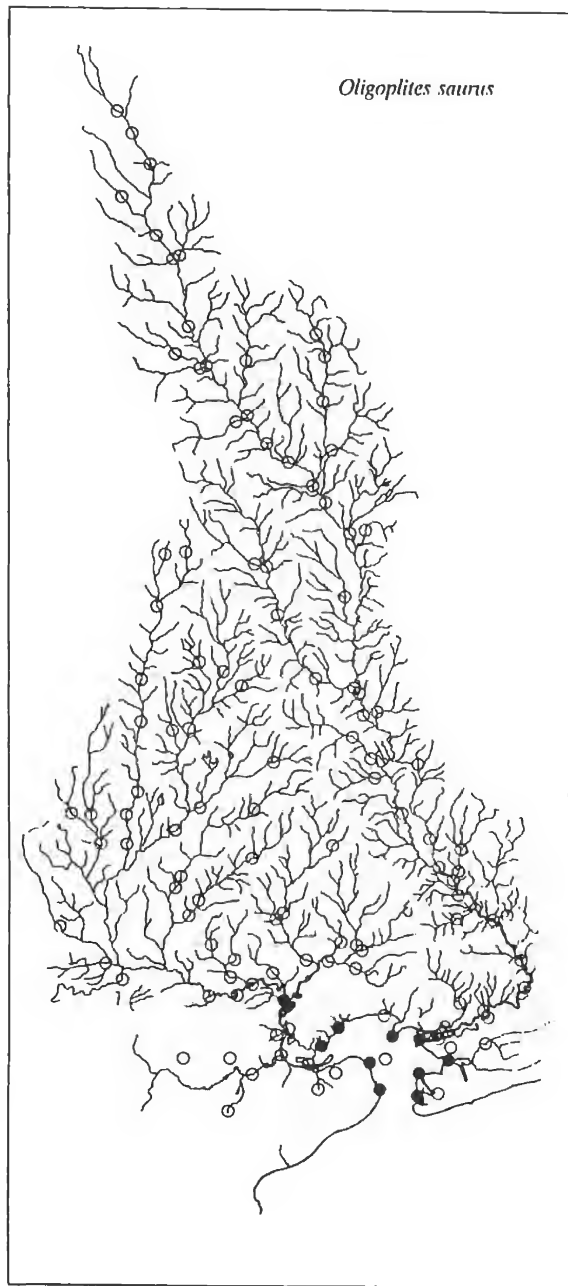
Map 87
 Percidae perches
Etheostoma swaini (Jordan, 1884)
 gulf darter
 32 sites 287 specimens



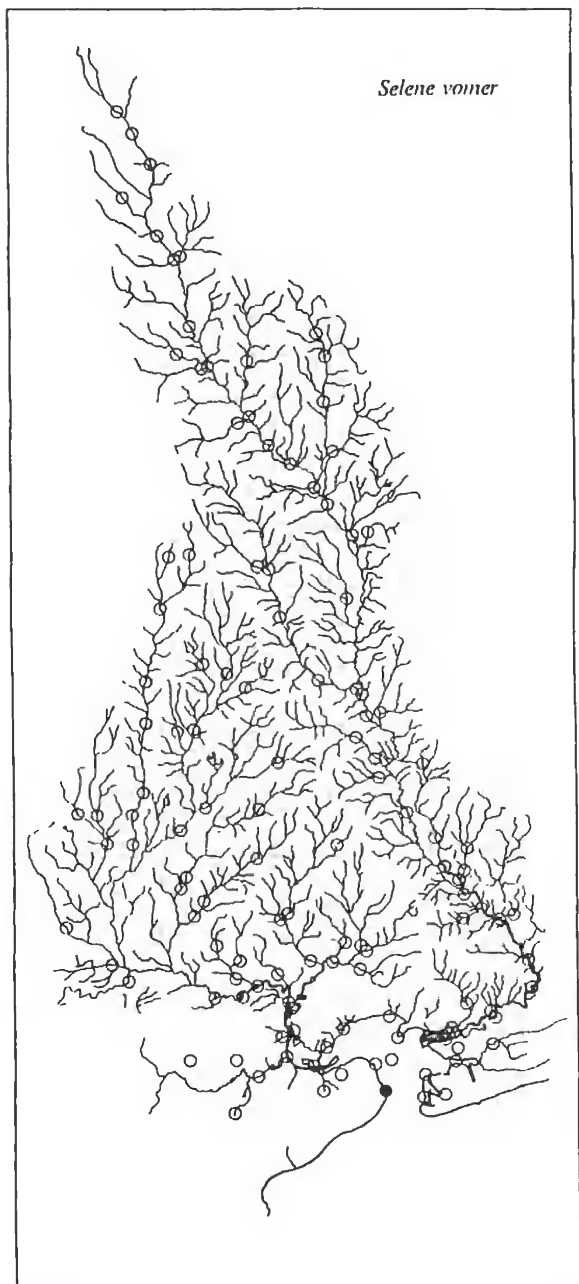
Map 88
 Percidae perches
Percina nigrofasciata (Agassiz, 1854)
 blackbanded darter
 61 sites 1,889 specimens



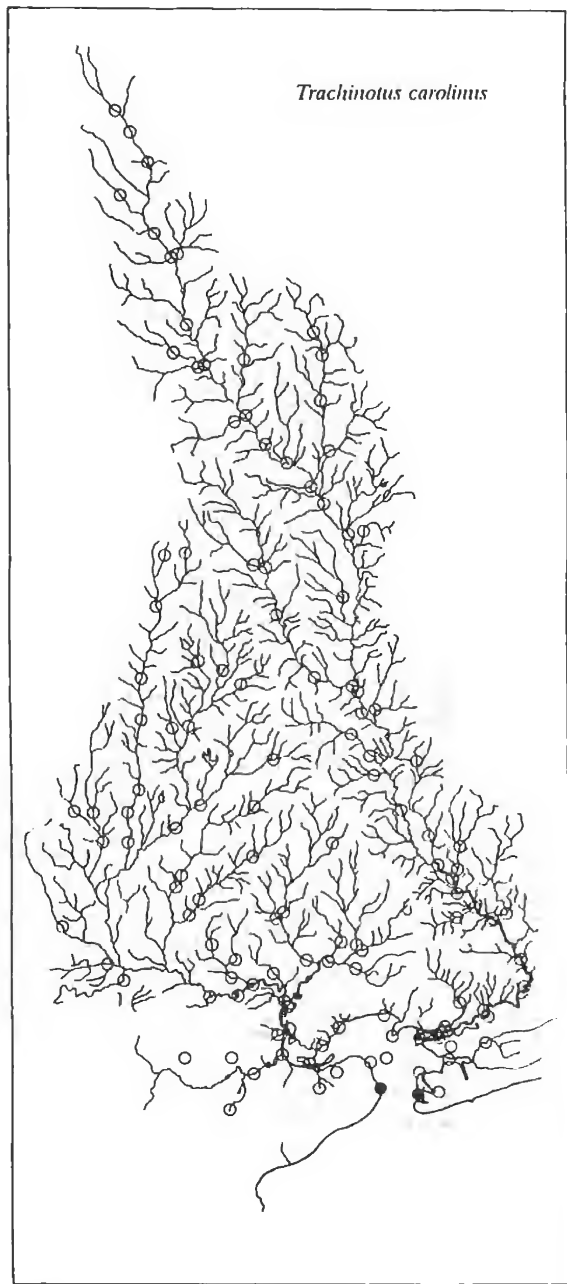
Map 89
 Carangidae jacks
Chloroscombrus chrysurus (Linnaeus, 1766)
 Atlantic bumper
 2 sites 4 specimens



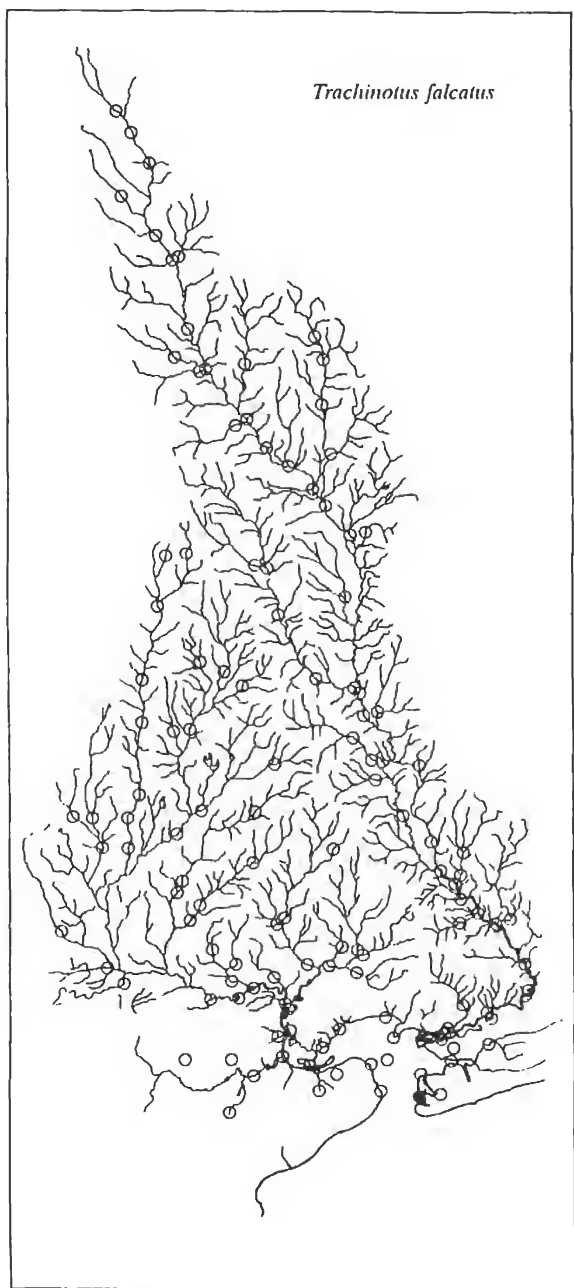
Map 90
 Carangidae jacks
Oligoplites saurus (Schneider, 1801)
 leatherjack
 11 sites 30 specimens



