Report of Fisheries Investigations

Resurvey of the Waters of Region 6-B

by

John E. Tilton
Project Leader

Gary Wood
Assistant Project Leader

Dingell-Johnson Project F-2-R-7, Job B-20
February 1, 1959 - January 31, 1960

H. D. Dodgen - Executive Secretary

Texas Game and Fish Commission
Austin, Texas

Marion Toole
Coordinator

Kenneth C. Jurgens & William H. Brown
Assistant Coordinators

ABSTRACT

A resurvey of Lake Inks, Granite Shoals, Buchanan, Belton, Marble Falls, and Austin, as well as the Brazos and San Gabriel Rivers, was carried out during 1959. Seventeen seine, 84 experimental gill net, and two rotenone collections were made on Inks Lake. The fish population was found to be similar to previous surveys, although some changes were noted in the rough fish complex. Gizzard shad showed a substantial drop in relative abundance in the netting results but rotenone samples revealed much higher population figures. Catfish and white bass dominated the game fish catch. The important largemouth bass is presumably still at a minimal population level as net and seine collections produced very few individuals.

The results of 23 net sets on Lake Granite Shoals reveal very high rough fish population, but low population figures for gizzard shad. Smallmouth buffalo were the most abundant species taken, accounting for 33 percent of total numbers and 56 percent of total weight. The game fish population is considered adequate and fishing remains good. The vegetation problem remains acute, but no control measures are considered economically feasible at this time.

Fifty-two net sets were made on Lake Buchanan. Rough fish accounted for over 72 percent of total numbers and 78 percent of total weight. Gizzard shad made up 54 percent of total fish taken. Game fish, including channel catfish, white bass, largemouth bass and white crappie, support heavy fishing pressure on the lake. No management practices are recommended at this time.

Seine collections on the Brazos River produced 5 species not taken in the original survey of the river including Notropis venustus, Notimogus crysoleucas, Ictalurus melas, Lepomis punctatus and Lepomis microlophus.

Thirty-eight net sets and nine seine collections showed substantially the same fish population as had been taken in previous surveys. A limited creel census was undertaken in an effort to check the catch of white crappie from Lake Belton. The census showed 1,581 anglers fished a total of 6,872.5 hours and caught 4,944 fish, for a fish/man hour total of 0.72. The crappie were small and few fishermen utilized the increased bag limit on this species. Gizzard shad showed a definite decrease in relative abundance, but no reason for the decrease could be ascertained.

Work on the San Gabriel River and Lakes Austin and Marble Falls was too limited for comparison with previous collections and the data gathered will be included in later reports.

Segment Completion Report

State of TEXAS

Project No. F-2-R-7

Name: Fisheries Investigations and Surveys of the Waters of Region 6-B.

Job No. B-20

Title: Resurvey of the Waters of Region 6-B.

Period Covered: February 1, 1959 - January 31, 1960

OBJECTIVES

To determine the present status of waters and fish populations which have been previously surveyed in Project F-2-R.

PROCEDURE

Fish collections were made principally through the use of standard experimental gill nets and small-mesh seines. All fish collections were taken from random locations with the exception of those from Inks Lake, which were made at stations selected in the basic survey.

Seined specimens were identified, counted, and checked for sexual development in the field except for those individuals whose identification was doubtful. These were brought to the laboratory for identification.

An eight-month creel census was undertaken on Lake Belton to check the crappie size and to determine if the more liberal crappie bag limit was being utilized by fishermen on the lake.

The creel census required one man on each of three major fishing docks. The census began at 12 noon and ran until the majority of fishermen left the dock at night. The census started the following morning when fishermen returned to the docks and was discontinued at noon. In this way the majority of dock fishermen were contacted in the 24-hour noon to noon census period. The census was conducted on a 13-day cycle to achieve rotation in days of the week.

In addition to fish collections and the creel census, physical changes which might influence fish population, were noted on the surveyed waters.

