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JOB COMPLETION REPORT

As Required by

FEDERAL AID IN FISHERIES RESTORATION ACT

Texas

Federal Aid Project No. F-4-R-8

FISHERIES INVESTIGATIONS AND SURVEYS OF THE WATERS OF REGION 4-B

Job No. B-29 Fisheries Reconnaissance

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ABSTRACT

Lake Arlington is a 2,200 acre water supply reservoir located on Village Creek to provide municipal water for the City of Arlington. It was completed in April 1957 and filled at once. Stocking was completed and the lake closed to fishing until March 5, 1958.

Rough fish showed a slight rise in per cent of numbers but the per cent of weight rose from 56.72 per cent in 1957-1958 to 80.99 per cent in 1960-1961. The majority of this increase was accredited to carpsucker which made up 79.75 per cent of the weight of fish taken by gill nets during 1960-1961.

Channel catfish were the only game species to show improvement and this change was offset by the drop in both per cent of number and weight shown by largemouth bass and white crappie.

Fishing is hampered on Lake Arlington by excessive water skiing and speed boat operations.

Benbrook Lake is located on the Clear Fork of the Trinity River near Fort Worth, Texas. The lake impounds 3,769 acres of water and was completed September 29, 1952. A closed season was imposed during the first year.

The population was dominated by game fish during the early years of impoundment as shown by the results of netting in 1953-1954 when largemouth bass made up 84.77 per cent of the gill net catch.

The change from a game fish dominance to one by rough species has continued rather steadily as the netting in 1955-1956 showed spotted sucker to make up 51.48 per cent of the rough fish total of 70.50 per cent. Gizzard shad predominated the 1960-1961 gill net catch with 80.50 per cent of the total collections.

Benbrook Lake is another where the fisherman is troubled by excessive water ski and speed boat operations. It is located so near Fort Worth that non-fishing use is quite heavy.

Eagle Mountain Lake is located on the West Fork of the Trinity River between Lake Worth and Lake Bridgeport. It covers 9,600 acres and was completed in 1932 to serve as a water supply for the City of Fort Worth, Texas.

A fishery survey in 1955-1956 showed a predominance of game species with white bass making up 48.99 per cent of the gill net catch. The game fish total was 67.67 per cent. This condition did not prevail in 1958-1959 when a recheck indicated that rough fish were the more numerous. The rough fish total of 78.51 per cent was made up largely of gar and gizzard shad with 41.43 per cent and 25.75 per cent respectively. The 1959-1960 netting provided a slight rough fish predominance with 57.25 per cent of which gizzard shad comprised 33.59 per cent. Net catches in 1960-1961 continue to show a rough fish trend with gizzard shad accounting for 55.56 per cent of the total. Rough species amounted to 68.26 per cent.

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The predominance of rough species is apparent but as yet there is not sufficient evidence to support a recommendation for a chemical treatment.

Fort Parker Lake was constructed on the Navasota River, in Limestone County, Texas, by the Civilian Conservation Corps. The dam was completed in 1938 to impound 737 acres.

A survey was made in 1958 which indicated that an over population of gizzard shad existed. An attempt was made to control the shad with a selective treatment in November 1958. This application was made by helicopter using liquid rotenone and was not successful.

In March 1960 another attempt to control the shad was made using liquid rotenone dispersed by boats using gravity flow treatment drums. This was a more successful treatment but gill net checks showed that shad was still predominant and a third shad control attempt was planned.

The third treatment was made in October 1960, when boats were again used to distribute a higher concentration of liquid rotenone but with the addition of an air boat to work the shallow water where outboards could not operate. This shad kill was more successful but heavy rains resulted in reinfestation both from above and below the lake.

Fort Parker continues to be a good crappie and channel catfish lake despite the excessive shad population.

Possum Kingdom Lake is a multipurpose reservoir on the Brazos River. At spillway level it impounds 19,991 acres of water.

A closed season was imposed during the first year of impoundment and for the first five years fishing was excellent. The fishing declined until in 1953 many considered it a fished out lake.

Net checks between 1953 and 1956 revealed an abundance of gizzard shad and an attempt was made to control this species by applying 2.5 per cent rotenone by airplane. This application was made in August 1958 and was not successful. Gizzard shad made up 47.58 per cent of the net catches after this treatment and a test was made using both liquid and powered rotenone. These tests were conducted in the Rock Creek and Cedar Creek arms of the lake and were more successful from the standpoint of the number and size of shad killed but had no lasting effect as the shad moved in from the untreated areas until no change in population could be noted.

The netting attempted in 1960-1961 was hampered by bad weather and results are far from complete. The majority of the fish taken were game fish with channel catfish and bluegill sunfish the most numerous.

The reports of poor fishing together with the lack of recent data prompts the recommendation that a resurvey be undertaken.

Lake Weatherford is a shallow lake covering about 1,800 acres that provides municipal water for Weatherford, Texas. The dam was completed in 1957 and was filled by heavy rains that broke the dams on several small farm and ranch ponds thus liberating many adult rough and game fish into the lake.