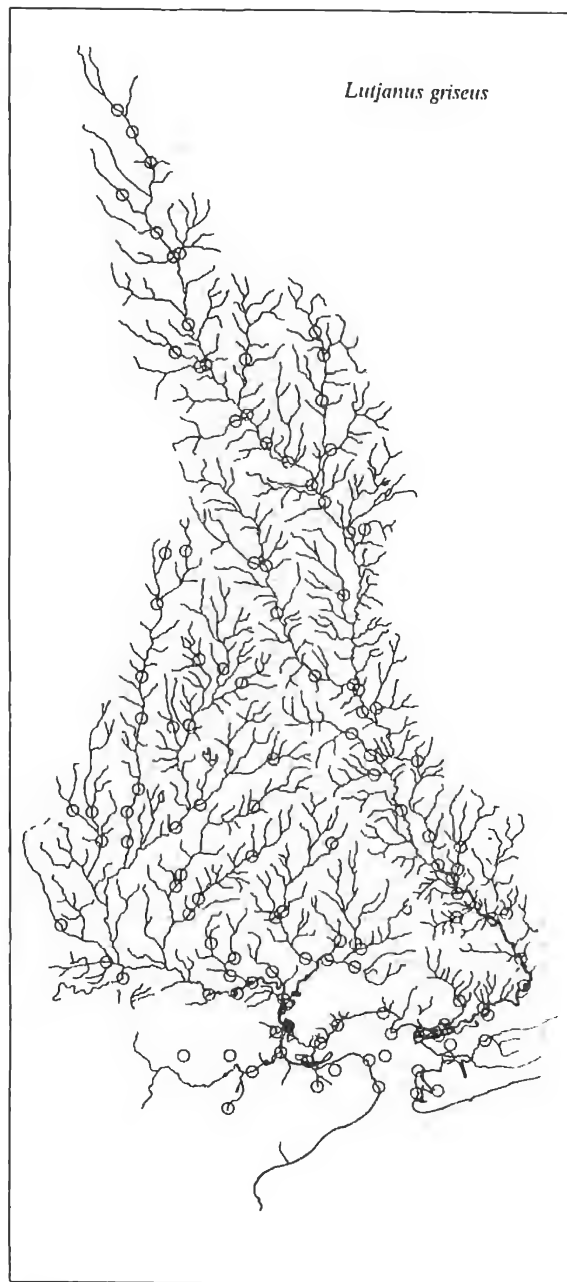
Map 91
Carangidae jacks
Selene vomer (Linnaeus, 1758)
lookdown
1 site 2 specimens



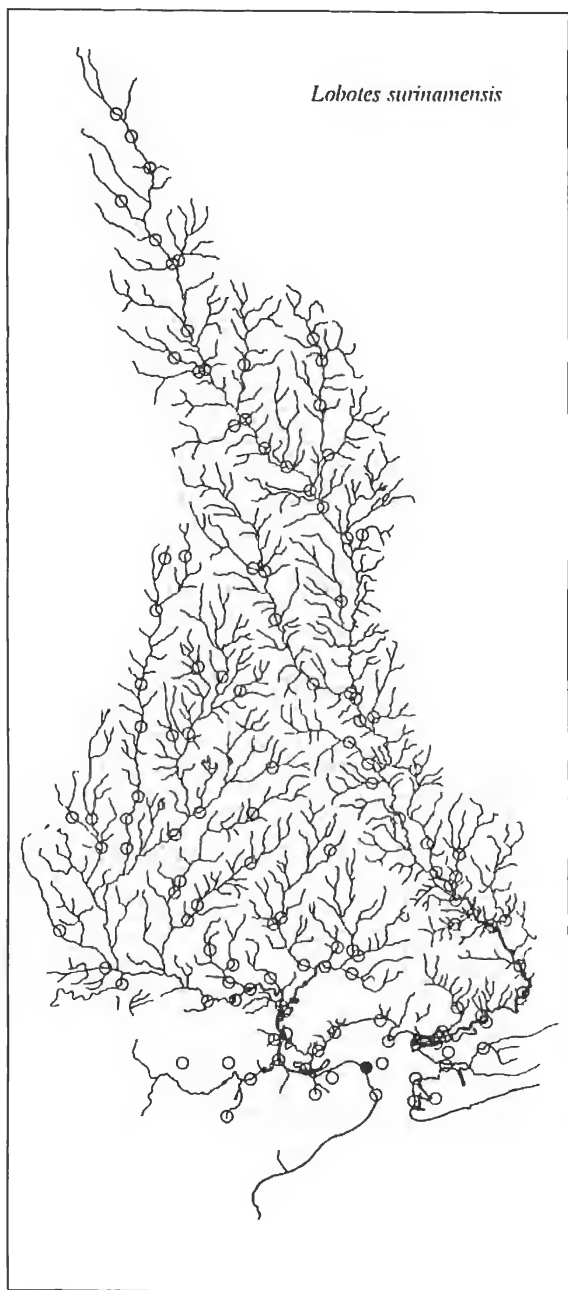
Map 92
Carangidae jacks
Trachinotus carolinus (Linnaeus, 1766)
Florida pompano
2 sites 19 specimens



Map 93
 Carangidae jacks
Trachinotus falcatus (Linnaeus, 1758)
 permit
 1 site 6 specimens



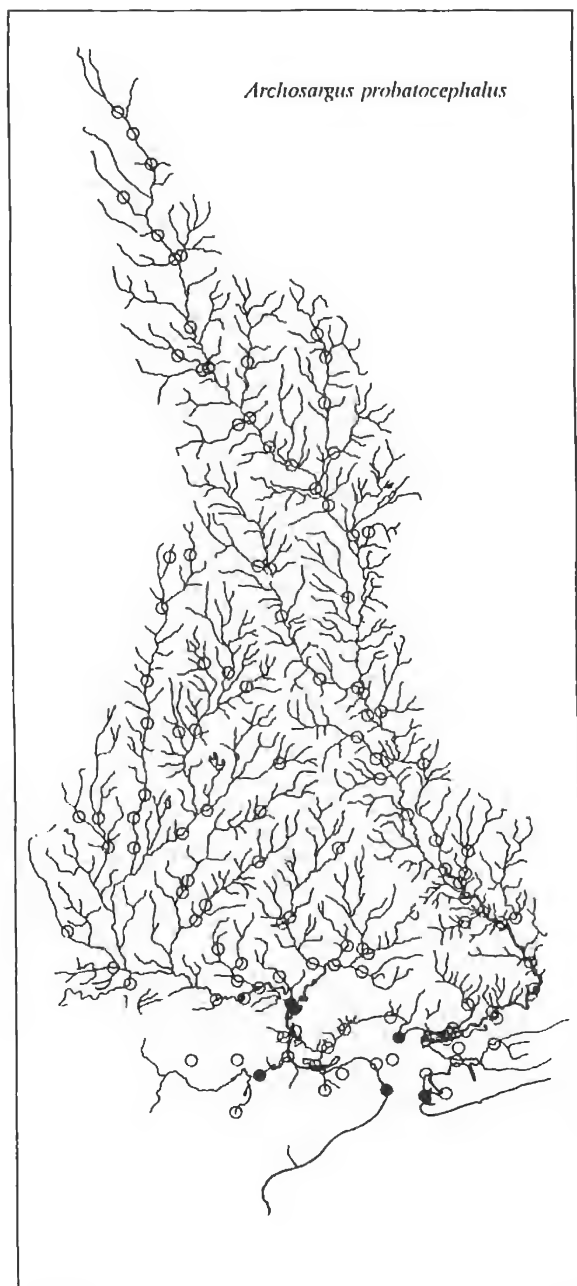
Map 94
 Lutjanidae snappers
Lutjanus griseus (Linnaeus, 1758)
 gray snapper
 1 site 1 specimen



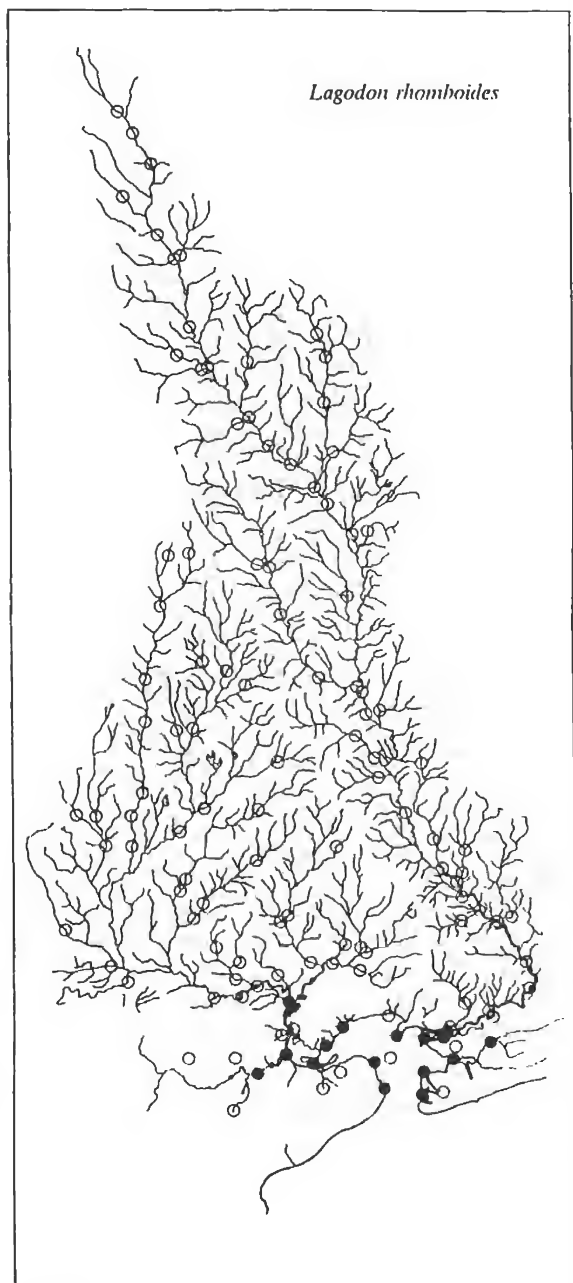
Map 95
 Lobotidae tripletails
Lobotes surinamensis (Bloch, 1790)
 tripletail
 1 site 14 specimens



