

Job Completion Report
Investigations Project

State of TEXAS

Project No. F-3-R-6

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

Job No. B-14

Title: Basic Survey and Inventory of Fish
Species in Ferrell's Bridge Reservoir
(Lake O' the Pines).

Period Covered:

June 1, 1958 through May 31, 1959

Abstract:

Lake O' the Pines is a newly impounded U. S. Army Corps of Engineers' lake with a surface area of 18,700 acres at water supply level. A year-long basic survey was conducted with the use of experimental type gill nets and bag seine. Forty-seven species of fish were collected in the lake including large populations of commercial type fish as well as sport fish. The water quality is acid but normal for the area. The lake level was lowered, during this job, to its minimum pool elevation to facilitate clearing of timber. Recommendations are made to resurvey the lake when it reaches its normal elevation and to change the minimum mesh size to three inches instead of the present three and one-half inches.

Objectives:

To gather fundamental data on the above waters in regard to their physical, chemical and biological aspects. To observe and measure the development and progress of the fish populations in this newly impounded reservoir.

Lake History:

The Ferrell's Bridge Reservoir is part of the comprehensive reservoir-levee plan for flood control in the Red River Basin below Denison Dam and is a U. S. Army Corps of Engineers project. The project was authorized by the U. S. Congress in Public Law No. 526, approved July 24, 1946. Construction was initiated in January 1955, with the relocation of roads in the area. The entire project, including the dam proper and the relocation of roads and utilities in the reservoir, is scheduled for completion in 1959.

The earth fill dam is located on Cypress Creek, approximately 9 miles west of Jefferson, and is designed for flood control and municipal water supply. The dam is a maximum of 97 feet in height above the stream bed and is 10,600 feet in length. The crown of the dam has a roadway which connects FM 726 with a county road. The downstream slope of the dam is sodded and the upstream slope is protected from erosion by gravel and rip-rap.

The reservoir will provide 38,200 surface acres, or 587,200 acre feet of storage space for flood waters, and 18,700 surface acres, or 251,000 acre feet of storage capacity, for water supply. At water supply pool, the elevation is 228.5 feet msl. There are two, 10 foot diameter conduits through the dam which control the lake level. There is a concrete spillway structure located on the east end of the dam. This spillway is 200 feet wide and has a capacity of 68,200 c.f.s.

The stream was closed and water was diverted through the conduits in August of 1957. The lake began filling and was allowed to reach storage capacity elevation in June 1958, for the dedication ceremonies. After that, the gates were opened again and the water level rapidly fell to a low in October. This was to facilitate the clearing of additional timber in the lake bed. Table 1. gives the elevations and surface area through the year.

Procedure:

Because of the large size of the lake, it was originally planned to make collections twice a month for the duration of the job. The lake was divided into three sections and one section would be worked on each trip. However, as the lake was drained, the area was reduced greatly and it was decided that one trip a month would suffice. Data collected included gill netting results, seining collections, water analysis, temperature, turbidity and time.

Netting Methods

During the first few trips there were six net sets made up of two gill nets each, or a total of 12 nets. As the water level dropped and the fish became concentrated, this was reduced to eight gill nets. The nets were experimental type 125 feet long, eight feet deep, with bar mesh sizes varying from one inch to three inches, graduated $\frac{1}{2}$ inch, every 25 feet.

All netted fish were saved and were counted and weighed by species and the average weight calculated for each species. Most of the game fish were measured and weighed individually and their individual coefficients of condition were determined. Also, stomach contents and sexual development were spot checked.

Seining Collections

Seining collections were made with a 26 by 6 foot bag seine with a $\frac{1}{4}$ inch mesh. Good seining beaches were usually difficult to locate because of snags where the brush had been cut. Usually old roads which had been inundated and areas of excavation were used to make seine hauls. Specimens were preserved in formalin solution and taken to the laboratory for identification.

Other Data

Surface water samples were taken and analyzed for pH, alkalinity, chlorides, and dissolved oxygen. Surface water temperatures were taken as well as air temperatures. Light penetration, measured with a secchi disc, and water color were also noted.

Findings:

Stocking

The following fish were put in the lake by the Tyler and Huntsville fish hatcheries:

Largemouth bass (fry)	390,000
Warmouth	4,000
Redear	5,500
Black crappie	10,000
Channel catfish	221,800

Because Lake O' the Pines reached its maximum elevation immediately following the spawning season, the survival rate of the fish was very high. Then, as the lake level dropped, all of these fish became concentrated and made fishing extremely good for a period. Also, some tremendous catches were made by gill nets.

