

STATE Texas

PROJECT NO. F-3-R-1, Job B-5

PERIOD July, 1953 - May 30, 1954

## Job Completion Report

by

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### TITLE

Inventory of Species present and their distribution in those portions of Little Cypress, Cypress and Black Cypress bayous which lie within Marion County, Texas.

### OBJECTIVES

To determine the distribution of the species present and their relative abundance and the ecological factors influencing their distribution.

### METHODS

A total of 96 collections were made at six generalized locations on Little Cypress, Cypress and Black Cypress Bayous in Marion County. (figure #1). Thirty-five seining collections were made with a 26 by 6 ft. bag seine. Collections were made with hoop nets of 1, 2 and 3 inch mesh.

Seining collection specimens were preserved in 10% formalin solution and later identified and counted at the lab. Hoop net specimens were counted and weighed in the field.

Dissolved oxygen and carbon dioxide, pH and turbidity were recorded, along with ecological data, in conjunction with Job A-1.

Lack of waders prevented seining from November 1953 through February 1954. Also, lack of proper equipment prevented oxygen and carbon dioxide determination until the last phases of the study.

### RESULTS

There were 64 species of fish taken by all methods of collection. Table 1 lists all species and the stream where each was found. Only 20 of the 64 species were found in all three bayous. Black Cypress, with 46, had the most species while Little Cypress had the least at 38. It may be that the clearer, more acid water is preferred by a wider range of species.

Seining collections produced a total of 1,793 specimens including 55 different species. Table 2 gives numbers and localities of each species taken by this means. The most abundant species (Notropis amabilis), 13.8% was not taken at all in Black Cypress. The black stripe topminnow was second in abundance at 11.3% and the silvery minnow was third at 7.8%. Cyprinids made up 55% of the seining collections. Other forage species (shad, topminnow, etc.) made up 23.5% of the collections.

Hoop net collections produced 97 specimens weighing 264.69 pounds, including 18 different species. Table 3 shows the results of hoop net collections. Even though the average catch was only about 2.5 fish per set, nine of the species taken were not collected by seining.

#### SUMMARY

1. The area included in this inventory of species was Little Cypress, Cypress and Black Cypress Bayou s in Marion County, which make up the main tributaries of Caddo Lake.

2. There were 64 separate species taken by all collection methods with only 20 species being found in all three streams.

3. A slightly wider range of species was found in the clearer waters of Black Cypress than in the other bayous.

4. 55 species were collected by seining. Cyprinids and other forage species made up 78.5% of collections.

5. 18 species were collected with hoop nets, including nine species not taken by other means.

