

FILE

JOB COMPLETION REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-2-R-10

FISHERIES INVESTIGATIONS AND SURVEYS OF THE WATERS OF REGION II-B

Job No. B-24: Fisheries Resurvey of Lake Inks

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ABSTRACT

Lake Inks was resurveyed during the segment. A lake drawdown during February and March of 1962 has retarded the growth of submerged vegetation, notably Myriophyllum sp.

A selective treatment for gizzard shad with liquid rotenone was done on Lake Inks under Job 16a35, F-14-D-5. Rough fish species decreased 17 per cent by number and 5 per cent by weight of the total fish netted in Inks Lake, presumably because of the reduction in shad following the selective kill.

This job will be continued on Inks Lake to aid in the evaluation of the selective treatment.

JOB COMPLETION REPORT

STATE OF Texas

Project No. F-2-R-10 Name: Fisheries Investigations and Surveys of the Waters of Region 2-B

Job No. B-24 Title: Fisheries Resurvey of Lake Inks

Period covered: February 1, 1962 to January 31, 1963

Objectives:

To conduct fisheries resurvey of Lake Inks regarding the fish species present, their relative abundance and ecological factors influencing their distribution.

Justification:

A resurvey of Inks Lake was conducted during the past segment of Project F-2-R. The resurvey is being continued this segment in order that data collected can be used to evaluate the results of experimental Job E-6, Rough Fish Population Control on Inks Lake.

Procedure:

Physical and chemical data for Inks Lake, located in Burnet County, are available under Job B-14, F-2-R-4 (Basic Inventory). Factors which would influence fish distribution, movement, spawning activities, and angling success on Inks Lake were noted during this resurvey period.

Netting collections were made with 125-foot experimental gill nets. These nets consist of five, 25-foot sections ranging between one-inch and three-inch square mesh, increasing in size by one-half inch per section. During the project period, 96 nets were set at stations established during the basic inventory. Except for February, sets were made each month of the segment. Table 2 shows the catch per net, per foot of net, etc.

Seining collections were made in June and July of 1962 to determine the survival rate of bass fry in the lake. Inks Lake was stocked by both Federal and State hatcheries as a follow-up to the selective treatment of the lake for gizzard shad with liquid rotenone under Job 16a35, F-14-D-6. The selective treatment was done on March 1, 1962.

A checklist of the fish species mentioned in this report is given in Table 1.

Findings:

Lake Inks was selectively treated for gizzard shad with liquid rotenone on March 1, 1962 under Project F-14-D-6, Job 16a35. The shad comprised 48.88 per cent by number and 10.57 per cent by weight of the fish collected during the 1961 resurvey as opposed to 11.11 per cent by weight and 2.34 per cent by number of the fish collected through extensive netting immediately after the selective treatment. This resurvey shows that shad comprised 34.18 per cent by number and 17.11 per cent by

weight of the fish collected during this project period. It should be also noted that there was an extensive kill of freshwater drum although this species was rarely collected in nets.

Netting collections for the project period are summarized in Table 3, and the netting summaries by month are illustrated in Table 4. As can be seen from these tables, rough fish dominate the catch in both weight and number.

The table below shows the per cent of rough fish by weight and number as determined by experimental netting over the past eight years. The seventeen per cent drop by number and 5 per cent drop by weight in the rough fish is presumably correlated with the selective shad treatment.

LAKE INKS ROUGH FISH RATIO, 1955 - 1962

	1955	1956	1957	1958	1959	1960	1961	1962
Per cent rough fish (number)	63	78	63	71	65	70	73	56
Per cent rough fish (weight)	74	74	78	71	74	79	85	80

Seining collections tended to indicate a fair rate of survival through the fingerling stage of largemouth black bass. A large number of shad were collected through seining operations during June and July of 1962 indicating a heavy spawn following the selective kill.