The initial survey was made in 1957-1958 and the net collections showed 58.29 per cent rough fish. Largemouth bass provided 12.75 per cent of the total catch during this survey but were reduced to 1.07 per cent of the 1960-1961 net catch.

White crappie were of little importance in the gill net collections during the 1957-1958 survey but increased to 58.61 per cent of the 1960-1961 total.

The catch per 100 feet of gill net showed little difference between the surveys of 1957-1958 and the 1960-1961 but the pounds taken per 100 feet of gill net increased by 2.54 pounds. The majority of this increase may be attributed to the white crappie. This species showed a marked rise in both numbers taken and pounds of fish per 100 feet of gill net.

Channel Catfish also showed an increase in both numbers and weight but not to the extent as evidenced by white crappie.

Lake Worth was impounded in 1912 as a water supply for Fort Worth, Texas and covered 5,400 acres at spillway level. It was the first of a series of three lakes on the West Fork of the Trinity River.

The first survey of Lake Worth showed a predominance of game species in the gill net catch. A total of 56.03 per cent of the catch were game fish with white crappie accounting for 43.80 per cent. In the 1959-1960 netting game fish made up 86.07 per cent with white crappie and white bass providing a majority of this number.

The net collections in 1960-1961 were dominated by game species but not to the extent that was observed in previous nettings. Only 54.17 per cent were game fish. White crappie was the most numerous game fish but gizzard shad dominated the catch as they provided 41.60 per cent of the number and 27.77 per cent of the weight.

JOB COMPLETION REPORT

State of TEXAS

Project No. F-4-R-8

Name: Fisheries Investigations and Surveys of
the Waters of Region 4-B

Job No. B-29

Title: Fisheries Reconnaissance.

Period Covered: November 1, 1960 - October 31, 1961

Objectives:

To conduct limited investigations to obtain current information concerning gross changes in fishing conditions and factors influencing fish populations.

Techniques Used:

Certain previously surveyed lakes in Region 4-B were revisited and seine or net checks made. Lakes Arlington, Benbrook, Eagle Mountain, Fincastle, Fort Parker, Possum Kingdom, Weatherford and Worth were rechecked. These data collected were recorded for examination and comparison with the results of previous surveys to provide a basis for determining if any change had occurred.

The results of these checks will be discussed later when each lake is treated separately.

Findings:

Lake Arlington is located on Village Creek, in the eastern portion of the City of Fort Worth, and covers about 2,200 acres. It was constructed by the City of Arlington to serve as a water supply. The dam was completed in April 1957 and filled before May 1, 1957. The Eagle Mountain State Fish Hatchery stocked this lake with largemouth bass, channel catfish and sunfish, after which fishing was prohibited until March 5, 1958.

The changes in the fish population since the original survey in 1957-1958 are significant but not unexpected (Tables 1 and 2). The percent of rough fish has risen from 50.68 to 56.24 but the weight shows a greater dominance by rough species with 56.72 per cent in 1957-1958 and 80.99 per cent in 1960-61. River carpsucker accounted for much of this change as this species made up 31.22 per cent of the weight in the first survey, but provided 79.75 per cent of the total weight in 1960-1961. The average weight of this species rose from 0.57 pounds in 1957-58 to 2.06 pounds in 1960-61.

Channel catfish were the only other species to show a marked increase. They provided 1.52 per cent of the number and 2.24 per cent of the weight in the first survey but rose to 21.88 per cent of the number and 10.65 per cent of the weight in 1960-61.

Largemouth bass and white crappie made the most significant change from a fishing standpoint. These species provided 20.72 and 18.92 per cent, respectively,

of the number taken in the 1957-1958 survey but made up only 7.81 and 3.13 per cent of the number taken in 1960-61. The loss in per cent of total weight was as marked as that of per cent of number.

Black bullheads and carp disappeared from the catch in 1960-61 after providing a substantial portion of the 1957-58 catch in both number and pounds.

There has been considerable fishing pressure on Lake Arlington but fishing success has been hampered by excessive speedboat and water ski activities. The location of this lake makes it accessible to a large number of people and the fee charged for boating, by the City of Arlington, tends to encourage the speed and pleasure boat use which discourages the fisherman.

Lake Benbrook is located on the Clear Fork of the Trinity River near Fort Worth, Texas. It is a flood control and water conservation impoundment covering 3,769 acres at elevation 694 which is the top of the conservation pool. The dam was closed September 29, 1952 but was not filled until 1957 because of low rainfall.

A closed season during the first year of impoundment was coupled with an intensive stocking of largemouth bass, channel catfish and sunfish to produce a heavy game fish population during the period of low water. This resulted in heavy catches of small game fish during 1953-1954 when largemouth bass dominated the gill net collections. Game fish accounted for 89.07 per cent of the entire catch with largemouth bass accounting for 84.77 per cent (table 3).

The change from game fish dominance to a predominance of rough fish has continued rather steadily. The 1955-1956 netting showed spotted sucker to make up 51.48 per cent of the total rough fish per centage which was 70.50. By 1959 the rough species were dominated by gizzard shad with 62.67 per cent of the 69.13 total rough fish per cent.