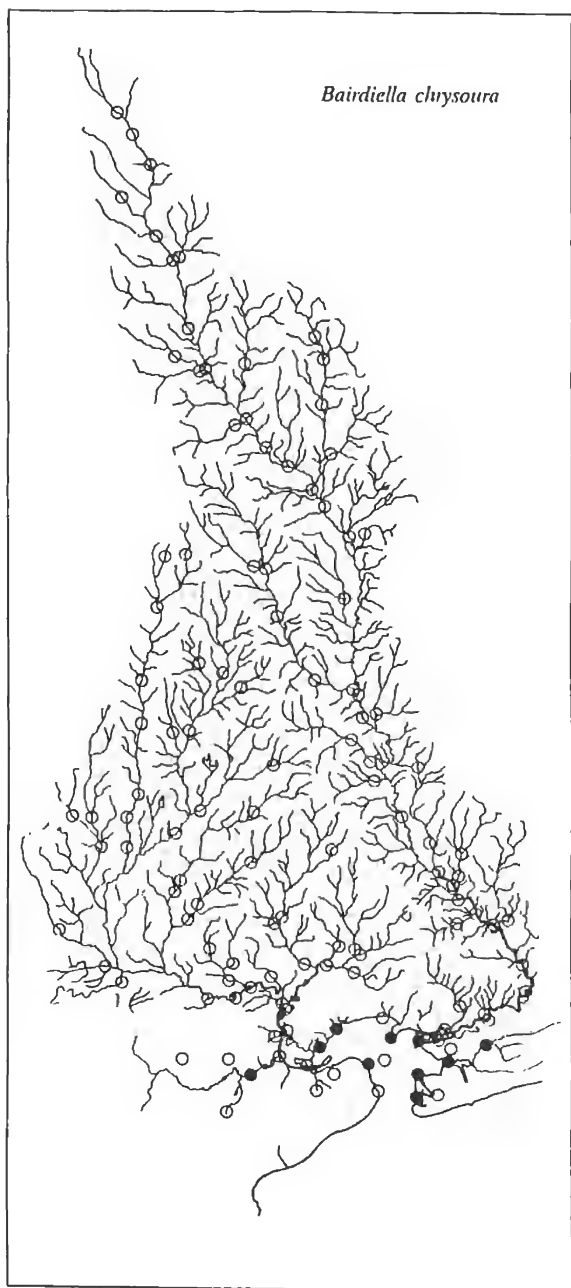
Map 96
 Gerreidae mojarras
Eucinostomus argenteus (Baird and Girard, 1855)
 spotfin mojarra
 4 sites 16 specimens



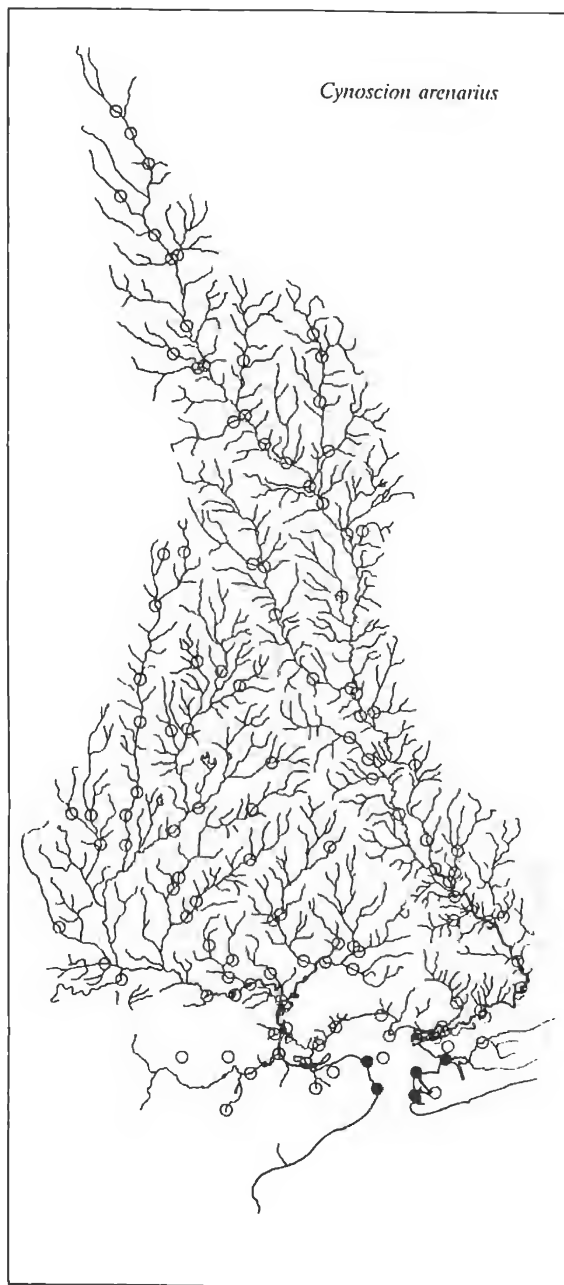
Map 97
Sparidae porgies
Archosargus probatocephalus (Walbaum, 1792)
sheepshead
6 sites 27 specimens



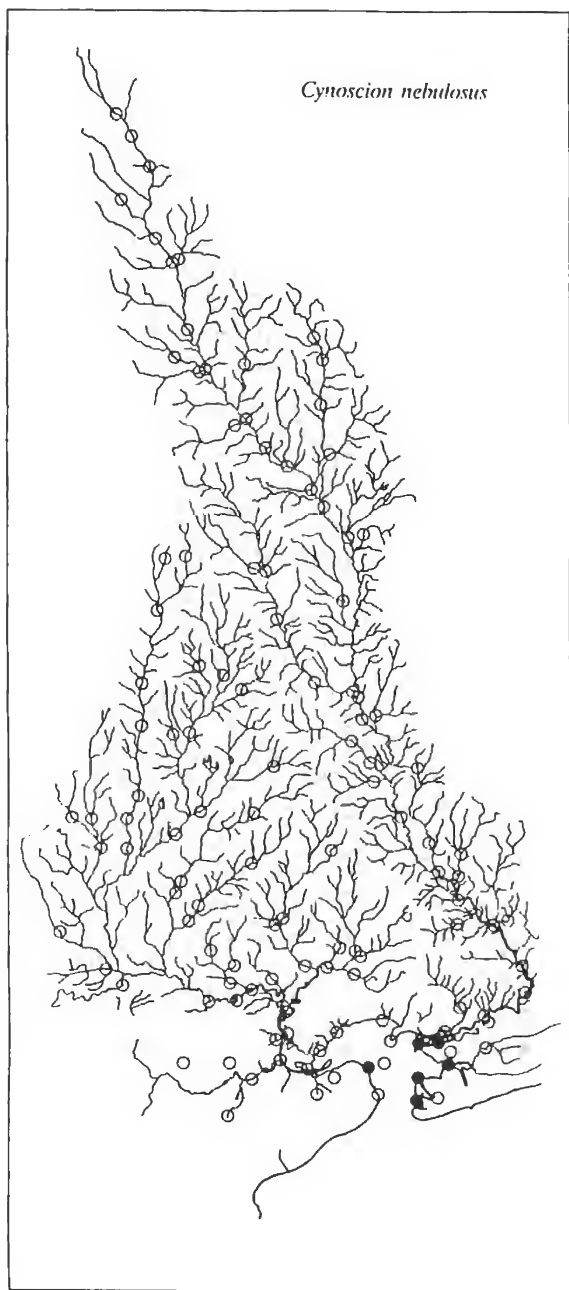
Map 98
Sparidae porgies
Lagodon rhomboides (Linnaeus, 1766)
pinfish
17 sites 193 specimens



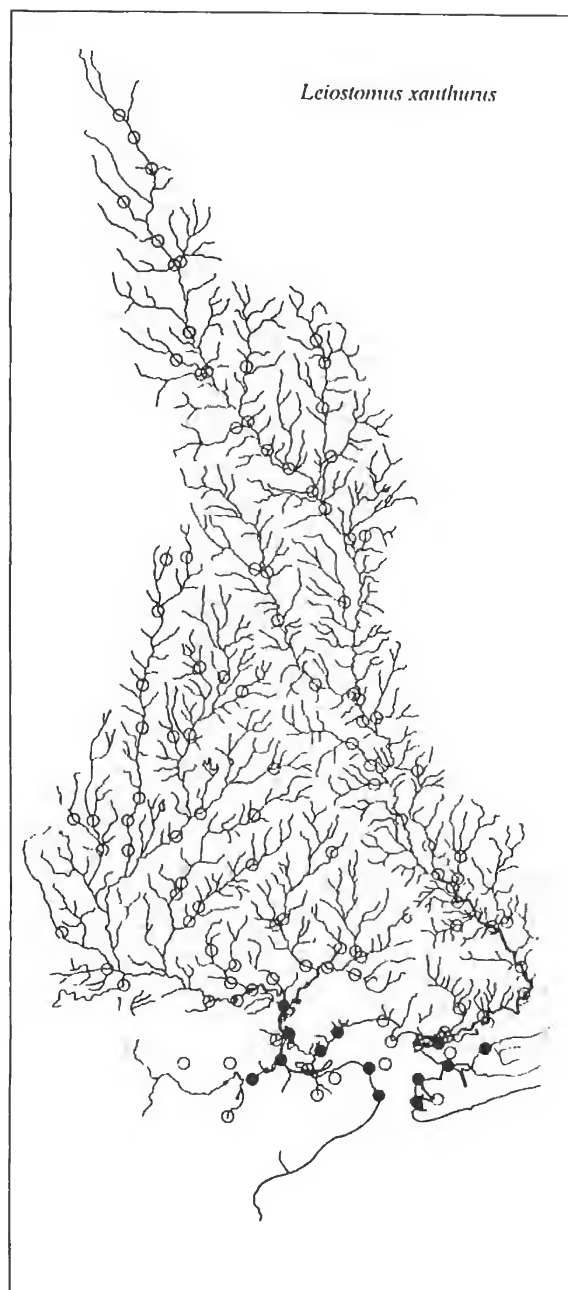
Map 99
 Sciaenidae drums
Bairdiella chrysoura (Lacepède, 1802)
 silver perch
 10 sites 916 specimens