The Lower Colorado River Authority, in response to public request, lowered Inks Lake approximately ten feet for a fifteen day period in late February and early March. This drawdown did much to curb the growth of submerged vegetation principally Myriophyllum sp., which has complicated efforts to fish Inks Lake before. The drawdown, if it could be done annually and earlier in the year could reduce the vegetation to a desirable level.

Recommendations:

Although fishermen's reports tend to indicate that the bass fishing on Inks Lake is improved, it is still not at its peak level of 1955. Crappie fishing success is also much worse than previous years.

It is recommended that this job be continued to further evaluate the results of the selective kill and the massive stocking of largemouth bass.

Prepared by Richard L. White
Asst. Project Leader

Approved: Marion Toole
Coordinator

Date: March 22, 1963

John Tilton
Regional Supervisor

TABLE 1

CHECKLIST OF SPECIES MENTIONED IN REPORT

<u>Scientific Name</u>	<u>Common Name</u>
<u>Lepisosteus osseus</u>	longnose gar
<u>Dorosoma cepedianum</u>	gizzard shad
<u>Ictiobus bubalus</u>	smallmouth buffalo
<u>Carpionodes carpio</u>	river carpsucker
<u>Notemigonus crysoleucas</u>	golden shiner
<u>Cyprinus carpio</u>	carp
<u>Ictalurus punctatus</u>	channel catfish
<u>Ictalurus furcatus</u>	blue catfish
<u>Pylodictis olivaris</u>	flathead catfish
<u>Roccus chrysops</u>	white bass
<u>Micropterus treculi</u>	Texas spotted bass
<u>Micropterus salmoides</u>	largemouth black bass
<u>Chaenobryttus gulosus</u>	warmouth
<u>Lepomis cyanellus</u>	green sunfish
<u>Lepomis microlophus</u>	redeer sunfish
<u>Lepomis macrochirus</u>	bluegill sunfish
<u>Lepomis megalotis</u>	longear sunfish
<u>Lepomis humilis</u>	orangespotted sunfish
<u>Pomoxis annularis</u>	white crappie
<u>Aplodinotus grunniens</u>	freshwater drum

TABLE 2

Success of Gill Netting in Terms of Numbers and Pounds of Fish

Resurvey 1962

Body of Water	Number of Nets Set	Number of feet Net Set	Number of fish caught	Number lbs. Fish Caught	Average No. Fish per Net	Average No. per feet Net	Average No. lbs. Fish per Net	Average No. lbs. Fish per ft. Net
Lake Inks	96	12,000	1,296	1,671	13.50	0.11	17.41	0.14

TABLE 3

LAKE INKS NETTING RESULTS, 1962

Species	Number	Per Cent of Number	Weight	Per Cent of Weight
Longnose gar	50	3.86	222.44	13.31
Gizzard shad	443	34.18	285.99	17.11
Smallmouth buffalo	99	7.64	447.56	26.78
River carpsucker	101	7.70	288.49	17.26
Golden shiner	1	0.08	0.16	0.01
Carp	29	2.24	100.37	6.01
Channel catfish	131	10.11	134.17	8.03
Blue catfish	1	0.08	4.25	0.25
Flathead catfish	4	0.32	17.76	1.07
White bass	52	4.01	49.67	2.98
Texas spotted bass	6	0.46	9.51	0.57
Largemouth black bass	64	4.94	59.45	3.56
Warmouth	21	1.62	6.24	0.38
Green sunfish	19	1.47	2.19	0.13
Redear sunfish	18	1.39	3.57	0.22
Bluegill sunfish	206	15.80	24.38	1.45
Longear sunfish	36	2.78	2.80	0.17
Orangespotted sunfish	1	0.08	0.11	0.01
White crappie	13	1.00	11.47	0.68
Freshwater drum	1	0.08	0.51	0.03
TOTALS	1,296	100.00	1,671.09	100.00