Gizzard shad continue to be the most numerous species in the 1960-1961 net catch (table 4). They comprise 80.50 per cent of the total catch with spotted suckers providing the remainder of the 81.35 per cent that were rough fish. Blue-gill sunfish made up 10.17 per cent to lead the game species followed by white crappie with 5.09 per cent.

The fishing on Benbrook Lake suffers during the summer months from competition with water ski and speedboat operations. The fact that the lake is located very near Fort Worth and is accessible for after work recreation makes it exceedingly popular with the boating public. Many of these users do not fish but their use of the lake makes fishing difficult, if not impossible, during daylight hours in warm weather.

Lake Eagle Mountain is the second in a chain of three lakes on the West Fork of the Trinity River. The dam was completed in 1932 to impound 9,600 acres of water to serve as a water supply for the City of Fort Worth, Texas.

A fishery survey made in 1955-1956 showed a game fish dominance in the net catches with 67.67 per cent. White bass provided 48.99 per cent of the total catch.

The recheck made in 1958-1959 showed a predominance of rough fish in the net catch with gar and gizzard shad making up 41.43 and 25.75 per cent, respectively, of the rough fish total of 78.57 per cent.

The 1959-1960 netting showed rough fish to be continuing in predominance but only by a slight margin. The rough fish per cent was 57.25 which was composed largely of gizzard shad and longnose gar with 33.59 and 17.76 per cent respectively. The white bass returned to prominence in the catch with 25.19 per cent along with white crappie which provided 11.46 per cent.

The 1960-1961 netting continued to show a rough fish dominance with spotted gar, longnose gar and gizzard shad making up 68.26 per cent of the total. Gizzard shad accounted for 55.56 per cent. The game species were rather evenly divided with no species outstanding.

There is no doubt that rough fish occupy a large portion of the space in Eagle Mountain Lake but the fact that this is a water supply tends to complicate any remedial work planning. There is not sufficient evidence that a chemical treatment would be successful at the present time and until satisfactory methods and equipment can be developed such a treatment is not recommended.

Fincastle Lake is located on the headwaters of Catfish Creek in Henderson County, Texas. A check of this lake was made during a stream survey on the Trinity River and was found to have an excessive gizzard shad population. This indicated a need for shad control and on May 20, 1958 an application of liquid rotenone was made. An estimated 36,960 shad weighing 16,592 pounds were killed in this 54 acre lake.

Net checks made during a 12 month period took only three shad. These were adult females weighing more than 16 ounces and each was gravid. There was considerable evidence that the shad control was quite successful but net checks made during 1959-1960 showed gizzard shad to be the most numerous species making up 50.60 per cent of the catch. Rough fish accounted for 73.80 per cent of the total catch. This predominance of rough fish prompted the decision to attempt a total kill and restock with more desirable species.

This treatment was made on April 26, 1960 when rotenone liquid was applied at a concentration of 1.0 ppm. The results of this treatment indicated that the selective shad kill had removed all but a fraction of one per cent of the shad but the resultant acceleration in spawning of this species had returned the gizzard shad to numerical dominance within a very short time.

The net checks made since the lake was restocked indicate the total kill attempt was successful on the gizzard shad but not on spotted gar, lake chubsucker, yellow bullhead, black bullhead and sunfish. The above species were able to survive in the shallow heavily vegetated areas near the inflowing streams that feed the lake. Black bullhead appears to be the dominant species now with 43.28 per cent followed by bluegill sunfish with 25.43 per cent.

Fort Parker State Park Lake is located on the Navasota River between Mexia and Groesbeck, Limestone County, Texas. This lake was constructed in 1938 as a Civilian Conservation Corps project.

A survey was made in 1958 which revealed that the shallow 737 acre lake was over populated with gizzard shad. In 1958 an attempt was made to control the shad by spraying liquid rotenone from a helicopter. This treatment was not successful and was followed in March 1960 by an attempt using boats. This treatment was more

effective than the former but was far from successful. In October 1960 another attempt at shad control was made using a higher concentration of rotenone and employing an air boat, to work the shallow water with a spray pump, in an effort to reach all the shad. This treatment was much more successful but the exact degree of success cannot be determined as the entire watershed could not be treated. This fact coupled with the heavy rain that occurred immediately after the treatment re-infested the lake with shad. Many shad were observed swimming up stream over the dam which serves as a spillway.

The result of netting done in 1959-1960 does not indicate the true situation as the nets used were of too large mesh to take the young of the year shad that were very abundant in the kill (table 9). The per cent of total weight indicates that the shad taken were of fair size. This lake continues to be a good crappie and channel catfish lake as indicated by the data in table 10, but the netting did not reveal the true status of these species since only a few were netted. Channel catfish provide much of the fishing in this lake and are of good size.

Possum Kingdom Lake was the first major impoundment on the Brazos River. This multipurpose reservoir was completed in 1941 to be used for flood control, hydroelectric power, irrigation and municipal uses. At spillway level 19,991 acres of land are inundated to an average depth of 36.69 feet.