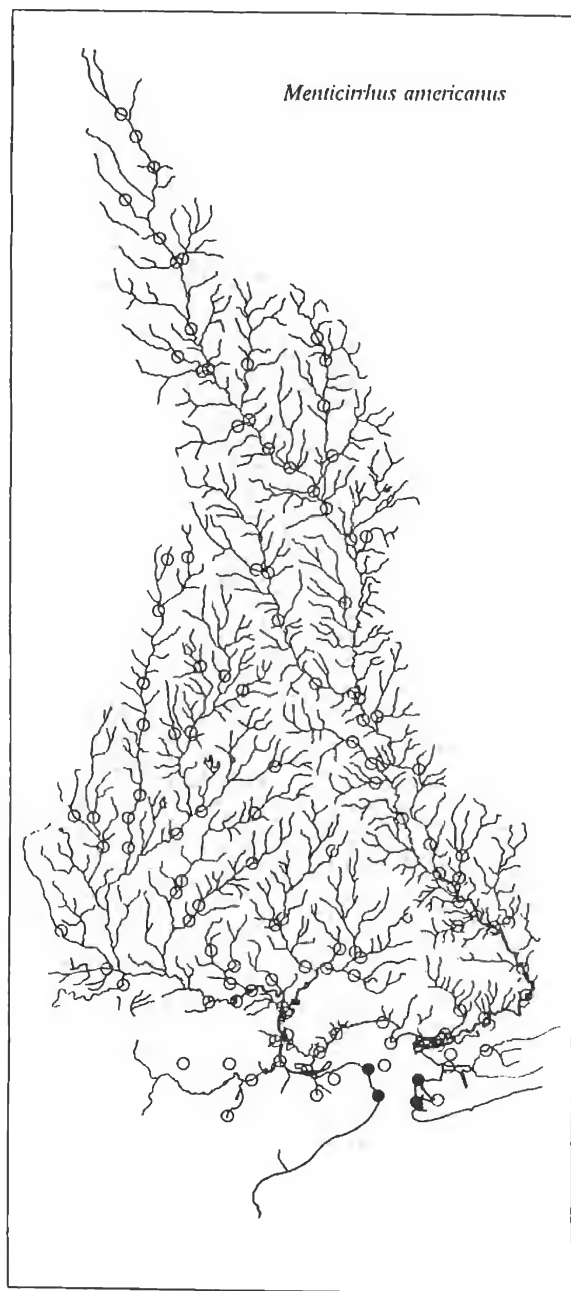
Map 100
 Sciaenidae drums
Cynoscion arenarius Ginsburg, 1929
 sand seatrout
 5 sites 143 specimens



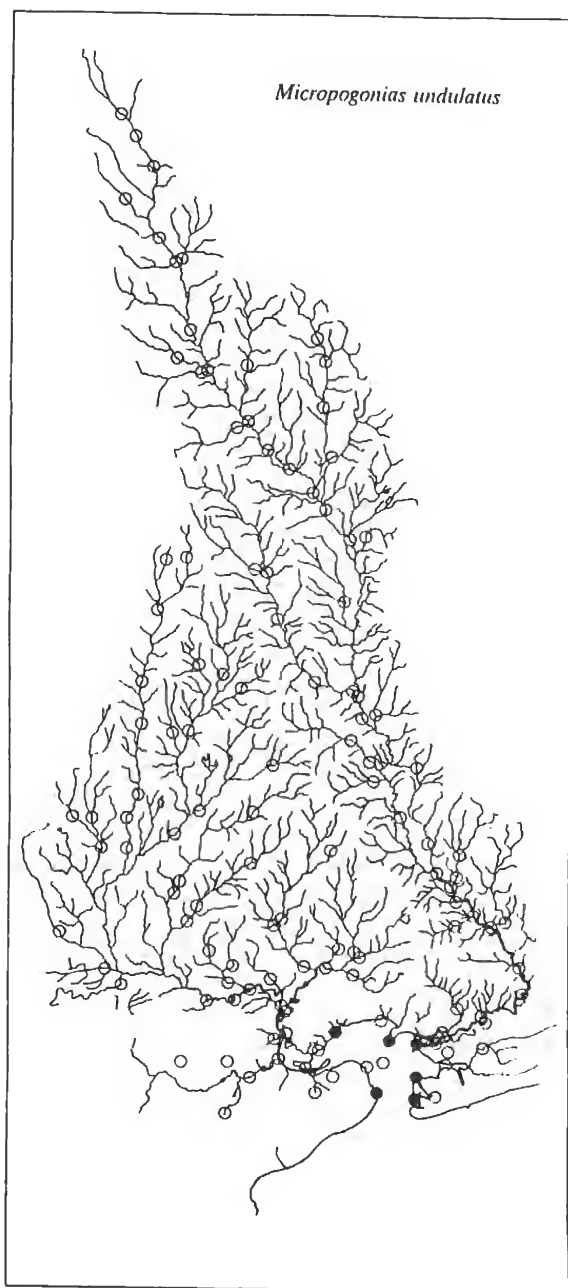
Map 101
 Sciaenidae drums
Cynoscion nebulosus (Cuvier, 1830)
 spotted seatrout
 6 sites 20 specimens



Map 102
 Sciaenidae drums
Leiostomus xanthurus Lacepède, 1802
 spot
 13 sites 1,225 specimens



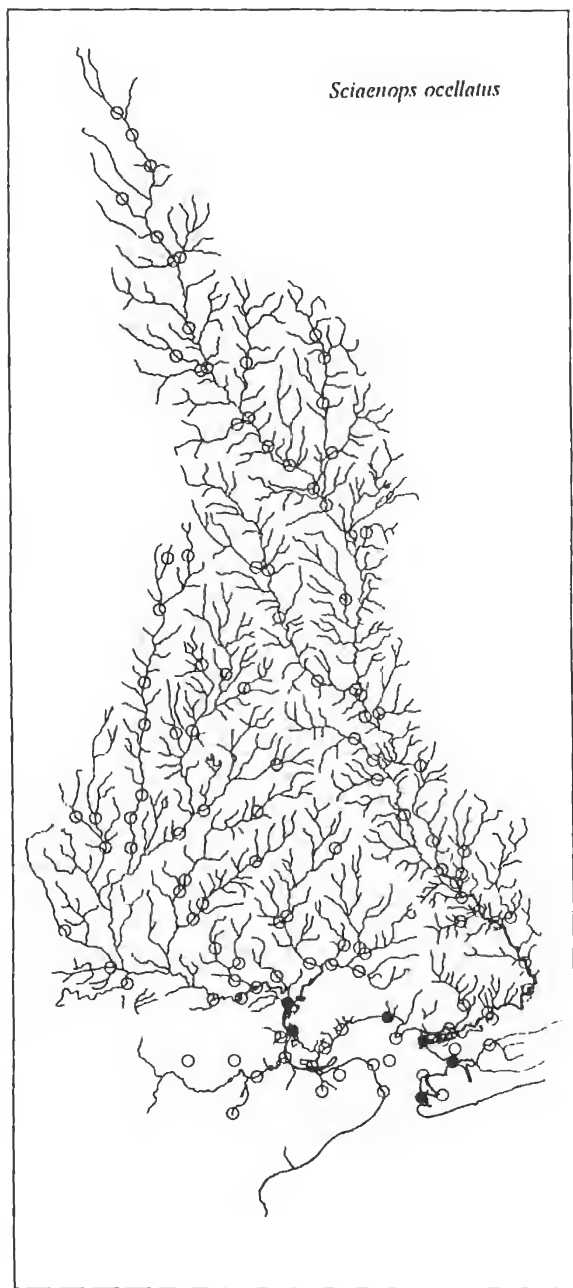
Map 103
 Sciaenidae drums
Menticirrhus americanus (Linnaeus, 1758)
 southern kingfish
 4 sites 74 specimens



Map 104
 Sciaenidae drums
Micropogonias undulatus (Linnaeus, 1766)
 Atlantic croaker
 6 sites 171 specimens



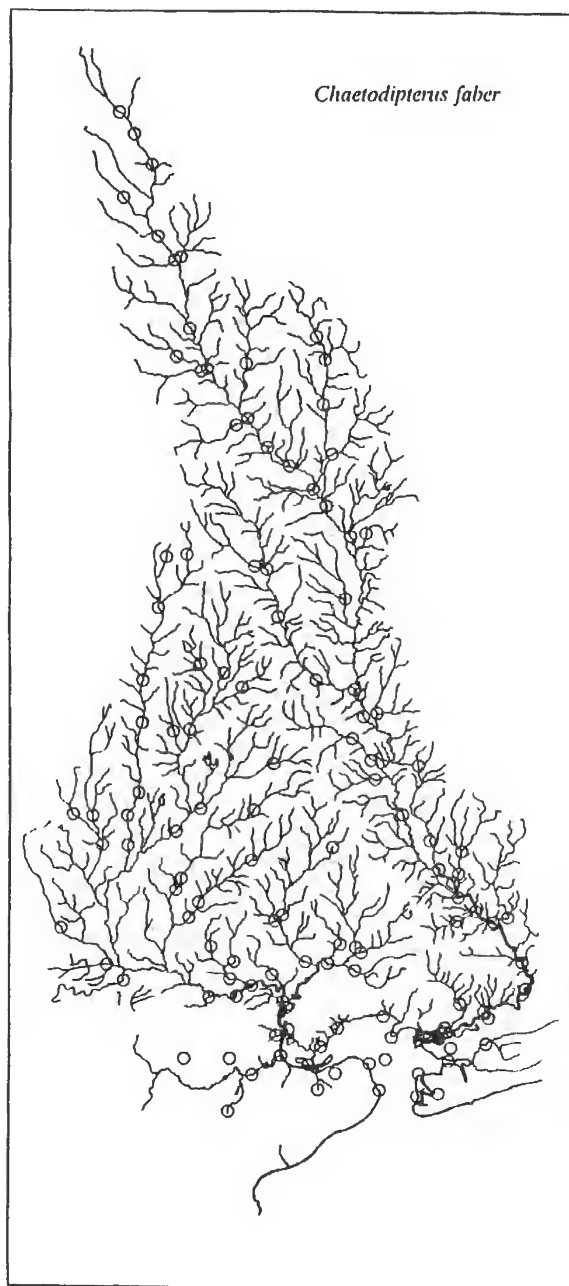
Pogonias cromis



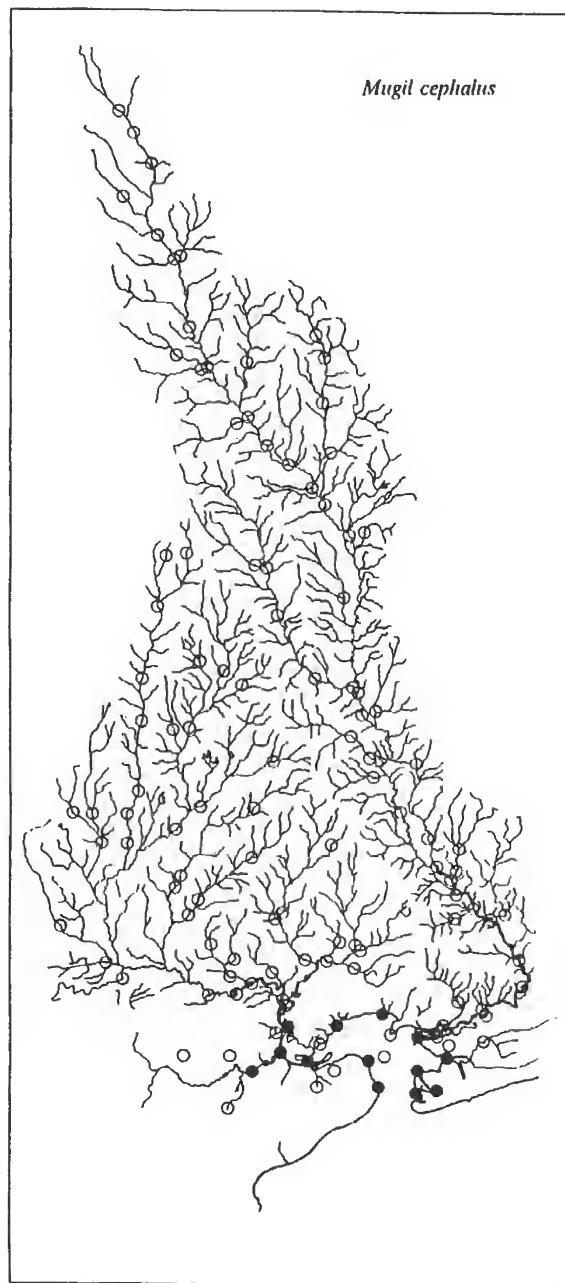
Sciaenops ocellatus

Map 105
 Sciaenidae drums
Pogonias cromis (Linnaeus, 1766)
 black drum
 3 sites 4 specimens