TABLE 4
LAKE INKS NETTING RESULTS BY NUMBER AND PER CENT OF NUMBER, RESURVEY, 1962

COMMON NAME	MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		1963 JANUARY	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Longnose gar	5	4.3	12	6.12	8	3.30	4	2.80	3	2.85	4	6.35	3	7.82	10	6.85	1	1.39	0	0.00	0	0.00
Gizzard shad	14	11.29	87	44.38	107	44.21	40	28.00	22	20.96	3	4.76	2	5.27	55	37.67	25	34.73	28	41.79	60	58.82
Smallmouth buffalo	15	12.00	37	18.88	14	5.78	3	2.10	3	2.85	2	3.17	0	0.00	11	7.53	5	6.94	5	7.46	4	3.92
River carpsucker	28	22.58	28	14.28	24	9.96	3	2.10	2	1.91	1	1.59	2	5.27	1	6.80	5	6.94	2	2.99	5	4.91
Carp	2	0.16	4	2.04	6	2.48	2	1.42	1	0.96	1	1.59	3	7.89	6	4.11	0	0.00	3	4.48	1	0.98
Golden shiner	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	0.69	0	0.00	0	0.00	0	0.00
Channel catfish	36	29.00	4	2.04	17	7.02	10	7.00	8	7.16	6	9.52	3	7.89	19	13.01	9	12.50	8	11.94	11	10.78
Flathead catfish	0	0.00	0	0.00	0	0.00	1	0.71	2	1.91	0	0.00	0	0.00	1	0.69	0	0.00	0	0.00	0	0.00
Blue catfish	0	0.00	1	0.51	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
White bass	1	0.08	0	0.00	0	0.00	0	0.00	1	0.95	0	0.00	3	7.89	13	8.90	15	20.84	8	11.94	11	10.79
Texas spotted bass	2	0.16	0	0.00	0	0.00	0	0.00	0	0.00	1	1.59	0	0.00	1	0.69	2	2.78	0	0.00	0	0.00
Largemouth black bass	8	6.45	0	0.00	1	0.41	0	0.00	10	9.53	15	23.81	10	26.32	10	6.85	5	6.94	3	4.48	2	1.96
Warmouth	3	2.41	2	1.02	1	0.41	2	1.42	7	6.66	3	4.76	2	5.26	1	0.69	0	0.00	0	0.00	0	0.00
Green sunfish	2	0.16	0	0.00	2	0.82	4	2.80	2	1.90	3	4.76	3	7.89	3	2.06	0	0.00	0	0.00	0	0.00
Redear sunfish	0	0.00	1	0.51	7	2.80	2	1.42	1	0.96	0	0.00	0	0.00	1	0.69	2	2.77	1	1.49	3	2.94
Bluegill	5	4.30	16	8.16	47	19.42	55	39.05	37	35.23	19	30.16	5	13.16	9	6.17	0	0.00	8	11.94	5	4.91
Longear sunfish	0	0.00	2	1.02	8	3.30	13	9.23	6	5.72	2	3.18	1	2.63	2	1.37	2	2.78	0	0.00	0	0.00
Orangespotted sunfish	0	0.00	0	0.00	0	0.00	1	0.71	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
White crappie	3	2.41	2	1.02	0	0.00	1	0.71	0	0.00	3	4.76	0	0.00	2	1.37	1	1.39	1	1.49	0	0.00
Freshwater drum	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	1	2.63	0	0.00	0	0.00	0	0.00	0	0.00
Totals	124	100.00	196	100.00	242	100.00	141	100.00	105	100.00	63	100.00	38	100.00	146	100.00	72	100.00	67	100.00	102	100.00