A closed season was imposed on this lake during the first year after impoundment. The bass that were stocked as fry, immediately after closure of the dam, were able to grow rapidly in this lake which filled to spillway level in a few weeks. The fishing became phenomenal and limit catches of large bass became the rule. This condition persisted until the lake was about nine years old when the catches were less satisfactory and by 1953 Possum Kingdom was considered to be fished out.

Net checks made during the next three years indicated an abundance of rough fish of which gizzard shad was by far the more numerous species. Plans were made to attempt control of shad by the application of 2.5 per cent synergized rotenone liquid to the entire surface of the lake at the rate of 5.5 ounces per acre foot of water. This application was made in August 1958 by use of airplanes. This treatment was less than successful as shown by table 11. Gizzard shad made up 47.85 per cent of the net catch in the survey that followed the shad kill (table 11). This condition led to another attempt at shad control. This treatment was made with boats that applied the liquid rotenone to the water by gravity flow together with a treatment barge that mixed rotenone powder with water before applying the mixture to the upper two feet of the lake. This treatment was restricted to the Rock Creek and Cedar Creek arms to test the effectiveness of cove treatment. Net checks before and after the cove treatments showed that fish moved into a treated area within a short time and little effect could be noted.

Netting during 1960-1961 was not successful as bad weather hampered the work during the time allocated to Possum Kingdom Lake. A total of 28 fish were taken of which 10 were channel catfish and 7 were bluegill sunfish (table 12).

Lake Weatherford was completed in 1957 to serve as a municipal water supply. It is a rather shallow lake located on the Clear Fork of the Trinity River near Weatherford, Texas. At spillway level this lake covers about 1,800 acres.

The watershed of Lake Weatherford included many small lakes and ponds that had been constructed to provide water for livestock. Many of these overflowed or had their dams broken by heavy rains soon after the completion of Lake Weatherford. This

resulted in many rough fish being introduced into the lake along with some larger bass, crappie and channel catfish.

The survey made in 1957-1958 showed 58.29 per cent of the net catch to be rough fish (table 13). This is unusual in a new impoundment. The general rule is for the game species to greatly outnumber the rough fish during the first year or two. This condition frequently persists until the lake is three years of age when the rough fish dominance begins to be apparent.

Largemouth bass were quite prominent in the catch of game fish during this survey as they provided 12.75 per cent of the catch. This was changed in the net catch in 1960-1961 when bass provided only 1.07 per cent of the catch but white crappie made up 58.61 per cent of the total (table 14).

The smaller numbers taken during the 1960-1961 netting is not to be taken as an indication that the fish population is declining. An examination of the number and pounds of fish taken per 100 feet of net shows that there is little difference in the number but the 1960-1961 netting provided an increase of 2.54 pounds of fish per 100 feet of net. This increase is largely due to the rise in the catch of white crappie. This species provided only 2.17 fish weighing 0.67 pounds per 100 feet of gill net during the 1957-1958 netting but rose to 12.11 fish weighing 4.07 pounds per 100 feet of gill net in 1960-1961.

Channel catfish also showed a sharp rise in the catch per 100 feet of net. The 1957-1958 netting took 0.28 fish weighing 0.21 pounds, per each 100 feet of net, as compared to 3.55 fish weighing 2.64 pounds taken in 1960-1961.

Lake Worth is the oldest of the lakes on the West Fork of the Trinity River. It was impounded in 1912 to impound 5,400 acres of water for use as a municipal water supply for Fort Worth, Texas. The level of Lake Worth is rather constant as Eagle Mountain and Bridgeport lakes are located above it on the same stream.

The original survey of Lake Worth was made in 1955-1956 and game species made up 56.03 per cent of the number and 34.78 per cent of the weight of all fish taken by gill nets. The catch per 100 feet of net was 11.69 fish weighing 4.99 pounds. White crappie made up the greater part of the catch as 43.80 per cent of the number and 21.75 per cent of the weight were this species.

The 1959-1960 netting continued to show a predominance of game species with 86.07 per cent of the number and 49.27 per cent of the weight being made up of game fish (table 15). The catch per 100 feet of gill net showed a rise in the game fish catch over the netting of 1955-1956 with 21.00 fish weighing 9.85 pounds. White crappie again lead in both numbers and weight. White bass were prominent in the catch as they occupy second place in both numbers and weight.

In the 1960-1961 netting game fish still provided a majority but were less dominant than in the previous samplings. Only 54.17 per cent of the number and 34.46 per cent of the weight were game species (table 16). The catch per 100 feet of gill net showed a decided drop with 5.20 fish weighing 1.66 pounds taken. This was much lower than the catch per 100 feet of net in the other net samplings. White crappie failed to dominate the catch for the first time because gizzard shad provided 41.60 per cent of the number and 27.77 per cent of the weight in the 1960-1961 netting.