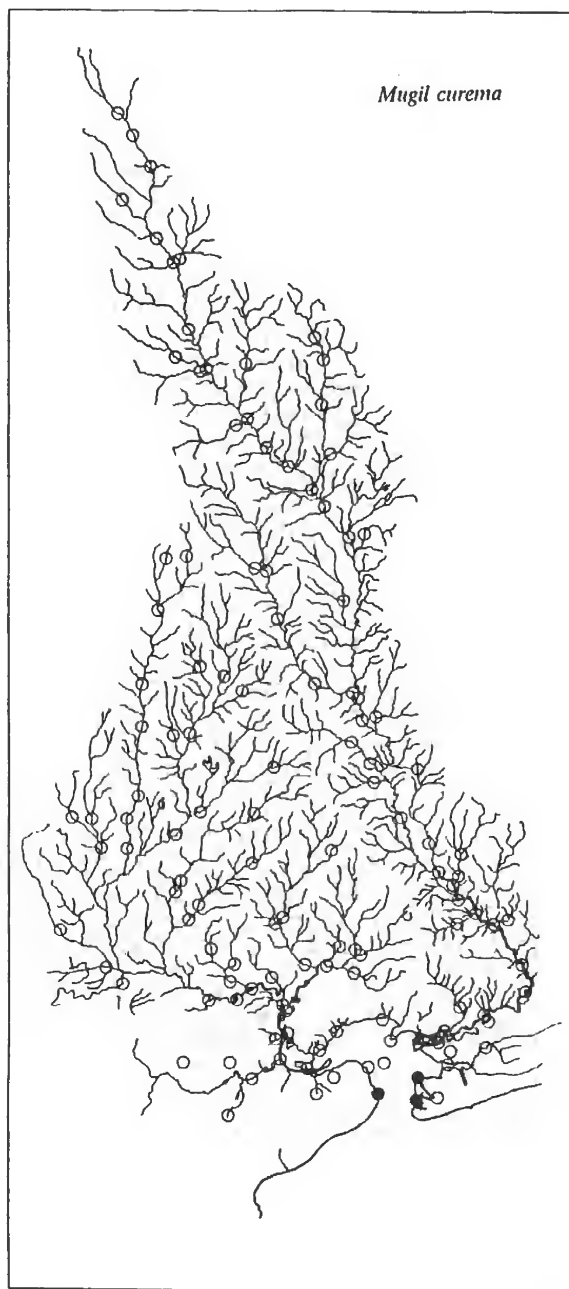
Map 106
 Sciaenidae drums
Sciaenops ocellatus (Linnaeus, 1766)
 red drum
 6 sites 11 specimens



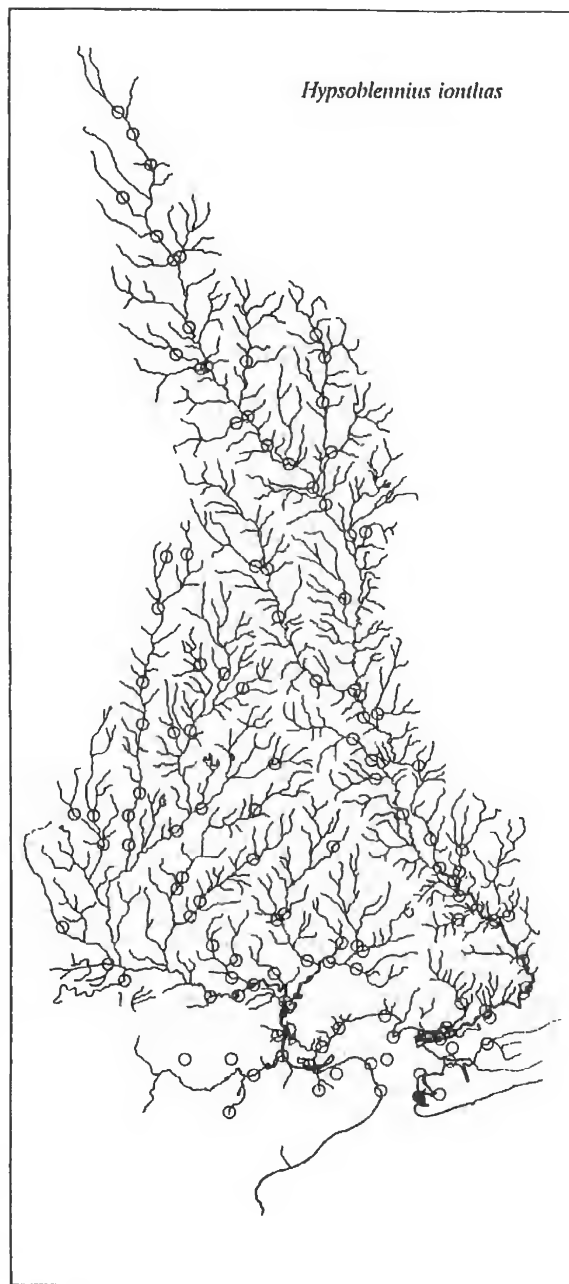
Map 107
 Ehippidae spadefishes
Chaetodipterus faber (Broussonet, 1782)
 Atlantic spadefish
 1 site 1 specimen



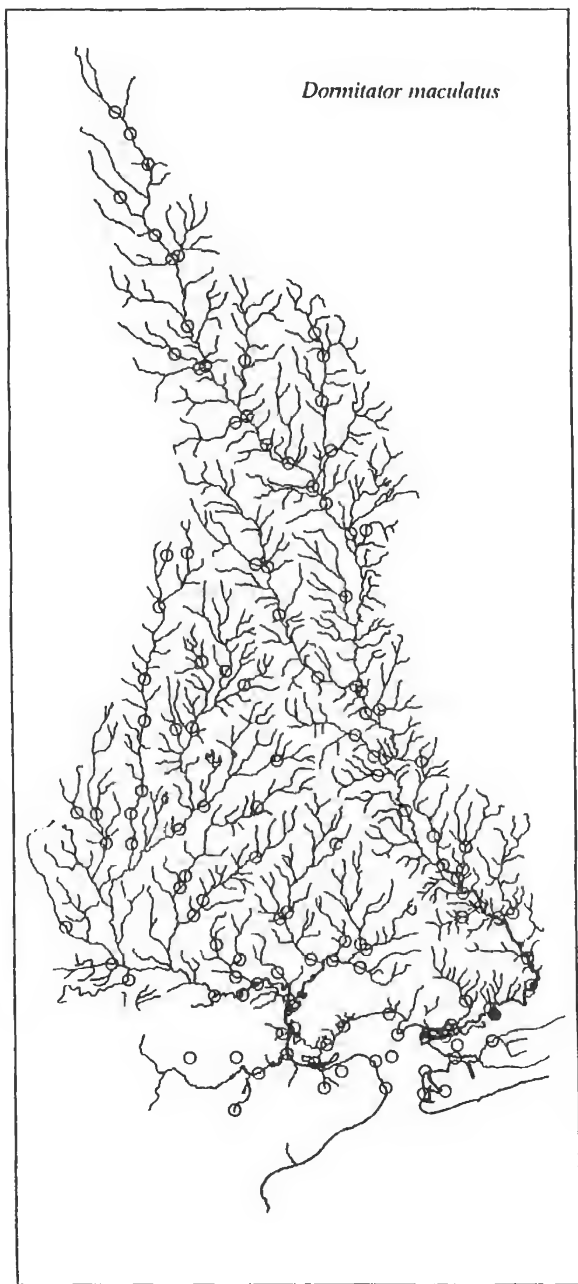
Map 108
 Mugilidae mullets
Mugil cephalus Linnaeus, 1758
 striped mullet
 13 sites 368 specimens



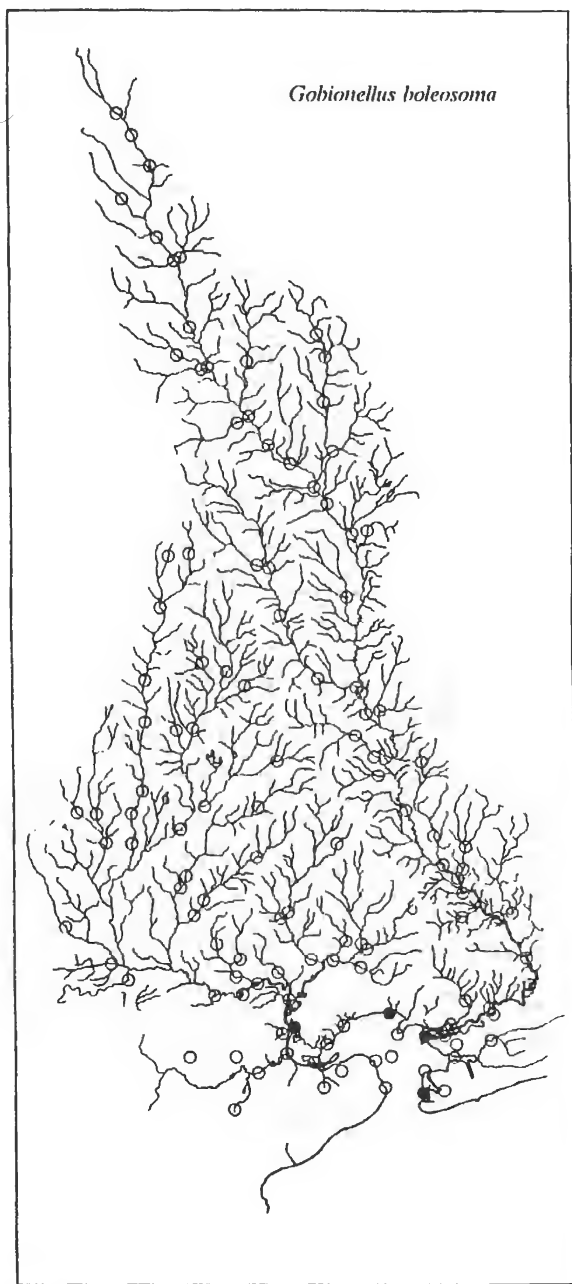
Map 109
 Mugilidae mullets
Mugil curema Valenciennes, 1836
 white mullet
 3 sites 13 specimens