Fish Collections

A total of 47 species of fish representing fifteen families was collected in Lake the Pines. Table 2 lists the species and families phylogenetically. The names are from Hubbs, A CHECKLIST OF TEXAS FRESHWATER FISHES, dated December 1958.

Netting:

Table 3 shows the results of all netting conducted on Lake O' the Pines during the year. This table also gives total numbers, weights, and percentage of total numbers and weights for each species and for each collection. It also gives the ratios of game fish to rough fish. In addition, the average weight for each species is given.

A total of 31 species was collected by gill nets. By far the most common species were spotted gars (646) and black bullheads (617). Smallmouth buffalo (382) and gizzard shad (248) followed in abundance. The most commonly collected game fish, and next in order of numbers collected, was the largemouth bass (229). Other important species are channel catfish, warmouths, bluegills, yellow bullheads and black crappie.

Concerning total weight, smallmouth buffalos produced the highest total weight (908.83 lbs.), followed by spotted gar (431.50 lbs.), black bullheads (405.31 lbs.), channel catfish (181.50 lbs.), and largemouth bass (144.38 lbs.).

Bowfin had the highest average weight (2.84 lbs.), followed by shortnose gars (2.73 lbs.), flathead catfish (2.30 lbs.), and carp (1.62 lbs.).

A total of 3,543 specimens, weighing 3,016.88 pounds, averaging 0.85 lbs., were collected. These consisted of 36.18% game fish and 63.82% rough fish by numbers, and 1.06% game fish and 72.94% rough fish by weight. All the catfish, except the two bullhead species, were classified as game fish, thus making 15 game fish species and 16 rough fish species.

The overall general condition of the game fish in Lake O' the Pines is good. This is indicated by the condition data given for ten species in Table 4. It is interesting to note that closely related species such as the black basses, the catfishes, the crappies, and the sunfishes were very close in their average condition factor. The black crappie apparently showed a little better adaptation to the acid water than the white crappie.

The stomachs of fish checked contained a wide variety of food items. Therefore, no definite pattern of food habits was discernible. Shad was the most commonly found food item in bass stomachs along with crawfish, sunfish and bugs and beetles found in other stomachs. One flathead catfish stomach contained a bullhead catfish about 10 inches long.

Seining:

Table 5 gives the results of seining. Twenty eight species and 2,612 specimens were collected in this manner. There was a decided reduction in numbers of specimens after the water became cold in the winter and the fish remained difficult to locate through May. The most numerous species collected were gizzard shad, sand shiners, silvery minnows, black bullheads, blackstripe topminnows, mosquitofishes and spottail shiners. The sand shiner was collected most consistently. Largemouth bass and bluegill sunfish were also collected fairly consistently.

Generally speaking, a good number of forage fish are available in the lake.

Annotated Checklist of Fish Species

1. Lepisosteus platostomus - shortnose gar. Only three of this species were collected. Their average weight was 2.73 pounds.
2. L. productus - spotted gar. This was the most commonly netted fish. Three hundred were caught in one netting collection.
3. L. osseus - longnose gar. Their numbers are few.
4. Amia calva - bowfin. Though not too common, the ones collected were fairly large.
5. Dorosoma petenense - threadfin shad. These fish showed up in relatively good numbers through November and then became less abundant in the collections.
6. D. cepedianum - gizzard shad. This is the most common fish in the lake.
7. Esox americanus - grass pickerel. Though collected both by seining and netting, their numbers are few.
8. E. niger - chain pickerel. Only a few were collected by netting.
9. Ictiobus bubalus - smallmouth buffalo. This is a very important fish in the lake. It was third in total numbers netted and in average weight, and it was first in total weight.