Recommendations:

The results of the 1960-1961 Fincastle Lake netting indicated a need for a predator that would feed on the two species of bullheads. With this need in mind, it was suggested that a heavy stocking of channel catfish be made together with such flathead catfish as could be obtained not exceeding 200.

The lack of recent data together with the complaints on Possum Kingdom Lake that few fish are being taken and minnows are scarce have prompted the thought that a resurvey is needed.

Prepared by Leonard D. Lamb
Project Leader

Approved by Marion Toole
Coordinator

Date March 20, 1962

Regional Supervisor

Table 1. Lake Arlington netting results, 1957-1958.

Species	Number	Per Cent	Per Weight	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
Gizzard shad*	23	3.18	7.47	2.04	199	0.73	0.24	1.55-4.80	2.09
River carpsucker*	200	27.62	114.13	31.22	216	6.35	3.62	2.10-4.00	2.57
Carp*	36	4.97	24.74	6.77	276	1.14	0.78	2.25-3.40	2.98
Channel catfish	11	1.52	8.20	2.24	270	0.35	0.26	1.30-1.95	1.57
Black bullhead*	104	14.37	58.90	16.11	211	3.30	1.87	1.60-2.70	2.27
Yellow bullhead*	4	0.55	2.11	0.58	213	0.13	0.07	1.80-2.80	2.32
Large-mouth bass	150	20.72	85.61	23.42	224	4.76	2.72	1.75-3.10	2.23
Green sunfish	1	0.14	0.31	0.08	160	0.03	0.01	3.40	3.40
Bluegill sunfish	52	7.18	9.50	2.60	134	1.65	0.30	3.40-5.00	4.52
White crappie	137	18.92	53.01	14.50	187	4.35	1.68	1.10-4.70	2.61
Black crappie	6	0.83	1.59	0.44	161	0.19	0.05	2.35-3.40	2.89
Totals	724	100.00	365.57	100.00	-	22.98	11.60	-	-

*Indicates rough fish species

Table 2. Lake Arlington netting results, 1960-1961.

Species	Number	Per cent (lbs.)	Per Weight of Weight	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
Gizzard shad*	1	1.56	0.28	0.32	190	0.20	0.05	1.90	1.90
River carpsucker*	34	53.12	70.14	79.75	301	6.80	14.03	2.10-3.40	2.80
Channel catfish	14	21.88	9.36	10.64	267	2.80	1.87	1.15-2.80	1.55
Yellow bullhead*	1	1.56	0.81	0.92	250	0.20	0.16	2.40	2.40
White bass	2	3.13	2.49	2.83	280	0.40	0.50	2.60-2.60	2.60
Largemouth bass	5	7.81	3.45	3.92	236	1.00	0.69	2.10-2.70	2.38
Bluegill sunfish	5	7.81	0.83	0.95	132	1.00	0.17	3.20-3.60	3.28
White crappie	2	3.13	0.59	0.67	180	0.40	0.12	2.05-2.60	2.32
Totals	64	100.00	87.95	100.00	-	12.80	17.59	-	-

*Indicates rough fish species

Table 3. Lake Benbrook netting results, 1959-1960

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
Gizzard shad*	262	62.68	95.87	44.40	207	17.47	6.39	1.45-2.40	1.86
River carpsucker*	2	0.48	2.44	1.13	284	0.13	0.16	2.05-2.40	2.22
Carp*	22	5.26	18.91	8.76	241	1.47	1.26	2.00-2.80	2.39
Channel catfish	13	3.11	26.37	12.21	350	0.87	1.76	1.20-1.90	1.59
Black bullhead*	3	0.72	1.43	0.66	196	0.20	0.09	2.60-3.30	2.86
Largemouth bass	35	8.37	44.67	20.69	264	2.33	2.98	1.35-3.80	2.30
Bluegill sunfish	32	7.66	7.01	3.25	135	2.13	0.47	3.00-5.00	4.00
White crappie	49	11.72	19.22	8.90	187	3.27	1.28	2.20-3.20	2.65
Totals	418	100.00	215.92	100.00	-	27.87	14.39	-	-

*Indicates rough fish species

Table 4. Lake Benbrook netting results, 1960-1961.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K"	
								Range	Average
Gizzard shad*	95	80.51	38.31	80.48	217	23.75	9.58	1.40-1.90	1.61
Spotted sucker*	1	0.85	0.62	1.30	240	0.25	0.16	2.00	2.00
Channel catfish	2	1.69	2.49	5.23	330	0.50	0.62	1.45-1.65	1.55
Largemouth bass	2	1.69	1.46	3.07	255	0.50	0.37	1.85-2.20	2.03
Bluegill sunfish	12	10.17	2.56	5.38	138	3.00	0.64	2.70-4.60	3.75
White crappie	6	5.09	2.16	4.54	198	1.50	0.54	1.75-2.80	2.12
Totals	118	100.00	47.60	100.00	-	29.50	11.91	-	-