OBSERVATIONS AND FINDINGS

Inks Lake

Netting, rotenone, and seining data were tabulated and are contained in Tables 1, 2, and 3. Data for the report was compiled from 17 seine collections, 84 gill net sets, and 2 rotenone collections during the period February 1, 1959, through

Another interesting observation is the utilization of carp in the lake. A total of 1,565 carp were counted during the census, almost all taken for food, as well as for sport.

Prepared by John E. Tilton
Project Leader

Gary Wood
Assistant Project Leader

Approved by Marion Toole
Director Inland Fisheries Division

Date April 8, 1960

Table 1. Lake Inks Netting Results, 1959.

Common Name	Number	Percent of Number	Weight (Lbs.)	Percent of Weight
Gar	106	5.43	471.22	22.68
Gizzard shad	739	37.85	98.07	4.72
Smallmouth buffalo	115	5.89	364.99	17.56
River carpsucker	275	14.09	544.66	26.20
Carp	24	1.23	55.63	2.68
Channel catfish	361	18.49	342.44	16.47
Yellow catfish	2	0.10	12.99	0.63
White bass	128	6.56	105.06	5.05
Largemouth black bass	22	1.13	34.11	1.64
Texas spotted bass	5	0.25	3.32	0.16
Warmouth	4	0.21	1.19	0.05
Sunfish (all)	96	4.92	7.98	0.39
White crappie	74	3.79	36.20	1.74
Freshwater drum	1	0.06	0.56	0.03
Totals	1,952	100.00	2,078.42	100.00

Table 2. Lake Inks Rotenone Results, July 22, 1959.

Common Name	Number	Percent of Number
Gizzard shad	1,980 (approx)	61.98
Carp	1	0.03
Cyprinids (minnows)	460 (approx)	14.39
Channel catfish	40	1.25
White crappie	6	0.19
Largemouth black bass	33	1.03
Warmouth	1	0.03
Sunfish (all)	671 (approx)	21.00
Logperch	2	0.06
Freshwater drum	1	0.04
Totals	3,195	100.00

Table 3. Lake Inks Seining Results, 1959.

Common Name	Scientific Name	Number	Percent of Number
Gizzard shad	Dorosoma cepedianum	79	6.10
Spottail shiner	Notropis venustus	924	71.29
Redhorse shiner	Notropis lutrensis	259	19.99
Parrot minnow	Pimephales vigilax	3	0.23
Gambusia	Gambusia affinis	1	0.08
Largemouth black bass	Micropterus salmoides	3	0.23
Texas spotted bass	Micropterus treculi	3	0.23
Green sunfish	Lepomis cyanellus	15	1.16
Bluegill sunfish	Lepomis macrochirus	9	0.69
Totals		1,296	100.00

Table 4. Lake Granite Shoals Netting Results, 1959.

Common Name	Number	Percent of Number	Weight (Lbs.)	Percent of Weight
Longnose gar	4	0.74	23.25	2.99
Gizzard shad	75	13.79	15.50	2.00
Smallmouth buffalo	176	32.35	437.24	56.23
River carpsucker	120	22.06	104.38	13.43
Carp	5	0.92	12.96	1.66
Gray redhorse sucker	2	0.37	19.63	2.53
Channel catfish	56	10.29	82.21	10.57
Yellow catfish	3	0.55	21.38	2.75
White bass	32	5.88	28.45	3.66
Largemouth black bass	12	2.21	13.82	1.78
Texas spotted bass	1	0.18	1.75	0.22
Sunfish (all)	34	6.25	3.69	0.47
White crappie	22	4.05	11.89	1.53
Freshwater drum	2	0.36	1.38	0.18
Totals	544	100.00	777.53	100.00

Table 5. Lake Buchanan Netting Results, 1959.