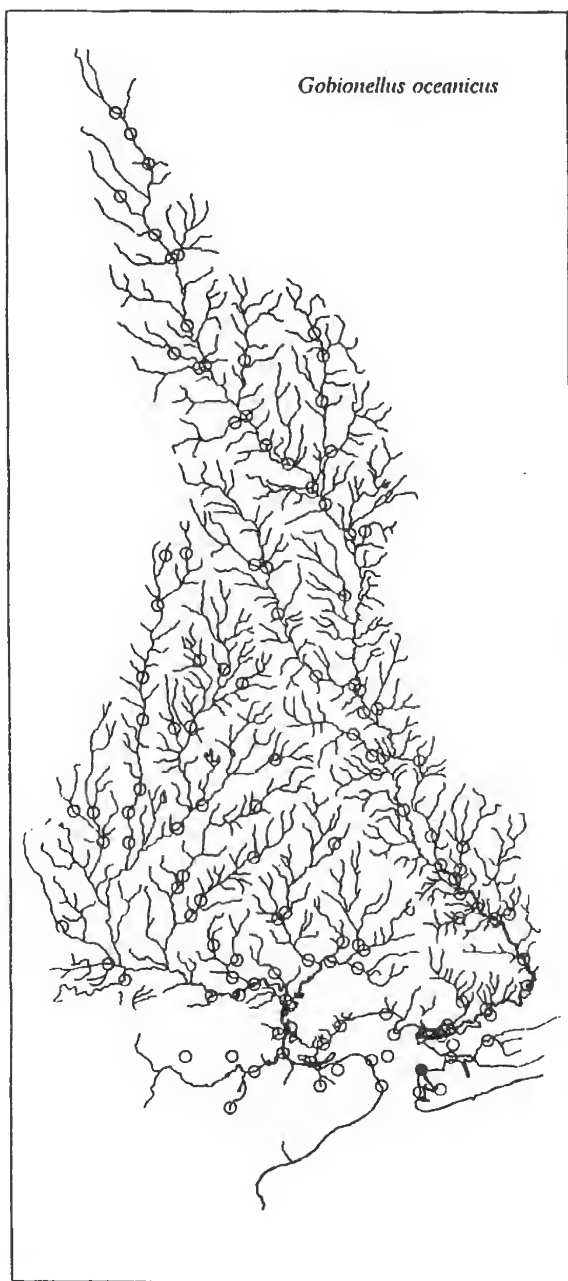
Map 110
 Blenniidae combtooth blennies
Hypsoblennius ionthas (Jordan and Gilbert, 1882)
 freckled blenny
 1 site 1 specimen



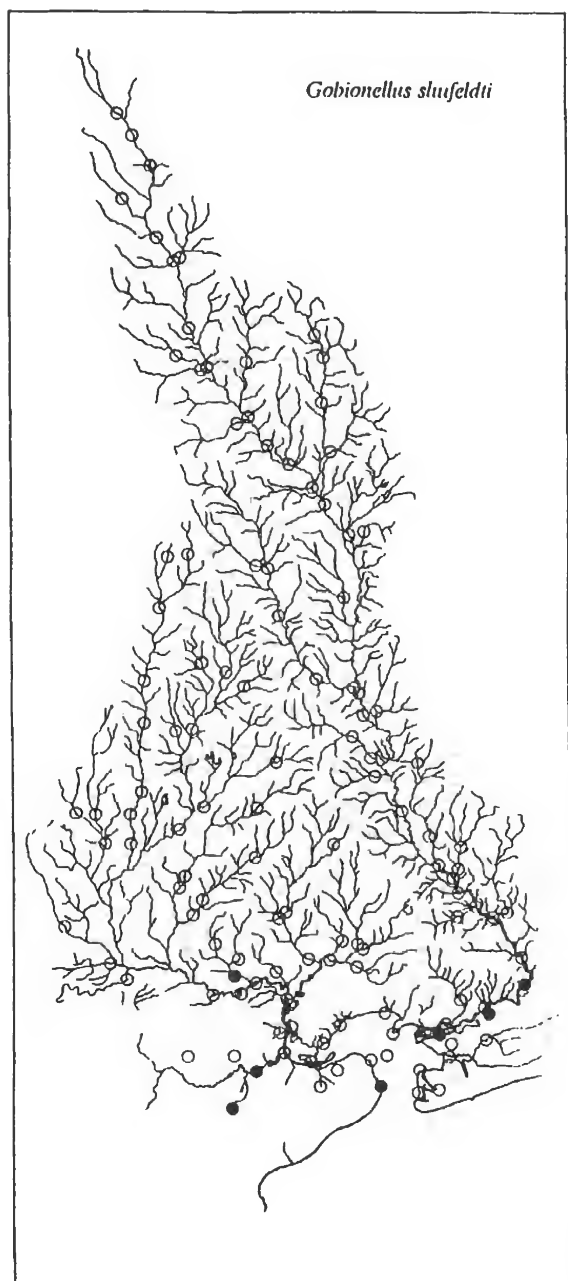
Map 111
 Eleotridae sleepers
Dormitator maculatus (Bloch, 1785)
 fat sleeper
 1 site 2 specimens



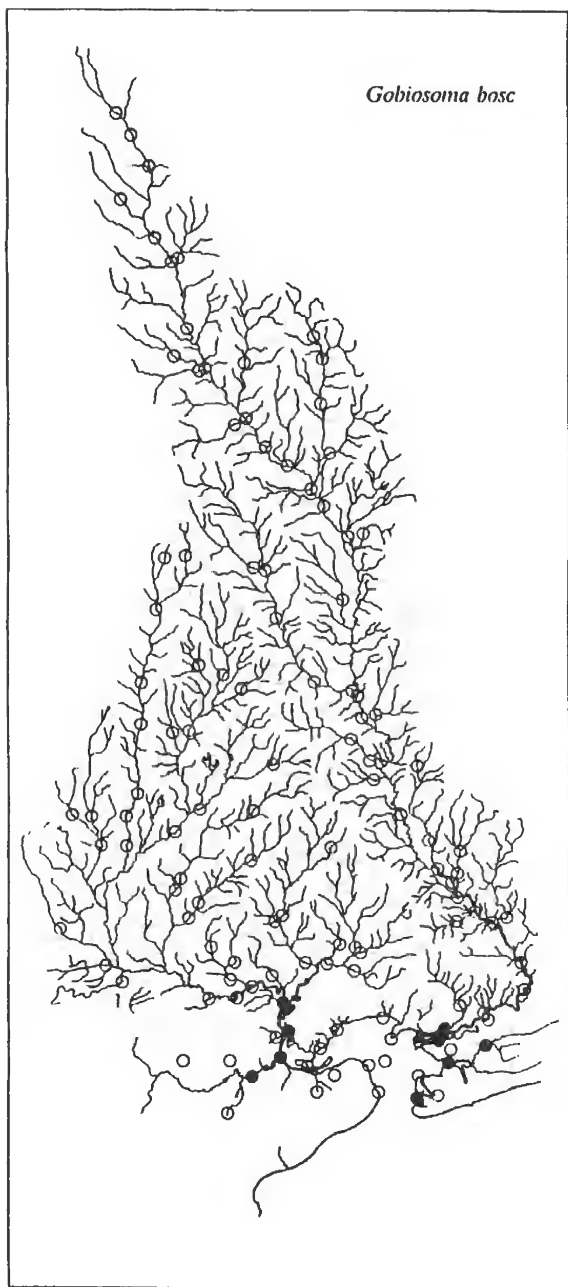
Map 112
 Gobiidae gobies
Gobionellus boleosoma (Jordan and Gilbert, 1882)
 darter goby
 4 sites 30 specimens



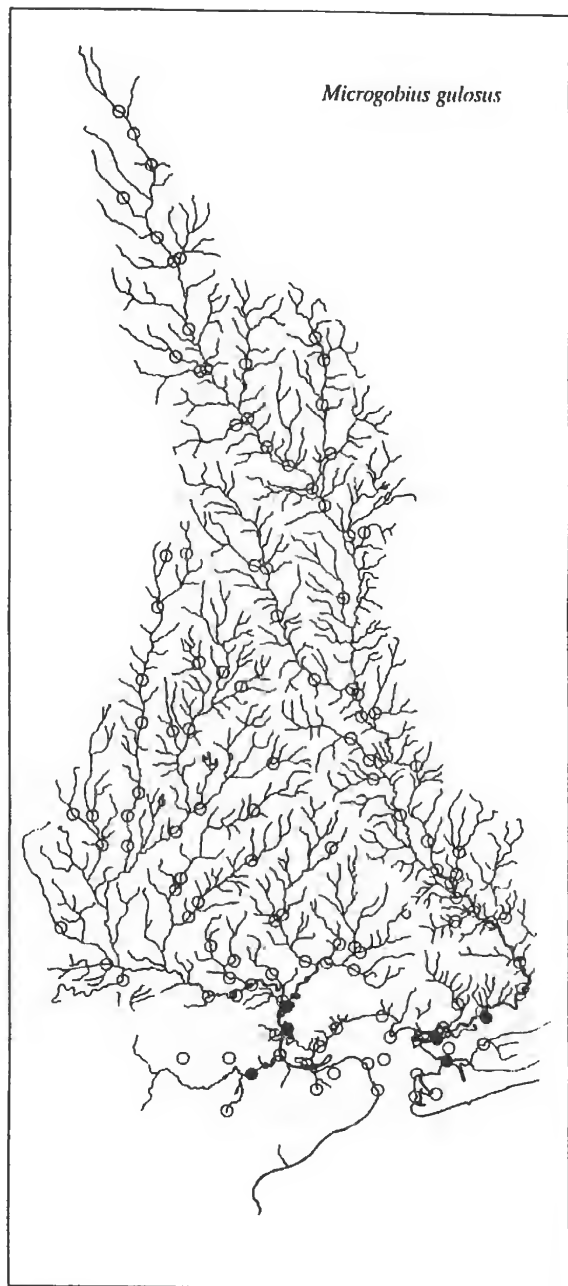
Map 113
 Gobiidae gobies
Gobionellus oceanicus (Pallas, 1770)
 highfin goby
 1 site 1 specimen