*Indicates rough fish species

Table 5. Lake Eagle Mountain netting results, 1959-1960.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
Spotted gar*	2	1.53	2.37	1.77	440	0.40	0.47		
Longnose gar*	23	17.56	78.67	58.74	765	4.60	15.73		
Gizzard shad*	44	33.59	16.03	11.97	207	8.80	3.21	1.40-2.40	1.93
Smallmouth buffalo*	3	2.29	2.41	1.80	221	0.60	0.48	2.70-4.50	3.50
River carpsucker*	3	2.29	3.54	2.64	220	0.60	0.71	1.67-2.90	2.41
Channel catfish	7	5.34	8.48	6.33	325	1.40	1.70	1.30-1.85	1.54
White bass	33	25.19	15.90	11.87	223	6.60	3.18	1.25-2.80	1.99
Largemouth bass	1	0.76	1.18	0.88	270	0.20	0.23	2.70	2.70
White crappie	15	11.45	5.36	4.00	189	3.00	1.07	1.90-3.10	2.42
Totals	131	100.00	133.94	100.00	-	26.20	26.78	-	-

*Indicates rough fish species

Table 6. Lake Eagle Mountain netting results, 1960-1961.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	Average
Spotted gar*	5	7.94	9.24	21.21	546	1.00	1.84		
Longnose gar*	3	4.76	10.74	24.65	813	0.60	2.15		
Gizzard shad*	35	55.55	14.01	32.16	210	7.00	2.80	1.40-3.60	1.89
Channel catfish	4	6.35	3.84	8.81	293	0.80	0.77	1.35-1.90	1.61
Flathead catfish	1	1.59	0.74	1.70	285	0.20	0.15	1.50-1.50	1.50
Largemouth bass	2	3.17	1.27	2.91	245	0.40	0.25	1.75-2.25	2.00
White bass	4	6.35	1.47	3.37	202	0.80	0.30	1.60-2.70	2.06
Bluegill sunfish	4	6.35	0.81	1.86	126	0.80	0.16	4.30-4.90	4.62
White crappie	5	7.94	1.45	3.33	176	1.00	0.29	2.10-3.30	2.47
Totals	63	100.00	43.57	100.00	-	12.60	8.71	-	-

*Indicates rough fish species

Table 7. Fincastle Lake netting results, 1959-1960.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Average
Spotted gar*	65	14.22	96.48	36.56	475	2.95	4.38	0.62
Gizzard shad*	231	50.55	83.03	31.47	199	10.50	3.77	2.01
Chubsucker*	21	4.59	13.82	5.24	226	0.95	0.63	2.59
Yellow bullhead*	20	4.38	12.90	4.89	230	0.91	0.59	2.39
Largemouth bass	18	3.94	18.70	7.09	254	0.82	0.85	2.31
Warmouth	1	0.22	0.32	0.12	160	0.05	0.01	3.50
Redear sunfish	33	7.22	10.64	4.03	161	1.50	0.49	3.58
Bluegill sunfish	44	9.63	9.88	3.74	135	2.00	0.45	4.05
White crappie	5	1.09	5.18	1.96	235	0.22	0.23	3.25
Black crappie	19	4.16	12.94	4.90	203	0.87	0.59	3.19
Totals	457	100.00	263.89	100.00		20.77	11.99	-

*Indicates rough fish species

Table 8. Fincastle Lake netting results, 1960-1961.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
Spotted gar*	5	1.22	5.29	4.32	430	0.27	0.28		
Lake chubsucker*	29	7.09	12.66	10.34	210	1.57	0.69	2.40-2.90	2.60
Golden shinner*	6	1.47	1.20	0.98	170	0.32	0.06	1.95-1.95	1.95
Black bullhead*	177	43.28	48.27	39.44	205	9.57	2.61	1.90-3.60	2.44
Yellow bullhead*	62	15.16	19.74	16.13	187	3.35	1.07	1.90-2.70	2.09
Largemouth bass	8	1.95	3.30	2.70	190	0.43	0.18	1.95-2.50	2.24
Redear sunfish	3	0.73	0.94	0.77	147	0.16	0.05	3.40-4.20	3.83
Bluegill sunfish	104	25.43	25.92	21.18	135	5.62	1.40	3.22-6.20	2.61
White crappie	8	1.95	2.84	2.32	180	0.43	0.15	2.70-3.40	2.90
Black crappie	7	1.72	2.23	1.82	175	0.38	0.12	2.70-2.70	2.70
Totals	409	100.00	122.39	100.00	-	22.10	6.61	-	-

*Indicates rough fish species

Table 9. Fort Parker Lake netting results, 1959-1960.