10. Moxostoma poecilurum - blacktail redhorse. A few of these were collected in the fall and winter.
11. Minytrema melanops - spotted sucker. Though not caught in large numbers, they were consistently collected.
12. Erimyzon sucetta - lake chubsucker. These fish appeared in collections in their greatest numbers in February and March. Even then, only a few were caught.
13. Cyprinus carpio - carp. Though not too common, the ones collected were fairly large.
14. Notemigonus crysoleucas - golden shiner. Only two specimens were collected during the yearly netting. Quite a few were collected by seining.
15. Notropis fumeus - ribbon shiner. This species was collected only four times during the early part of the job.
16. N. venustus - spottail shiner. This is a fairly common shiner in the lake.
17. N. lutrensis - redhorse shiner. This good bait fish is not too common in this lake.
18. N. stramineus - sand shiner. Second only to shad in numbers collected, it was the most commonly collected of the "minnows".
19. N. volucellus - mimic shiner. Only eight specimens of this species were collected.
20. Hybognathus nuchalis - silvery minnow. This species and the sand shiner were collected in almost equal numbers.
21. Pimephales vigilax - parrot minnow. Only two specimens of this species were collected.
22. Ictalurus punctatus - channel catfish. This is a very important fish in the lake. They are present in good numbers and average approximately one pound in weight.
23. I. furcatus - blue catfish. Though not so numerous as the channel cat, the blue cat is fairly abundant.
24. I. melas - black bullhead. Collected only three times by seining, the black bullhead was second only to spotted gar in numbers and third in weight in netting collections.
25. I. natalis - yellow bullhead. Though not as numerous as black bullheads, they are present in good numbers.
26. Pylodictus olivaris - flathead catfish. A good many of this species are present in the lake and they are relatively large in size.
27. Fundulus chrysotus - redspot topminnow. Only one specimen of this species was collected.

28. F. notatus - blackstripe topminnow. This fish was quite numerous in the collections during early part of the job.
29. Gambusia affinis - mosquitofish. This is a fairly common species.
30. Aphredoderus sayanus - pirate perch. Only one specimen of this species was collected.
31. Labidesthes sicculus - brook silversides. Few were collected.
32. Roccus chrysops - white bass. Though not in large numbers, this popular game fish was consistently collected.
33. Micropterus punctulatus - spotted bass. This species is present in fairly good numbers.
34. M. salmoides - largemouth bass. This is the most abundant game fish present in the lake.
35. Chaenobryttus gulosus - warmouth. This popular fish is quite abundant and was collected consistently.
36. Lepomis cyanellus - green sunfish. Only one specimen of this species was collected.
37. L. punctatus - spotted sunfish. Spotted sunfish are not too common in the lake.
38. L. microlophus - redear sunfish. This species was collected fairly consistently in small numbers.
39. L. macrochirus - bluegill sunfish. Bluegills were consistently collected in fairly large numbers.
40. L. auritus - yellowbelly sunfish. This species was collected only on the first three trips.
41. L. megalotis - longear sunfish. Longears were rarely collected.
42. Pomoxis annularis - white crappie. This species is present in good numbers and attains fairly large size.
43. P. nigromaculatus - black crappie. This species was consistently taken in collections.
44. Centrarchus macropterus - flier. Only one flier was collected by seining.
45. Hadropterus maculatus - blackside darter. The blackside darter was found only on one occasion.
46. Percina caprodes - logperch. The logperch is not too common in this lake.
47. Aplodinotus grunniens - freshwater drum. Only two were collected by netting.

Water Quality and Water Levels

Surface water analyses revealed the water to be moderately acid, fairly low in alkalinity, normal for the area in chlorides, and normal in dissolved oxygen. The water was fairly clear at high water level elevations but became muddied when the water level receded. Table 6 gives the results of water analyses during the study period. There was no great fluctuation in the water quality over the year.

Vegetation

At this time there is no known undesirable aquatic vegetation in the lake. However, there still remains several hundred acres of inundated timber and brush. Some of this timber is presently being cleared by the Corps of Engineers.

Commercial Fishing

A three and one half inch square mesh net law prevails in the Marion County portion of the lake and, though there is some commercial fishing done on the lake, insufficient numbers of fish are taken to provide a living for those fishing. It would be an advantage to change the mesh size to three inches and encourage contract fishing on the lake to remove rough species. Lake O' the Pines will support a good legal commercial operation under a three inch mesh law.

Conclusions and Recommendations:

Considering the findings of this survey, Lake O' the Pines should support a good sport fisheries as well as a good commercial fisheries. The water quality is adequate for fish life and there is a sufficient population of forage fish available in the lake.

No additional survey on the lake is recommended until the lake level reaches normal elevation. Additional population development studies might then be considered.

It would be to an advantage to change the present mesh size laws to three inches in Marion County.

Prepared by John N. Dorchester
Assistant Project Leader

Approved by Marion Toole
Director Inland Fisheries Division

Date September 29, 1959

Table 1. Lake Level Elevations and Areas by Months.

	Elevation in Ft. (msl.)	Surface Area in Acres
June	230	19,780 *
July	220	12,380
August	209	5,170
September	208	4,560
September	210	5,820
October	205	2,710 *
November	206	3,310
February	208	4,560
April	212	7,080
May	207	3,940

* Indicates the extreme elevations and areas.