Table Number 1

## Cypress, Little Cypress and Black Cypress Species Distribution Checklist

Species	Common Name	Little Cypress	Cypress	Black Cypress
<i>Lepisosteus productus</i>	Spotted gar	X		
<i>Lepisosteus osseus</i>	Longnose gar	X	X	
<i>Dorosoma cepedianum</i>	Gizzard shad	X		X
<i>Esox vermiculatus</i>	Grass pickerel	X	X	X
<i>Esox niger</i>	Chain pickerel	X	X	X
<i>Ictiobus niger</i>	Black buffalo	X		
<i>Ictiobus bubalus</i>	Smallmouth buffalo	X		
<i>Minytrema melanops</i>	Spotted sucker	X	X	X
<i>Notemigonus crysoleucas</i>	Golden shiner		X	X
<i>Opsopoeodus emiliae</i>	Pugnose minnow			X
<i>Notropis atherinoides</i>	Emerald shiner	X	X	X
<i>Notropis percobromus</i>	Plains shiner	X	X	
<i>Notropis amabilis</i>	Texas shiner	X	X	
<i>Notropis fumeus</i>	Ribbon shiner			X
<i>Notropis umbratilis</i>	Redfin shiner		X	X
<i>Notropis chalybeus</i>	Ironcolor shiner	X	X	X
<i>Notropis roseus</i>	Central weed shiner	X	X	X
<i>Notropis amnis</i>	Pallid shiner		X	
<i>Notropis venustus</i>	Blacktail shiner	X	X	X
<i>Notropis lutrensis</i>	Red shiner	X	X	
<i>Notropis deliciosus</i>	Sand shiner	X	X	
<i>Notropis atrocaudalis</i>	Blackspot shiner	X	X	X
<i>Hybognathus nuchalis</i>	Silvery minnow	X	X	X
<i>Hybognathus hayi</i>	Cypress minnow		X	X
<i>Ictalurus punctatus</i>	Southern channel catfish	X	X	
<i>Ictalurus furcatus</i>	Blue cat		X	
<i>Ameiurus melas</i>	Black bullhead			X
<i>Ameiurus natalis</i>	Yellow bullhead	X		X
<i>Pilodictus olivaris</i>	Flathead cat			X
<i>Schilbeodes mollis</i>	Tadpole madtom			X
<i>Schilbeodes nocturnus</i>	Freckled madtom		X	
<i>Anguilla rostrata</i>	American eel	X		
<i>Fundulus chrysotus</i>	Redspot topminnow	X		X
<i>Fundulus notti</i>	Starhead topminnow			X
<i>Fundulus notatus</i>	Blackstripe topminnow	X	X	X
<i>Gambusia affinis</i>	Mosquito fish	X	X	X
<i>Aphredoderus sayanus</i>	Pirate perch	X		X
<i>Labidesthes sicculus</i>	Brook silversides	X	X	X
<i>Morone chrysops</i>	White bass		X	
<i>Micropterus punctulatus</i>	Spotted bass	X	X	X
<i>Micropterus salmoides</i>	Largemouth bass	X	X	X
<i>Chaenobryttus coronarius</i>	Warmouth		X	X
<i>Lepomis cyanellus</i>	Green sunfish		X	
<i>Lepomis punctatus</i>	Spotted sunfish	X	X	X
<i>Lepomis symmetricus</i>	Small sunfish			X
<i>Lepomis microlophus</i>	Redear	X	X	X
<i>Lepomis macrochirus</i>	Bluegill	X	X	X

(Table #1, continued)

Species	Common Name	Little Cypress	Cypress	Black Cypress
<i>Lepomis humilis</i>	oranged spotted sunfish			X
<i>Lepomis auritus</i>	Yellow belly sunfish		X	X
<i>Lepomis megalotis</i>	Longear sunfish			X
<i>Lepomis marginatus</i>	Dollar sunfish	X		X
<i>Pomoxis annularis</i>	White crappie		X	
<i>Pomoxis nigromaculatus</i>	Black crappie	X	X	X
<i>Centrarchus macropterus</i>	Flier		X	
<i>Elassoma zonatum</i>	Banded pigmy sunfish	X		X
<i>Hadropterus maculatus</i>	Black side darter	X		X
<i>Hadropterus scierus</i>	Dusky darter		X	X
<i>Hadropterus shumardi</i>	River darter		X	
<i>Ammocrypta vivax</i>	Arkansas sand darter		X	X
<i>Etheostoma chlorosomum</i>	Bluntnose darter		X	X
<i>Etheostoma gracile</i>	Western swamp darter	X	X	X
<i>Etheostoma proliare</i>	Cypress darter	X		X
<i>Etheostoma parvipinne</i>	Goldstripe darter	X		X
<i>Aplodinotus grunniens</i>	Drum	X	X	X
Totals	64 species	38	42	46