Species	Number	Per cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net
Spotted gar*	7	4.48	8.26	9.76	402	0.77	0.91
Gizzard shad*	43	27.57	19.11	22.58	206	4.78	2.13
Smallmouth buffalo*	12	7.69	1.31	1.55	129	1.33	0.14
Channel catfish	3	1.92	3.54	4.18	306	0.34	0.39
Black bullhead*	3	1.92	1.82	2.15	223	0.33	0.21
Yellow bullhead*	2	1.29	0.52	0.61	150	0.22	0.05
Largemouth bass	15	9.61	9.31	11.00	210	1.67	1.04
Warmouth	5	3.21	1.67	1.97	149	0.56	0.18
Bluegill sunfish	18	11.54	2.69	3.18	111	2.00	0.30
White crappie	48	30.77	36.41	43.02	206	5.33	4.05
Totals	156	100.00	84.64	100.00	-	17.33	9.40

*Indicates rough fish species

Table 10. Fort Parker Lake netting results, 1960-1961.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
Spotted gar*	13	13.98	17.67	22.14	460	2.16	2.94		
Gizzard shad*	21	22.58	10.11	12.67	213	3.50	1.69	1.65-4.20	2.20
Channel catfish	18	19.35	23.02	28.84	313	3.00	3.84	1.33-4.20	1.94
Yellow bullhead*	7	7.53	4.24	5.31	196	1.17	0.70	2.25-4.10	2.92
Largemouth bass	9	9.68	5.40	6.77	217	1.50	0.90	2.35-3.00	2.58
Warmouth	4	4.30	1.38	1.73	155	0.67	0.23	3.85-5.00	4.46
Bluegill sunfish	2	2.15	0.37	0.46	125	0.33	0.06	4.10-4.60	4.35
White crappie	19	20.43	17.62	22.08	216	3.17	2.94	2.60-4.50	3.68
Totals	93	100.00	79.81	100.00	-	15.50	13.30	-	-

*Indicates rough fish species

Table 11. Possum Kingdom Lake netting results, 1958-1959.

Species	Number	Per Cent	Weight (lbs)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K"	
								Range	Average
Spottet gar*	20	0.85	45.54	2.18	546	0.20	0.45		
Longnose gar*	229	9.75	707.57	33.85	690	2.24	6.94		
Gizzard shad*	1,124	47.85	595.43	28.49	230	11.02	5.84	1.15-3.00	1.90
Smallmouth buffalo*	21	0.89	70.91	3.39	323	0.20	0.69	2.50-4.20	3.28
River carpsucker*	134	5.70	144.09	6.89	263	1.31	1.41	1.80-3.30	2.57
Carp*	5	0.21	8.57	0.41	282	0.05	0.08	2.20-2.40	2.93
Channel catfish	129	5.49	232.19	11.11	350	1.26	2.28	1.10-2.40	1.72
White bass	236	10.05	124.44	5.95	219	2.31	1.22	2.45-3.20	2.43
Largemouth bass	59	2.51	46.28	2.21	288	0.58	0.45	1.90-3.70	2.33
Spotted bass	2	0.09	1.62	0.08	240	0.02	0.01	1.80-2.10	1.95
Warmouth	3	0.13	0.88	0.04	150	0.03	0.01	3.00-3.00	3.00
Redear sunfish	67	2.85	17.95	0.86	156	0.66	0.18	1.30-4.00	3.20
Bluegill sunfish	168	7.15	39.72	1.90	131	1.65	0.39	3.10-5.00	4.00
Yellowbelly sunfish	1	0.04	0.20	0.01	130	0.01		3.80-3.80	3.80
Longear sunfish	1	0.04	0.35	0.02	160	0.01		2.90-2.90	2.90
White crappie	142	6.05	48.79	2.33	180	1.39	0.48	1.90-3.40	2.61
Black crappie	2	0.09	0.56	0.03	172	0.02		2.40-2.50	2.45
Drum	6	0.26	5.18	0.25	228	0.06	0.05	2.10-3.00	2.47
Totals	2,349	100.00	2090.27	100.00	-	23.02	20.48	-	-

*Indicates rough fish species

Table 12. Possum Kingdom Lake netting results, 1960-1961.

Species	Number	Per Cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K"	
								Range	Average
Longnose gar*	1	3.57	1.49	9.18	660	0.10	0.15		
Gizzard shad*	2	7.14	1.09	6.72	235	0.20	0.11	1.85-1.95	1.90
River carpsucker*	1	3.57	1.24	7.64	290	0.10	0.12	2.30	2.30
Channel catfish	10	35.72	7.14	43.99	269	1.00	0.71	1.10-1.95	1.52
White bass	1	3.57	0.64	3.94	245	0.10	0.06	2.00	2.00
Spotted bass	2	7.14	1.15	7.09	235	0.20	0.12	1.75-2.30	2.02
Largemouth bass	1	3.57	1.00	6.16	280	0.10	0.10	2.10	2.10
Redear sunfish	2	7.14	0.63	3.88	155	0.20	0.06	3.90-3.90	3.90
Bluegill sunfish	7	25.00	1.50	9.24	137	0.70	0.15	2.95-4.60	3.71
White Crappie	1	3.57	0.35	2.16	180	0.10	0.04	2.70	2.70
Totals	28	100.00	16.23	100.00	-	2.80	1.62	-	-

*Indicates rough fish species

Table 13. Lake Weatherford netting results, 1957-1958.