Table 2. A Checklist of Lake O' the Pines Fish Species

- I. Family: LEPISOSTEIDAE - Gars
1. Lepisosteus platostomus - shortnose gar
 2. L. productus - spotted gar
 3. L. osseus - longnose gar
- II. Family: AMIIDAE - Bowfins
4. Amia calva - bowfin
- III. Family: CLUPEIDAE - Herrings
5. Dorosoma petenense - threadfin shad
 6. D. cepedianum - gizzard shad
- IV. Family: ESOCIDAE - Pickerels
7. Esox americanus - grass pickerel
 8. E. niger - chain pickerel
- V. Family: CATOSTOMIDAE - Suckers and buffalofishes
9. Ictiobus bubalus - smallmouth buffalo
 10. Moxostoma peocilurum - blacktail redhorse
 11. Minytrema melanops - spotted sucker
 12. Erimyzon sucetta - lake chubsucker
- VI. Family: CYPRINIDAE - Shiners and minnows
13. Cyprinus carpio - carp
 14. Notemigonus crysoleucas - golden shiner
 15. Notropis fumeus - ribbon shiner
 16. N. venustus - spottail shiner
 17. N. lutrensis - redhorse shiner
 18. N. stramineus - sand shiner
 19. N. volucellus - mimic shiner
 20. Hybognathus nuchalis - silvery minnow
 21. Pimephales vigilax - parrot minnow
- VII. Family: AMEIIURIDAE - Freshwater catfishes
22. Ictalurus punctatus - channel catfish
 23. I. furcatus - blue catfish
 24. I. melas - black bullhead
 25. I. natalis - yellow bullhead
 26. Pylodictus olivaris - flathead catfish

Table 2. (Continued) A Checklist of Lake O' the Pines Fish Species

VIII. Family CYPRIODONTIDAE - Killifishes and topminnows

27. Fundulus chrysotus - redspot topminnow
 28. F. notatus - blackstripe topminnow

IX. Family: POECILIIDAE - Mosquitofishes

29. Gambusia affinis - mosquitofish

X. Family: APHREDODERIDAE - Pirate perch

30. Aphredoderus sayanus - pirate perch

XI. Family: ATHERINIDAE - Silversides

31. Labidesthes sicculus - brook silversides

XII. Family: SERRANIDAE - Basses

32. Roccus chrysops - white bass

XIII. Family: CENTRARCHIDAE - Black basses and sunfishes

33. Micropterus punctulatus - spotted bass
 34. M. salmoides - largemouth bass
 35. Chaenobryttus gulosus - warmouth
 36. Lepomis cyanellus - green sunfish
 37. L. punctatus - spotted sunfish
 38. L. microlophus - redear sunfish
 39. L. macrochirus - bluegill sunfish
 40. L. auritus - yellowbelly sunfish
 41. L. megalotis - longear sunfish
 42. Pomoxis annularis - white crappie
 43. P. nigromaculatus - black crappie
 44. Centrarchus macropterus - flier

XIV. Family: PERCIDAE - Perches and darters

45. Hadropterus maculatus - blackside darter
 46. Percina caprodes - log perch

XV. Family: SCIAENIDAE - Croakers, drums and weakfishes

47. Aplodinotus grunniens - freshwater drum

Table 3. Results of Netting Collections on Lake O' the Pines.

Collection Number Date	FB-G-1 June 26, 1958		FB-G-2 July 8		FB-G-3 July 29		FB-G-4 August 27	
	No.	Weight	No.	Weight	No.	Weight	No.	Weight
Shortnose gar					2	5.75		
Spotted gar	11	7.25	2	1.25	46	20.25	135	80.00
Longnose gar			1	1.25	12	18.38	1	2.50
Bowfin	6	11.13	4	11.00	5	15.12	10	38.00
Gizzard shad	10	3.75	6	2.25	8	3.25	63	28.00
Grass pickerel							1	0.88
Chain pickerel							1	0.19
Smallmouth buffalo	82	148.56	43	66.50	31	47.39	40	97.00
Blacktail redhorse								
Spotted sucker	2	0.25	3	3.50	3	2.25	2	0.62
Lake chubsucker	1	0.25					1	0.13
Carp			1	3.50	10	7.37	2	2.00
Golden shiner								
Channel catfish	4	2.25	9	6.38	7	4.75	20	22.50
Blue catfish	8	5.56	7	7.38	3	1.44	12	11.62
Black bullhead	14	7.00	30	22.62	34	23.00	32	25.50
Yellow bullhead	8	4.00	7	3.62	4	1.75	7	3.25
Flathead catfish					5	11.44	19	39.89
White bass			2	3.62	2	0.32	5	1.44
Spotted bass	3	4.69	9	7.75	3	1.69	23	12.06
Largemouth bass	4	5.56	13	13.44	19	15.25	12	5.31
Warmouth	12	3.69	7	2.31	27	8.12	14	4.94
Green sunfish								
Spotted sunfish							2	0.25
Redear sunfish	5	0.50					3	0.69
Bluegill sunfish	5	1.13	5	1.50	14	2.00	8	1.88
Yellowbelly sunfish	1	0.25	2	0.44	1	0.37		
Longear sunfish	3	0.25						
White crappie	2	0.63			4	1.88	11	4.31
Black crappie	2	0.44	9	3.44	6	2.13	20	9.62
Freshwater drum			1	1.25	1	1.75		
Total numbers	183		161		247		444	
Total weight		207.14		163.00		195.65		392.58
Game fish	49	24.95	63	46.26	91	49.39	149	114.51
Rough fish	134	182.19	98	116.74	156	146.26	295	278.07
Percent game fish	26.78	12.04	39.13	28.38	36.84	25.24	33.56	29.17
Percent rough fish	73.22	87.96	60.87	71.62	63.16	74.76	66.44	70.83

