

# FRIO RIVER

STATE Texas  
PROJECT NO. F6R3 - Job B-1  
PERIOD July 1, 1953 - June 30, 1956

## Job Completion Report

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### TITLE

Inventory of the Fish Species in the Nueces, Frio, and Atascosa Rivers.

### OBJECTIVES

To determine the species present and their relative numbers in the waters entering Lake Corpus Christi.

### PROCEDURE

Thirty-one seining and four netting collections were made on the three rivers during the first and third segments of the job. From the fifty stations, mostly at road crossings, established for the basic survey (see Map 1) only 31 of them were found to be suitable for making seining or netting collections. Table 1 shows a list of the species taken in these collections and Table 2 shows the numbers of each species taken at each station. Many of the fish collections were made on the same trips that basic data were gathered for the water analysis and stream survey observations.

### OBSERVATIONS

By referring to the job completion report for F6R3 - Job A-1, it will be seen that these three rivers are intermittent, flowing only during and after run-off rains. The Nueces River is normally composed of long, narrow, deep pools occasionally connected by running riffles. The two major tributaries, the Frio and Atascosa Rivers usually have smaller, more isolated pools of water. Most of the creeks and arroyos draining into the rivers are completely dry except for periods of run-off rains. Several channel dams have been built in the vicinity of Crystal City on the Middle region of the Nueces and they form long narrow lakes which are frequently pumped completely dry for truck farm irrigation. The upper Nueces and Frio Rivers are not in Region B-8 and are not included in this report.

A total of 8,231 specimens was taken representing 32 species. Other species that were present in Lake Corpus Christi and almost certainly present in the Nueces River above the lake but not recorded in this job were Dorosoma petenensis, Cyprinus carpio, Notropis roseus, Pilodictus olivarius and Anguilla rostrata, Lucania parva, Carassius auratus and Eleotris pisonis were taken only rarely in Lake Corpus Christi and may occur in the watershed. Four species, Moxostoma congestum, Notropis venustus, Pimephales promelas and Poecilichthys lepidus were recorded in this job but were not found to occur in the lake. The first two of these were found only at Station 1, a

clear water pool typical of the upper Nueces River but unique in this Region. P. promelas was collected both at Station 1 and at Stations 22 and 26 while P. lepidus was found only at Station 26. Each of these stations contained running water over gravel bars.

Only 17 fishermen were seen during the progress of this job: two at Station 1, three on Commanche Lake, two on Espintosa Lake and ten on Holland Lake. Fishing pressure is not very heavy because the silty nature of the streams and the irregular water supply strongly favors rough fish, catfish, and freshwater drum. Some of the lakes in the vicinity of Crystal City might be worth renovation by complete removal of existing fish populations and restocking but the excessive use of the water for irrigation and the strong floods would probably prevent them from ever producing first class fishing for any appreciable time.

#### SUMMARY

Fish collections were made by seines or experimental gill nets at thirty-five stations on the Nueces, Frio, and Atascosa Rivers, above Lake Corpus Christi. Four species were found that were not found in Lake Corpus Christi and eight species that do occur in Lake Corpus Christi were not above it. Both game fish populations and fishing pressure are apparently low in the three rivers because the streams are mostly muddy and the water supply is irregular.

Table 1. A List of Fish Species Recorded from Lake Corpus Christi.