Species	Number	Per cent	Weight (lbs.)	Per cent of Weight		Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
				Weight	Length					
Gizzard shad*	151	27.50	44.93	20.97	204	5.30	1.57	1.30-5.00	1.84	
River carpsucker*	24	4.37	13.36	6.23	217	0.84	0.47	1.90-3.10	2.57	
Carp*	16	2.92	9.45	4.41	229	0.56	0.33	2.62-3.00	3.10	
Channel catfish	8	1.46	5.92	2.76	288	0.28	0.21	1.45-1.95	1.61	
Black bullhead*	122	22.22	55.28	25.80	211	4.28	1.94	1.05-2.80	2.69	
Yellow bullhead*	7	1.28	4.00	1.87	222	0.24	0.14	2.05-2.70	2.39	
Largemouth bass	70	12.75	40.22	18.77	217	2.46	1.41	1.50-3.40	2.61	
Green sunfish	1	0.18	0.27	0.13	125	0.04	0.01			
Redear sunfish	15	2.73	4.87	2.27	155	0.53	0.17	3.42-5.00	3.79	
Bluegill sunfish	73	13.30	16.93	7.90	133	2.56	0.59	3.80-5.00	4.75	
White crappie	62	11.29	19.05	8.89	179	2.17	0.67	1.70-2.90	2.41	
Totals	549	100.00	214.29	100.00	-	19.26	7.51	-	-	

*Indicates rough fish species

Table 14. Lake Weatherford netting results, 1960-1961.

Species	Number	Per cent	Weight (lbs.)	Per cent of Weight		Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K"	
				Weight	Length				Range	Average
Gizzard shad*	4	2.15	1.21	1.34	203	0.44	0.13	1.50-1.90	1.68	
River carpsucker*	8	4.30	15.90	17.57	312	0.89	1.77	2.30-3.20	2.70	
Carp*	7	3.76	7.48	8.26	276	0.80	0.83	1.80-3.20	2.32	
Channel catfish	32	17.21	23.76	26.26	293	3.55	2.64	1.05-2.05	1.40	
Black bullhead*	3	1.61	0.37	0.41	159	0.33	0.04	1.50-2.20	1.80	
Largemouth bass	2	1.08	1.43	1.58	260	0.22	0.16	1.80-1.80	1.80	
Bluegill sunfish	21	11.29	3.68	4.07	80	2.33	0.41	2.50-4.00	3.17	
White crappie	109	58.60	36.65	40.51	191	12.11	4.07	1.60-3.00	2.13	
Totals	186	100.00	90.48	100.00	-	20.67	10.05	-	-	

*Indicates rough fish species

Table 15. Lake Worth netting results, 1959-1960.

Species	Number	Per cent	Weight (lbs.)	Per cent of Weight	Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K"	
								Range	Average
Spotted gar*	5	4.10	8.11	12.66	490	1.00	1.62		
Longnose gar*	1	0.82	22.49	3.89	620	0.20	0.50		
Gizzard shad*	7	5.73	1.92	3.00	188	1.40	0.38	1.50-2.20	1.86
Smallmouth buffalo*	1	0.82	1.00	1.56	260	0.20	0.20	2.50	2.50
Carp*	1	0.82	0.44	0.69	200	0.20	0.09	2.50	2.50
Channel catfish	9	7.38	8.53	13.32	289	1.80	1.70	1.30-1.70	1.52
White bass	27	22.13	14.35	22.41	220	5.40	2.87	2.00-2.60	2.27
Spotted bass	1	0.82	0.53	0.83	210	0.20	0.11	2.60	2.60
Bluegill sunfish	9	7.38	2.18	3.40	138	1.80	0.44	3.60-4.80	4.14
White crappie	59	48.36	23.68	36.98	191	11.80	4.73	2.20-3.40	2.59
Drum*	2	1.64	0.81	1.26	195	0.40	0.16	2.30-2.80	2.55
Totals	122	100.00	64.04	100.00	-	24.40	12.80	-	-

*Indicates rough fish species

Table 16. Lake Worth netting results, 1960-1961.

Species	Number	Per cent	Weight (lbs.)	Per cent of Weight		Average length (mm.)	Number per 100 feet of net	Pounds per 100 feet of net	"K" Range	"K" Average
				Weight	Weight					
Spotted gar*	1	2.08	1.74	7.39	450	0.20	0.34			
Longnose gar*	1	2.08	6.99	29.68	950	0.20	1.40			
Gizzard shad*	20	41.67	6.54	27.77	198	4.00	1.31	1.05-3.00	1.92	
Channel catfish	3	6.25	1.35	5.73	236	0.60	0.27	1.35-1.85	1.55	
Largemouth bass	1	2.08	0.66	2.80	250	0.20	0.13	1.95	1.95	
White bass	1	2.08	0.50	2.13	220	0.20	0.10	2.20	2.20	
Bluegill sunfish	6	12.50	1.34	5.69	132	1.20	0.27	3.60-4.60	4.23	
White crappie	15	31.26	4.43	18.81	172	3.00	0.89	2.10-3.50	2.57	
Totals	48	100.00	23.55	100.00	-	9.60	4.71	-	-	

*Indicates rough fish species