

## Segment Completion Report

State of TEXAS

Project No. F-3-R-6

Name: Fisheries Investigations and Surveys  
of the Waters of Region 5-B.

Job No. E-3

Title: Dam "B" Reservoir White Bass Stocking  
Experiment.

Period Covered:

June 1, 1958 through May 31, 1959

### Abstract:

During the early part of this job, gill net and seining collections were made in Dam "B" Reservoir to determine if there was a suitable place for white bass in the fish population. It was determined from these studies that white bass would be an asset to the lake, not only from a biological viewpoint but also to the economy of the surrounding area. Original plans called for catching the white bass in the fall from below the Texarkana Dam but this source of bass failed to materialize. Other known sources also fell through until the white bass began making their spring "runs" in Caddo Lake. Hoop nets were set and over a period of fifteen nights (covering about 2½ weeks) and some 317 brood white bass were caught and successfully transferred to Dam "B". Further work will be done next segment to determine if these brood white bass made a successful spawn this spring in Dam "B".

### Objectives:

To determine if Dam "B" Reservoir will support a white bass (Roccus chrysops) if conditions are found to be favorable, they will be introduced.

### Procedures:

During the first six months of this project four collections were made with a 26 by 6 foot by  $\frac{1}{4}$  inch mesh bag seine to determine if there was enough forage fish available for white bass. Also, experimental type gill nets were set to determine if there was a place in the fish population for an additional sport fish. The results of these collections are shown in Tables 1 and 2. Visual observations were made to determine spawning areas. Physical characteristics of the reservoir were also considered.

The brood white bass were collected by hoop nets in Bois 'd Arc Pass of Caddo Lake when the fish made their annual spring runs upstream. Attempts to catch the white bass by rod and reel yielded insufficient numbers to make it worthwhile. The fish were transported from Caddo Lake to Dam "B" in a 140 gallon water tank and upon arrival at Dam "B" the fish were dipped in a malachite green solution for about thirty seconds to reduce possible fungus infection (Figure 1). The fish were released near the US 190 bridge over the Neches River channel passing through the lake (Figure 2). Prior to transporting the left pectoral fin of each fish was clipped for identification purposes.

## Findings:

Seining collections showed that a large number of gizzard shad (Dorosoma cepedianum) are available in the lake and tributary rivers. Also, there are various Notropis sp. present in good numbers for food. Gill net collections and interviews with fishermen and other persons connected with the lake show a definite need for an additional good sport fish. The main sport fishing now is for catfish, crappie, and some bass.

Since both the Angelina and Neches Rivers, with their many sandbars and strong currents, converge on Dam "B" suitable spawning grounds are available for the white bass.

The only factors that would possibly be against a white bass fishery are the characteristics of the lake proper, that is, shallow water depth, fairly high turbidity and abundant vegetation in some areas. Since the average depth of the lake is only about five feet it becomes quite turbid due to high winds and wave action. However, the river channel is sufficiently deep.

After it was decided to go ahead with the stocking of white bass in Dam "B" the next problem was to find the fish in sufficient numbers to collect and transfer. Several trips were made to the Sulphur River below Texarkana Dam, Cypress Bayou below Ferrell's Bridge Dam, Lake O' the Pines, and Cypress Bayou above Caddo Lake in attempts to catch white bass with sport fishing equipment. Only one white bass was collected in this manner. Finally on March 18, 1959, hoop nets were set in Bois 'd Arc Pass on Caddo Lake. The next morning there were 43 white bass in the nets. These fish were immediately transported to Dam "B" and were the first white bass to be introduced into the Neches River System. The complete stocking record is as follows:

Date Released	Number Released	Total Released to Date
March 19, 1959	43	43
March 20, 1959	29	72
March 25, 1959	45	117
March 27, 1959	63	180
April 3, 1959	84	264
April 9, 1959	53	317

The size of these white bass ranged from approximately seven inches in total length to sixteen inches in total length. It was suspected that nearly all of the fish released at first were males. Their milt flowed with very little pressure on the abdominal walls. Later, a few females showed up as indicated by eggs flowing so both sexes were definitely released. It is hoped that their sexual development was not too far along so as not to be influenced by the transfer to a new environment.

The clipped left pectoral fin makes it possible to identify the stocked fish when later studies are made to determine their establishment.

## Recommendations:

Now that white bass have successfully been stocked in Dam "B" it is recommended that follow up studies be made to determine survival, reproduction and establishment. This will be done by netting, seining and interviews with fishermen.

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Date September 9, 1959

Table 1. Seining Results in Dam "B".