Scientific Name	Common Name
<u>Lepisosteus spatula</u>	Alligator gar
<u>Lepisosteus productus</u>	Spotted gar
<u>Lepisosteus osseus</u>	Longnose gar
<u>Dorosoma cepedianum</u>	Gizzard shad
<u>Astyanax fasciatus</u>	Tetra
<u>Ictiobus bubalus</u>	Smallmouth buffalo
<u>Moxostoma congestum</u>	Gray redhorse
<u>Notemigonus crysoleucas</u>	Golden shiner
<u>Opsopoeodus emiliae</u>	Pugnose minnow
<u>Notropis venustus</u>	Spottail shiner
<u>Notropis lutrensis</u>	Red shiner
<u>Pimephales vigalax</u>	Parrot minnow
<u>Pimephales promelas</u>	Fathead minnow
<u>Ictalurus punctatus</u>	Southern channel catfish
<u>Ictalurus furcatus</u>	Blue catfish
<u>Ameiurus melas</u>	Black bullhead
<u>Ameiurus natalis</u>	Yellow bullhead
<u>Schilbeodes mollis</u>	Tadpole madtom
<u>Gambusia affinis</u>	Gambusia
<u>Mollienisia latipinna</u>	Sailfin molly
<u>Menidia beryllina</u>	Tidewater silversides
<u>Micropterus salmoides</u>	Largemouth black bass
<u>Chaenobryttus coronarius</u>	Warmouth
<u>Lepomis cyanellus</u>	Green sunfish
<u>Lepomis microlophus</u>	Redear sunfish
<u>Lepomis macrochirus</u>	Bluegill
<u>Lepomis megalotis</u>	Longear sunfish
<u>Pomoxis annularis</u>	White crappie
<u>Etheostoma gracile</u>	Western swamp darter
<u>Poecilichthys lepidus</u>	Greenthroat darter
<u>Aplodinotus grunniens</u>	Freshwater drum
<u>Cichlasoma cyanoguttata</u>	Rio Grande perch

Table 2. Numbers of Specimens taken in Netting and Seining Collections from the Nueces, Frio and Atascosa Rivers.

Species	Sta. 1	Sta. 1*	Sta. 2	Sta. 7*	Sta. 8	Sta. 9	Sta. 9*	Sta. 10	Sta. 12*	Sta. 13	Sta. 14	Sta. 15	Sta. 20	Sta. 21	Sta. 22	Sta. 26'	Sta. 27	Sta. 29
<i>L. spatula</i>				2			9		1									
<i>L. productus</i>				27			3		3								2	
<i>L. osseus</i>				3			2											
<i>D. cepedianum</i>				16			29		16								13	
<i>A. fasciatus</i>	46		5		23				67	26							1	14
<i>I. tubalus</i>				24			10											15
<i>M. congestum</i>		4							11									1
<i>N. crysoleucas</i>																		
<i>O. emilliae</i>					23			2		8		1	2					1
<i>N. venustus</i>	14	1																13
<i>N. lutrensis</i>	115									4				14	189			7
<i>P. vigilax</i>	10																	13
<i>P. promelas</i>																		1
<i>I. punctatus</i>		1		3					6	1	1	1			12			9
<i>I. furcatus</i>				2														1
<i>A. melas</i>																		
<i>A. natalis</i>								1										
<i>S. mollis</i>																		
<i>G. affinis</i>			1		10	35		129		38	9	14	164	26	62	68	2	52
<i>M. latipinna</i>													4					
<i>M. beryllina</i>					5								1					
<i>M. salmoides</i>		1			6			11		1	1		9	2	6	2		4
<i>C. coronarius</i>		2						6			1		3			1		
<i>L. cyanellus</i>																		
<i>L. microlophus</i>				1	7		1						9					
<i>L. macrochirus</i>				1	33	98	2	73	1	18	19		226	2	8	10	1	53
<i>L. megalotis</i>					2			1					9		9	10		
<i>P. annularis</i>				11					32	10								
<i>F. gracile</i>	10																	
<i>P. lepidus</i>																		
<i>A. grunniens</i>				7	2				3	1	1							
<i>C. cyanocruttata</i>	1	1				3						3		3			1	7
Totals	196	10	6	97	111	136	72	245	119	107	36	32	436	47	288	154		48
																		126