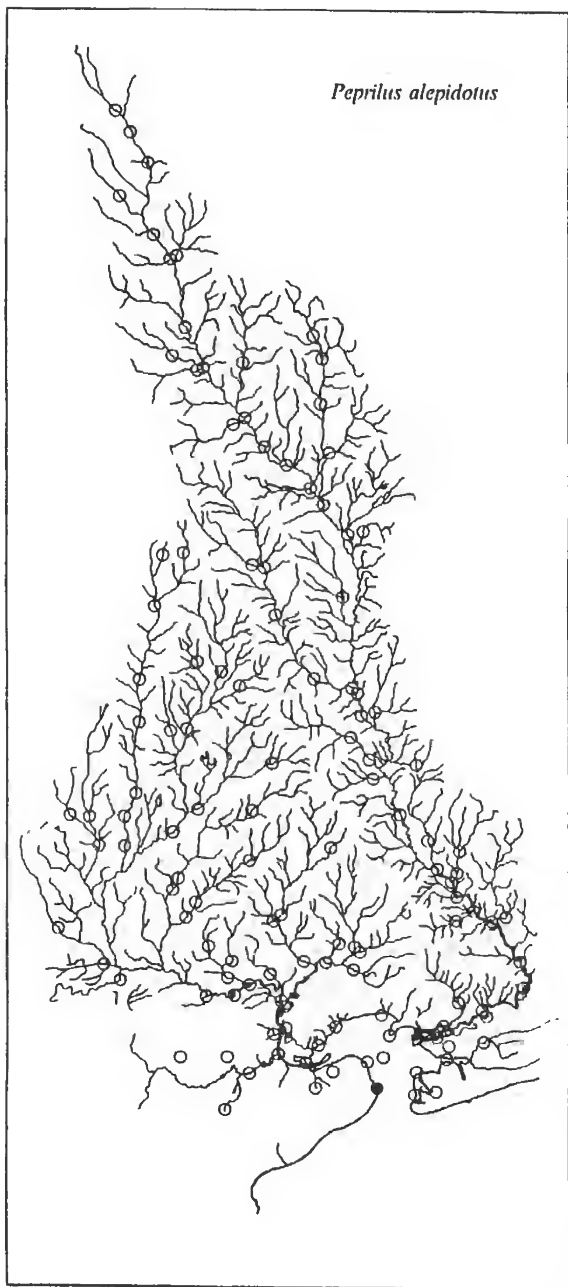
Map 114
 Gobiidae gobies
Gobionellus shufeldti (Jordan and Eigenmann, 1886)
 freshwater goby
 7 sites 36 specimens



Map 115
Gobiidae gobies
Gobiosoma bosc (Lacepède, 1800)
naked goby
11 sites 87 specimens

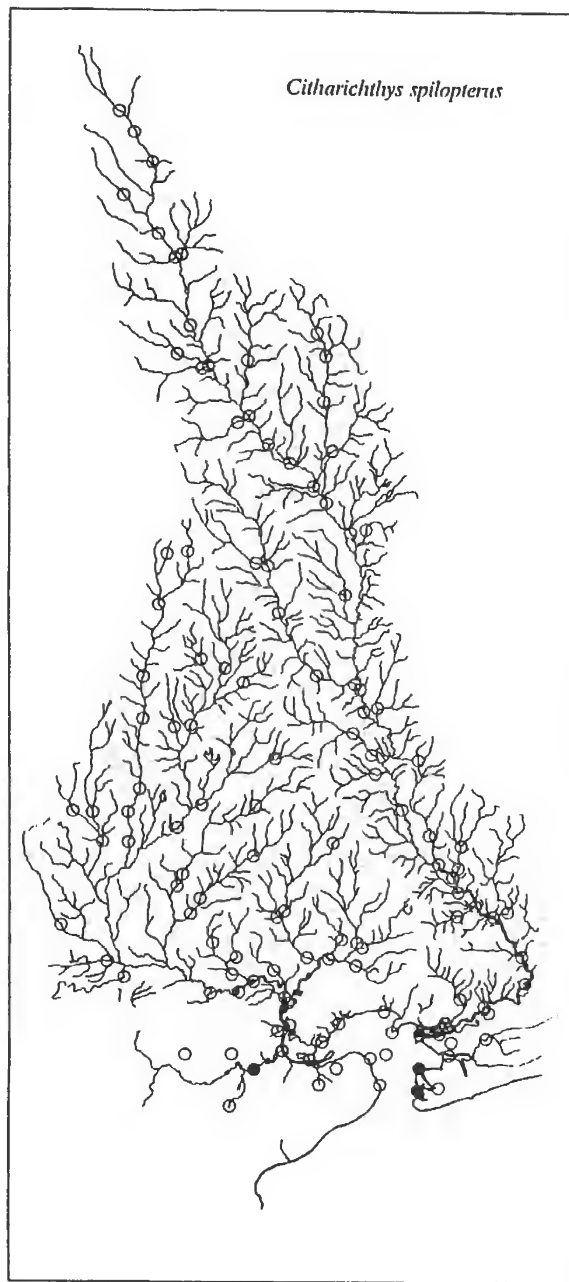


Map 116
Gobiidae gobies
Microgobius gulosus (Girard, 1858)
clown goby
6 sites 23 specimens



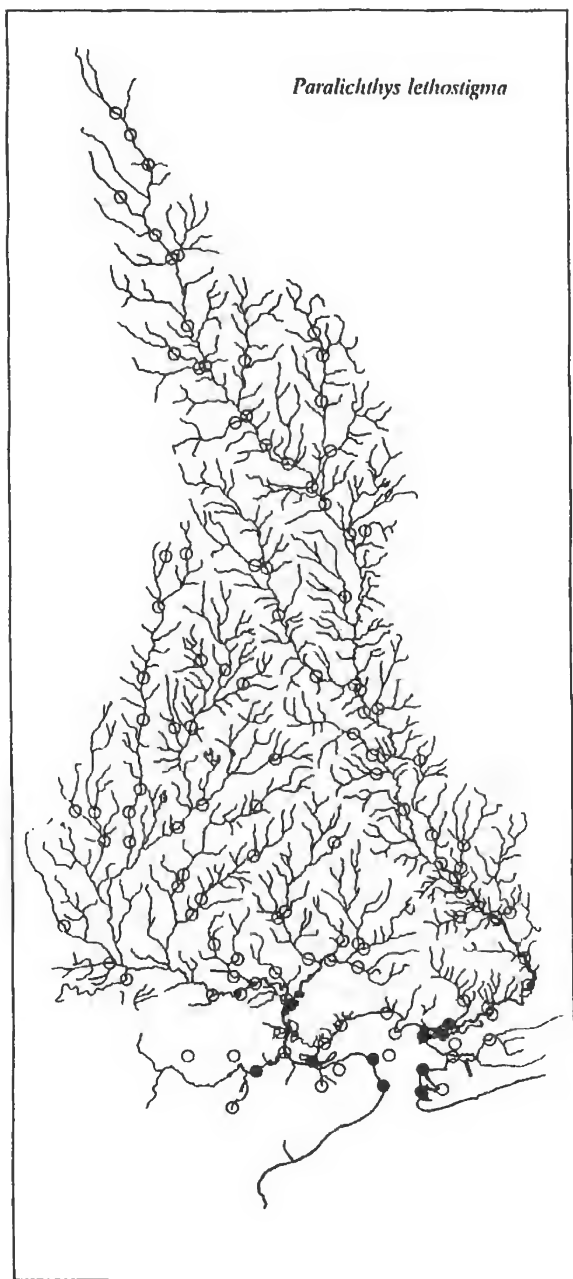
Peprilus alepidotus

Map 117
Stromateidae butterfishes
Peprilus alepidotus (Linnaeus, 1766)
harvestfish
1 site 1 specimen