TABLE 5

LAKE INKS NETTING BY WEIGHT AND PER CENT OF WEIGHT, RESURVEY 1962

COMMON NAME	MARCH		APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		1963 JANUARY	
	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%	Wt.	%
Longnose gar	27.38	10.15	43.74	13.74	34.83	12.46	12.51	12.23	23.37	24.82	18.88	34.84	15.36	36.99	33.47	18.74	1.50	1.96	0.00	0.00	0.00	0.00
Gizzard shad	6.29	2.33	34.19	9.45	47.21	16.80	26.33	25.74	16.91	17.96	1.97	3.64	2.19	5.14	43.36	24.04	14.90	19.41	23.16	30.46	63.48	57.99
Smallmouth buffalo	75.09	27.83	164.30	45.31	74.71	26.73	12.94	12.25	19.19	20.38	10.38	19.15	0.00	0.00	53.30	25.96	12.90	16.88	22.02	28.56	2.73	2.40
River Carpsucker	74.54	27.91	80.09	22.13	74.65	26.70	9.94	9.72	7.19	7.64	2.75	5.07	5.00	11.73	2.88	1.40	15.82	20.70	1.81	2.38	13.82	12.62
Carp	14.75	5.47	15.81	4.37	17.04	6.00	6.38	6.24	3.50	3.72	3.00	5.54	4.50	10.56	21.76	10.51	0.00	0.00	9.50	12.40	4.13	3.77
Golden shiner	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.08	0.00	0.00	0.00	0.00	0.00	0.00
Channel catfish	35.83	13.28	8.69	2.40	22.15	7.92	11.67	11.41	10.95	11.63	3.30	6.09	5.74	13.47	16.08	7.83	6.19	8.01	6.70	8.81	6.87	6.28
Flathead catfish	0.00	0.00	0.00	0.00	0.00	0.00	12.88	12.59	1.57	1.67	0.00	0.00	0.00	0.00	3.31	1.61	0.00	0.00	0.00	0.00	0.00	0.00
Blue catfish	0.00	0.00	4.25	1.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White bass	2.00	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.20	0.00	0.00	1.59	3.73	9.66	4.71	15.04	19.68	0.00	0.00	0.00	0.00
Texas spotted bass	4.94	1.83	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.63	1.16	0.00	0.00	1.13	0.53	3.44	4.50	8.31	10.93	12.88	11.76
Largemouth black bass	23.39	8.67	0.00	0.00	0.57	0.20	0.00	0.00	4.07	4.32	7.99	14.74	6.10	14.10	5.71	2.78	4.70	6.15	2.63	3.46	4.38	4.00
Warmouth	1.42	0.53	0.29	0.08	0.24	0.08	0.46	0.45	2.26	2.40	0.81	1.40	0.42	0.98	0.34	0.16	0.00	0.00	0.00	0.00	0.00	0.00
Green sunfish	0.23	0.08	0.00	0.00	0.21	0.07	0.39	0.38	0.25	0.26	0.39	0.72	0.37	0.87	0.35	0.17	0.00	0.00	0.00	0.00	0.00	0.00
Redear sunfish	0.00	0.00	0.16	0.04	1.33	0.48	0.22	0.21	0.31	0.33	0.00	0.00	0.44	1.03	0.14	0.07	0.57	0.74	0.10	0.13	0.74	0.68
Bluegill	0.77	0.28	2.45	0.67	5.76	2.06	6.99	6.83	3.82	4.06	1.97	3.54	0.08	0.19	0.99	0.48	0.00	0.00	0.75	0.99	0.44	0.40
Longear sunfish	0.00	0.00	0.16	0.04	0.08	0.29	0.43	0.42	0.57	0.60	0.19	0.35	0.00	0.00	0.40	0.10	0.17	0.22	0.00	0.00	0.00	0.00
Orange-spotted sunfish	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
White crappie	3.18	1.18	1.78	0.40	0.00	0.00	1.06	1.04	0.00	0.00	1.93	3.56	0.00	0.00	1.27	0.62	1.19	1.56	1.06	1.30	0.00	0.00
Freshwater drum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.51	1.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	269.81	100.00	361.91	100.00	278.78	100.00	102.31	100.00	94.15	100.00	54.19	100.00	42.30	100.00	205.31	100.00	76.42	100.00	76.04	100.00	109.47	100.00