Table No. 2  
Seining Collections

Species	Little Cypress	Cypress	Black Cypress	Totals	%
Longnose gar	1	0	0	1	00.05
Spotted gar	1	0	0	1	00.05
Gizzard shad	0	0	24	24	01.3
Grass pickerel	4	1	7	12	00.7
Chain pickerel	7	1	5	13	00.7
Spotted sucker	1	5	33	39	02.2
Golden shiner	0	3	68	71	03.9
Pugnose minnow	0	0	11	11	00.6
Emerald shiner	14	14	1	29	01.6
Plains shiner	4	2	0	6	00.3
Texas shiner	74	173	0	247	13.8
Ribbon shiner	0	0	57	57	03.2
Redfin shiner	0	5	4	9	00.5
Ironcolor shiner	40	7	64	111	06.2
Central Weed shiner	26	24	33	83	04.5
Pallid shiner	0	14	0	14	00.8
Blacktail shiner	3	105	6	19	01.1
Red shiner	0	7	0	7	00.4
Shiner	28	10	0	38	02.2
Blackspot shiner	21	8	18	47	02.6
Silvery minnow	14	36	90	140	07.8
Cypress minnow	0	2	96	98	05.5
Yellow bullhead	0	0	2	2	00.1
Tadpole madtom	0	0	4	4	00.2
Freckled madtom	0	1	0	1	00.05
Redspot topminnow	1	0	3	4	00.2
Starhead topminnow	0	0	12	12	00.7
Blackstripe topminnow	91	21	91	203	11.3
Mosquito fish	31	11	22	64	03.6
Pirate perch	1	0	11	12	00.7
Brook silversides	18	41	58	117	06.5
Spotted bass	2	6	1	9	00.5
Largemouth bass	5	2	9	16	00.9
Warmouth	0	1	2	3	00.2
Green sunfish	0	3	0	3	00.2
Spotted sunfish	3	6	6	15	00.8
Small sunfish	0	0	3	3	00.2
Redear	3	3	21	27	01.5
Bluegill	2	3	27	32	01.8
Orangespotted sunfish	0	0	1	1	00.05
Yellow belly sunfish	0	2	3	5	00.3
Longear sunfish	0	0	3	3	00.2
Dollar sunfish	2	0	4	6	00.3
White crappie	0	1	0	1	00.05
Black crappie	0	3	58	61	03.4
Flier	0	7	0	7	00.4

Table No. 2 (con'd)

Species	Little Cypress	Cypress	Black Cypress	Totals	%
Banded pigmy sunfish	2	0	1	3	00.2
Blackside darter	4	0	4	8	00.4
Dusky darter	0	2	1	3	00.2
River darter	0	2	0	2	00.1
Arkansas darter	0	16	4	20	01.1
Bluntnose darter	0	3	6	9	00.5
Western swamp darter	6	9	14	29	01.6
Cypress darter	12	0	17	29	01.6
Goldstripe darter	1	0	1	2	00.1
55 species	422	465	906	1,793	99.95

Table No. 3  
Hoop Net Collections

Species	Little Cypress		Cypress		Black Cypress		Totals	
	No.	Weight	No.	Weight	No.	Weight	No.	Weight
Longnose gar	31	135.00	1	3.50			32	138.50
Shad	2	1.25					2	1.25
Spotted sucker	1	1.50	4	5.62			5	7.12
Black buffalo	1	8.75					1	8.75
Smallmouth buffalo	2	28.12					2	28.12
Eel	1	1.75					1	1.75
Channel cat	2	1.37	7	4.25			9	5.62
Blue cat			1	1.50			1	1.50
Flathead cat					1	6.62	1	6.62
Yellow bullhead	1	0.50					1	0.50
Black bullhead					1	0.50	1	0.50
White bass			1	0.62			1	0.62
Bluegill	1	0.50	1	0.30	1	0.50	3	1.30
Redear			2	0.30			2	0.30
Black crappie	1	1.25	2	0.62			3	1.87
White crappie			1	0.25			1	0.25
Warmouth					3	1.50	3	1.50
D... ..	18	40.75	1	1.50	9	16.37	28	58.62
18 species	61	220.74 lbs.	21	18.46 lbs.	15	25.49 lbs.	97	264.69 lbs.