Species	June	July	September	November	Total
<u>Dorosoma cepedianum</u>		27	167		194
<u>Moxostoma poecilurum</u>			1		1
<u>Notropis fumeus</u>	1	7	21	9	38
<u>N. amnis</u>		3			3
<u>N. venustus</u>	1	7	4		12
<u>N. lutrensis</u>	4	3	1		8
<u>N. stramineus</u>		7	4	14	25
<u>N. volucellus</u>			54		54
<u>Hybognathus nuchalis</u>			2		2
<u>Pimephales vigilax</u>		21	39		60
<u>Fundulus chrysotus</u>	18			9	27
<u>F. notatus</u>	7	4	28	2	41
<u>Gambusia affinis</u>	15		1		16
<u>Labidesthes sicculus</u>	12	12	12	32	68
<u>Micropterus punctulatus</u>		7	13		20
<u>M. salmoides</u>	15	6	9		30
<u>Lepomis punctatus</u>	3		5		8
<u>L. microlophus</u>	4		1	1	6
<u>L. macrochirus</u>	19	1	3	12	35
<u>Pomoxis annularis</u>			1		1
<u>P. nigromaculatus</u>				2	2
<u>Etheostoma chlorosomum</u>		2	2		4
Total	99	107	368	81	655
Number of hauls	2	4	6	2	14

Table 2. Netting Results in Dam "B".

Species	June	July	August	September	October	November	Total
<u>Lepisosteus spatula</u>	1	1		2	1	1	6
<u>L. platostomus</u>		2					2
<u>L. productus</u>	24	9	29	2	4	3	71
<u>L. osseus</u>	10	25	16	3	4	3	61
<u>Amia calva</u>	2				2	2	6
<u>Dorosoma cepedianum</u>	90	93	87	7	20	19	316
<u>Ictiobus bubalus</u>	84	66	85	4	19	52	310
<u>Carpionodes carpio</u>	24	17	5	1	7	13	67
<u>Moxostoma poecilurum</u>				2	5		7
<u>Minytrema melanops</u>	8	6	3	1	2		20
<u>Erimyzon sucetta</u>	1						1
<u>Cyprinus carpio</u>	5	1	8	2	1		17
<u>Ictalurus punctatus</u>	29	10	40	2	1	5	87
<u>I. furcatus</u>		10	10	3	5	5	33
<u>I. natalis</u>			3		2	1	6
<u>Pylodictus olivaris</u>	3	4	2	1			10
<u>Micropterus punctulatus</u>			1				1
<u>M. salmoides</u>	5	10	13	2	4	6	40
<u>Chaenobryttus gulosus</u>	1		3		2	1	7
<u>Lepomis microlophus</u>	29	7	17		2	2	57
<u>L. macrochirus</u>	33	18	24	1	5	7	88
<u>L. megalotis</u>	2						2
<u>Pomoxis annularis</u>	6	21	46	37	19	56	185
<u>P. nigromaculatus</u>	3	21	22	10	9	11	76
<u>Aplodinotus grunniens</u>	12	17	13	4	1	4	51
Totals	372	338	427	84	115	191	1,527

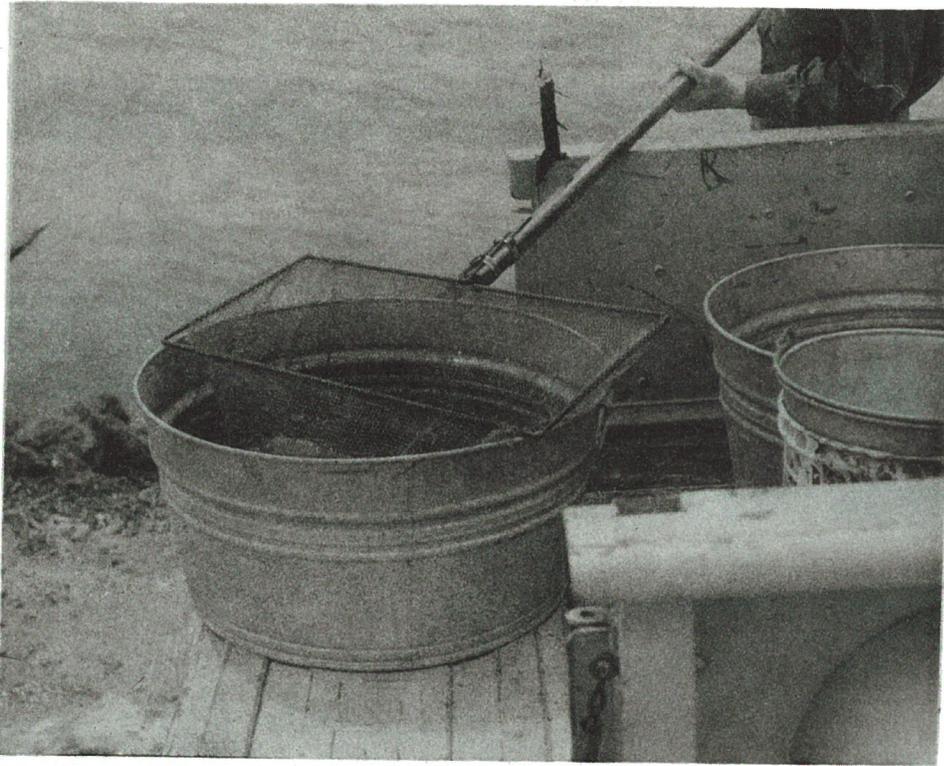


Figure 1. White bass were dipped in malachite green solution prior to releasing in Dam "B" Reservoir.



Figure 2. White bass being released in Dam "B" Reservoir.