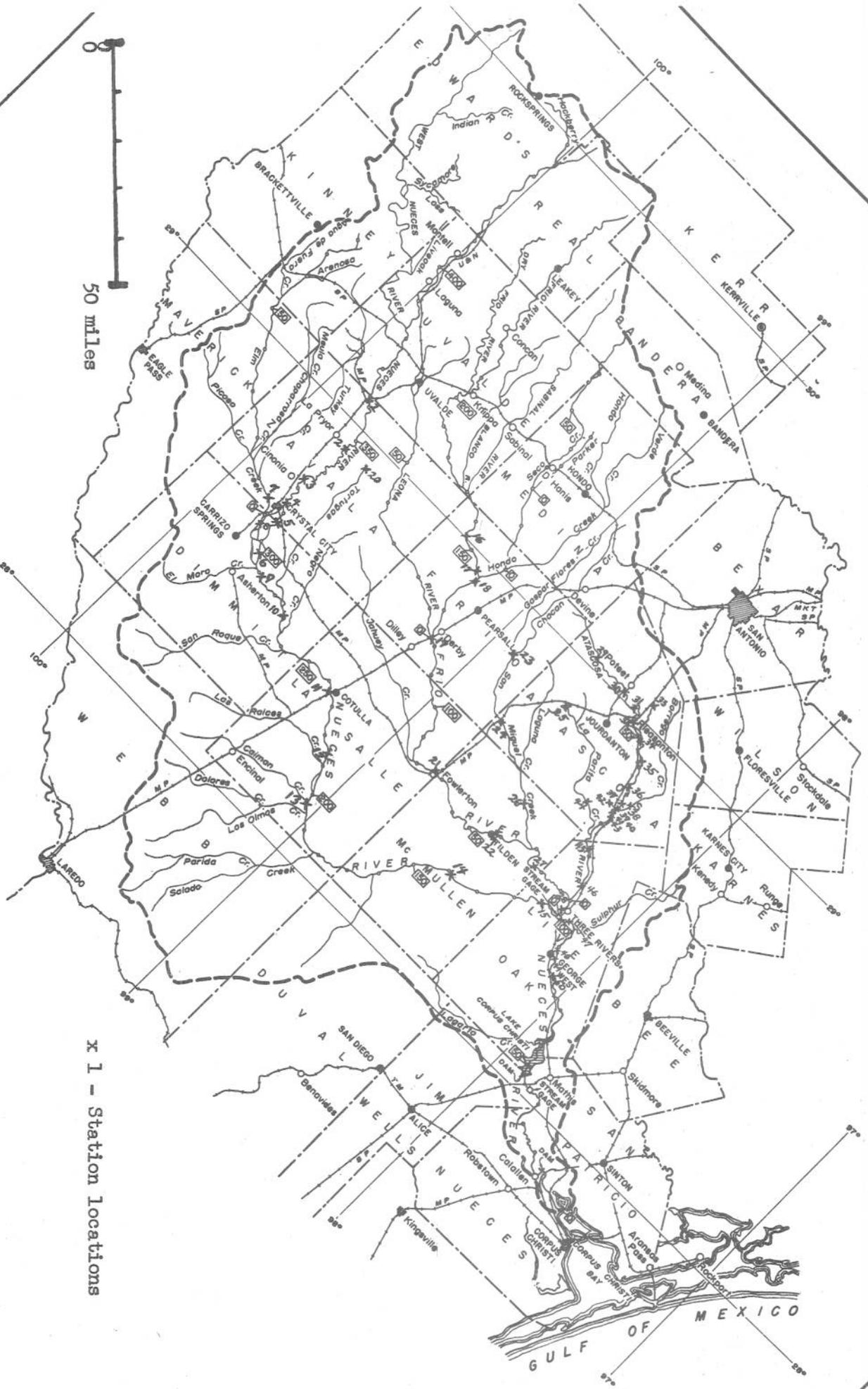
\* - Netting collection

! - Two collections





MAP I. THE WATERSHED OF THE NIECES, FRIO AND ATASCOSA RIVERS.



x 1 - Station Locations

Map adapted from "Report on Sedimentation in Lake Corpus Christi and the Water Supply of Corpus Christi, Texas". Brown, Jones and Rogers, U. S. Dept of Agriculture, Soil Conservation Service, SCS - TP - 74, December, 1948