Common Name	Number	Percent of Number	Weight (Lbs.)	Percent of Weight
Gar	12	0.60	35.51	2.14
Gizzard shad	1,069	53.91	485.86	29.19
Smallmouth buffalo	55	2.78	182.49	10.96
River carpsucker	302	15.23	589.03	35.38
Carp	1	0.05	5.25	0.32
Channel catfish	184	9.27	108.27	6.50
Yellow catfish	5	0.26	16.87	1.01
White bass	266	13.42	186.38	11.20
Largemouth black bass	25	1.26	27.38	1.65
Texas spotted bass	13	0.65	8.06	0.48
Warmouth	1	0.05	0.38	0.02
Sunfish (all)	28	1.41	2.69	0.16
White crappie	22	1.11	16.53	0.99
Totals	1,983	100.00	1,664.70	100.00

Table 6. Lake Belton Netting Results, 1959.

Common Name	Number	Percent of Number	Weight (Lbs.)	Percent of Weight
Gar	114	14.68	162.85	22.75
Gizzard shad	186	23.94	43.32	6.05
Smallmouth buffalo	22	2.83	26.89	3.76
River carpsucker	51	6.57	96.81	13.52
Carp	28	3.61	31.77	4.43
Gray redhorse sucker	25	3.21	54.13	7.56
Channel catfish	83	10.68	172.18	24.04
White bass	14	1.80	15.54	2.17
Largemouth black bass	24	3.09	40.48	5.65
Sunfish (all)	102	13.12	11.51	1.61
White crappie	77	9.91	43.87	6.13
Freshwater drum	51	6.56	16.69	2.33
Totals	777	100.00	716.04	100.00

Table 7. Lake Belton Seining Results, 1959.

Common Name	Scientific Name	Number	Percent of Number
Spotted gar	Lepisosteus productus	1	0.23
Longnose gar	Lepisosteus osseus	1	0.23
Gizzard shad	Dorosoma cepedianum	23	5.28
Spottail shiner	Notropis venustus	271	62.15
Redhorse shiner	Notropis lutrensis	77	17.66
Largemouth black bass	Micropterus salmoides	24	5.50
Warmouth	Chaenobryttus gulosus	1	0.23
Green sunfish	Lepomis cyanellus	2	0.46
Spotted sunfish	Lepomis punctatus	3	0.68
Redear sunfish	Lepomis microlophus	2	0.46
Bluegill sunfish	Lepomis macrochirus	27	6.20
Longear sunfish	Lepomis megalotis	4	0.92
Totals		436	100.00

Table 8. Lake Belton Creel Census Results, February 5 through September 28, 1959.

Species Caught	Length in inches																								Total
	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
Largemouth black bass	-	1	9	11	13	19	21	19	24	17	5	5	3	11	6	7	6	2	4	2	1	-	-	-	186
Spotted bass	-	-	-	5	1	4	2	5	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
White crappie	6	293	625	558	519	305	218	83	45	7	2	3	-	-	-	-	-	-	-	-	-	-	-	-	2664
Channel catfish	-	-	-	-	3	11	18	12	9	11	11	15	4	3	2	2	3	1	1	-	-	-	-	-	106
White bass	-	-	-	1	2	4	1	27	25	8	1	-	-	-	-	-	-	-	-	-	-	-	-	-	69
Drum	-	-	-	-	3	10	5	2	2	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	26
Warmouth	2	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9
Green sunfish	3	7	13	6	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32
Bluegills	28	82	40	7	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	159
Redear sunfish	-	2	9	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13
Longear sunfish	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Carp	-	-	3	1	44	56	131	201	456	392	42	46	18	16	9	9	17	59	19	22	20	1	2	1	1565
Buffalo	-	-	-	-	1	-	10	10	5	18	8	6	7	2	-	4	1	3	-	2	-	-	-	-	77
Gar	-	-	-	-	-	1	-	1	6	-	-	8	1	1	-	-	-	-	-	-	-	-	-	-	18
Totals	39	389	702	592	591	410	406	360	574	456	69	83	34	33	17	22	27	65	24	26	21	1	2	1	4944

total fishermen	1,581	
total fish	4,944	
total hours fished	6,872.5	
total fish/man-hour		.71938