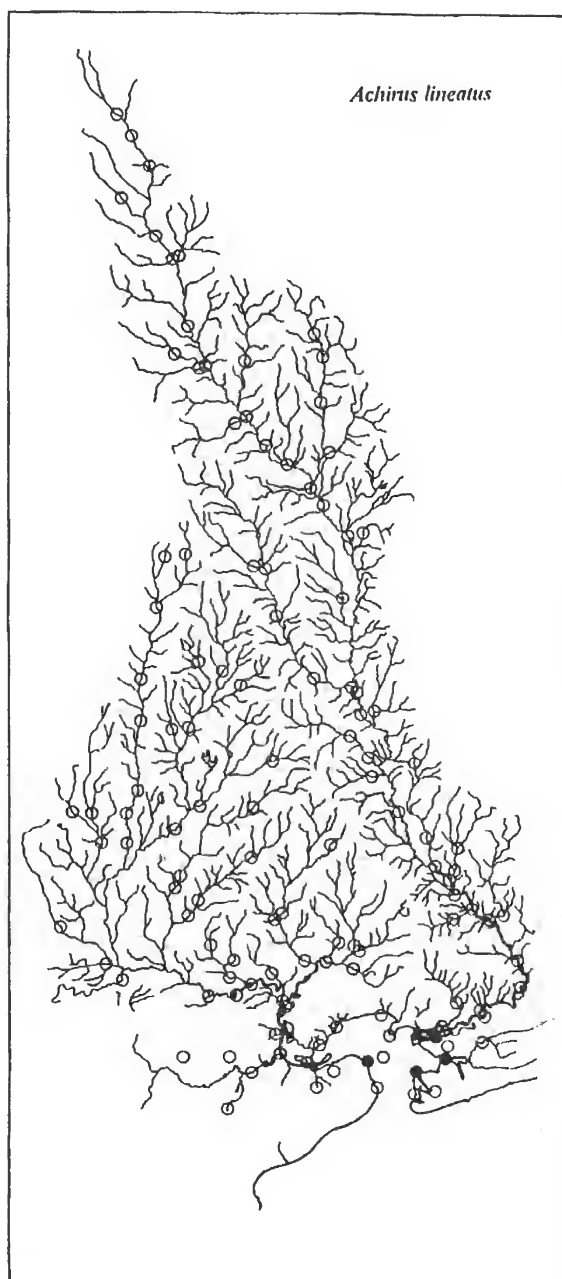


Citharichthys spilopterus

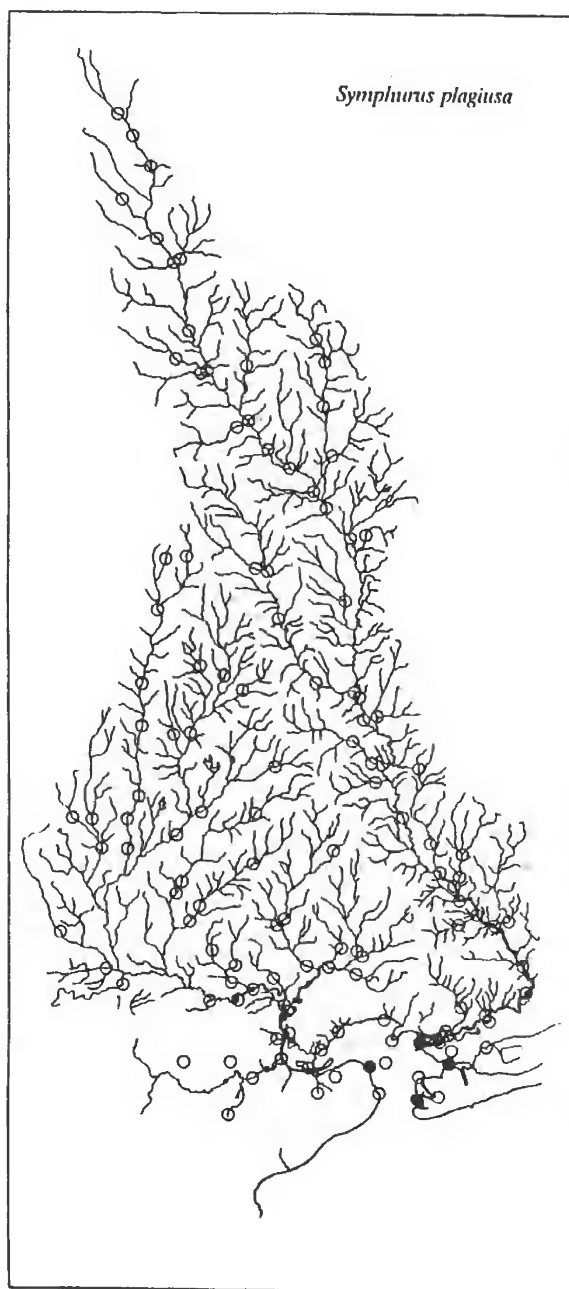
Map 118
Bothidae lefeye flounders
Citharichthys spilopterus Günther, 1862
bay whiff
3 sites 6 specimens



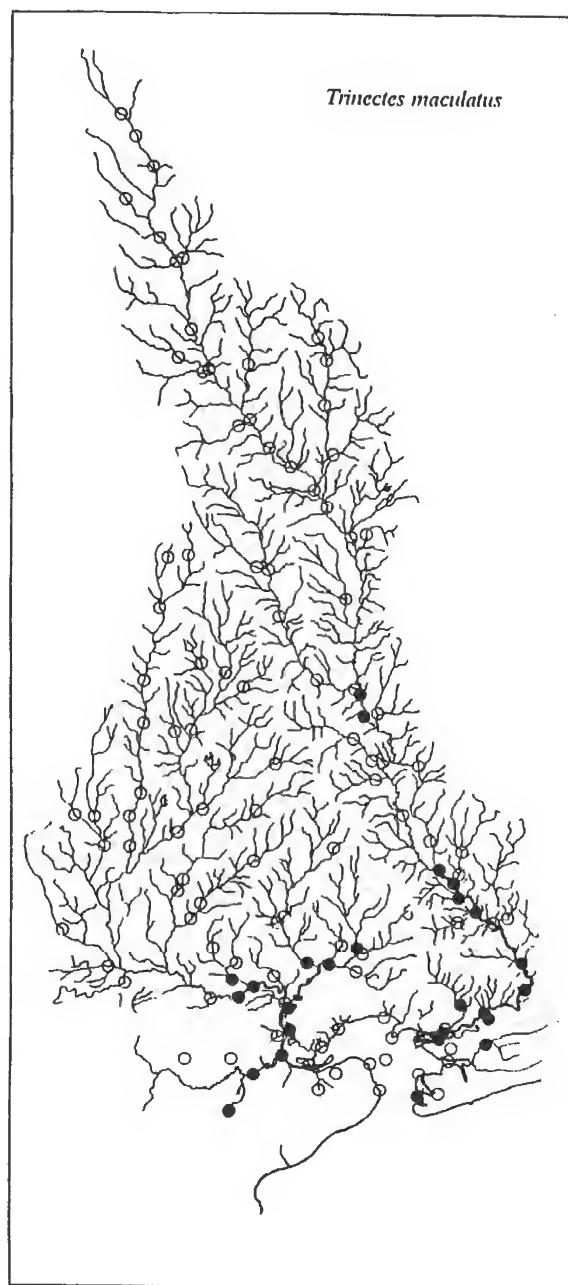
Map 119
 Bothidae lefteye flounders
Paralichthys lethostigma Jordan and Gilbert, 1884
 southern flounder
 10 sites 16 specimens



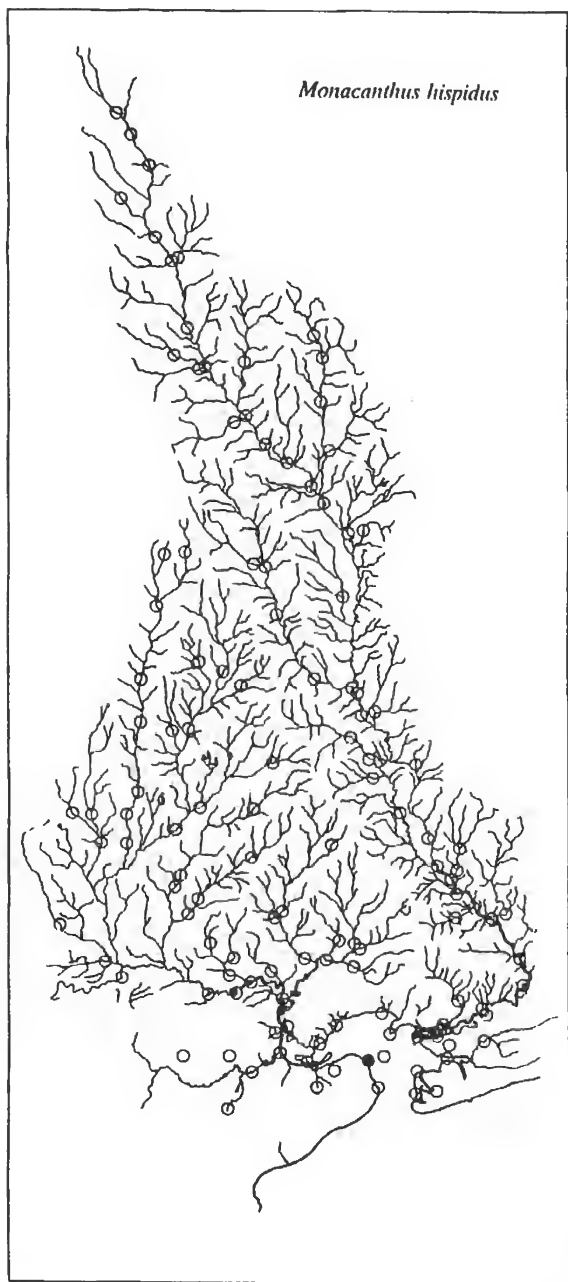
Map 120
 Soleidae soles
Achirus lineatus (Linnaeus, 1758)
 lined sole
 4 sites 405 specimens



Map 121
 Soleidae soles
Symphurus plagiusa (Linnaeus, 1766)
 blackcheek tonguefish
 4 sites 27 specimens

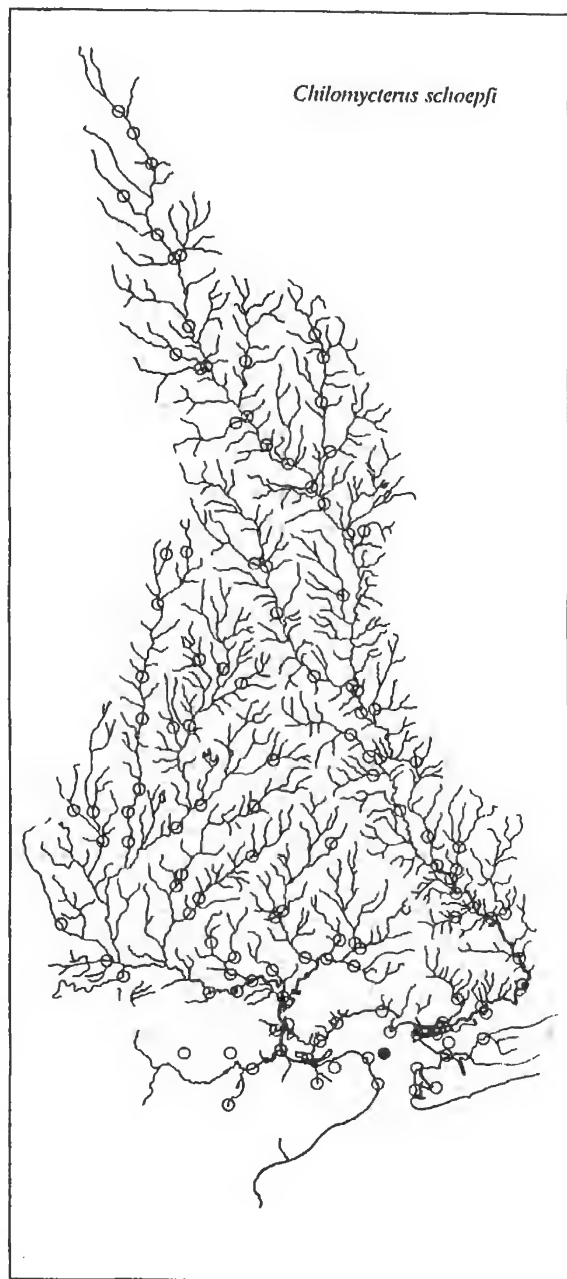


Map 122
 Soleidae soles
Trinectes maculatus (Bloch and Schneider, 1801)
 hogchoker
 26 sites 309 specimens



Monacanthus hispidus

Map 123
 Balistidae leatherjackets
Monacanthus hispidus (Linnaeus, 1766)
 planehead filefish
 1 site 2 specimens



Chilomycterus schoepfi

Map 124
 Tetraodontidae puffers
Chilomycterus schoepfi (Walbaum, 1792)
 striped burrfish
 1 site 1 specimen