Table 3. Results of Netting Collections on Lake O' the Pines. (Continued)

Collection Number Date	FB-G-5 September 16		FB-G-6 September 30		FB-G-7 October 15		FB-G-8 October 29	
	No.	Weight	No.	Weight	No.	Weight	No.	Weight
Shortnose gar								
Spotted gar	300	205.00	7	5.00	84	66.75	1	0.93
Longnose gar	1	1.31						
Bowfin	1	0.62	1	2.25	1	1.75	1	4.44
Gizzard shad	49	18.00	8	3.25	16	6.25	6	2.00
Grass pickerel	1	0.44	2	1.00			6	2.00
Chain pickerel							1	0.93
Smallmouth buffalo	47	131.00	26	84.00	34	101.50	16	39.50
Blacktail redhorse	7	2.19			1	0.50	2	0.44
Spotted sucker	5	4.06	2	2.25	5	6.00		
Lake chubsucker					1	0.25	1	0.25
Carp	7	9.62	2	4.25	10	21.00	2	4.13
Golden shiner								
Channel catfish	40	37.00	5	4.81	12	14.25	13	12.25
Blue catfish	37	40.00	4	2.87	5	4.50	4	4.78
Black bullhead	21	15.00	11	8.00	25	15.50	19	5.56
Yellow bullhead	35	20.00	6	3.75	22	15.00		
Flathead catfish	15	35.19	1	3.12	1	1.75	1	3.44
White bass	7	3.25	2	0.94	5	2.60	19	12.25
Spotted bass	45	14.75	3	0.62	5	2.92	1	0.31
Largemouth bass	66	30.00	15	6.44	47	25.06	12	5.88
Warmouth	40	13.88	7	2.25	6	2.30	11	4.00
Green sunfish								
Spotted sunfish	2	0.62						
Redear sunfish	2	0.31	3	0.50	2	0.42	1	0.21
Bluegill sunfish	19	3.56	6	1.00	12	2.50	3	0.37
Yellowbelly sunfish								
Longear sunfish							1	0.07
White crappie	23	11.00	17	8.12	16	9.70	1	0.56
Black crappie	26	12.50	14	4.56	10	5.95	9	1.13
Freshwater drum								
Total numbers	796		142		320		131	
Total weight		609.30		148.98		306.45		105.43
Game fish	322	202.06	77	35.23	121	71.95	76	45.25
Rough fish	474	407.24	65	113.75	199	234.50	55	60.18
Percent game fish	40.45	33.16	54.23	23.65	37.81	23.48	58.02	37.77
Percent rough fish	59.55	66.84	45.77	76.35	62.19	76.52	41.98	62.23

Table 3. Results of Netting Collections on Lake O' the Pines. (Continued)

Collection Number Date	FB-G-9 November 26		FB-G-10 January 29		FB-G-11 February 27		FB-G-12 March 31	
	No.	Weight	No.	Weight	No.	Weight	No.	Weight
Shortnose gar	1	2.44						
Spotted gar	8	7.00	1	1.00	3	3.13	1	0.56
Longnose gar								
Bowfin					1	1.44	3	6.75
Gizzard shad	8	3.56	7	3.00	2	0.56	21	8.69
Grass pickerel	6	2.25						
Chain pickerel	8	4.63	1	0.88	3	1.06		
Smallmouth buffalo	12	34.50	11	35.56	9	21.81	17	59.38
Blacktail redhorse	10	3.75						
Spotted sucker	5	5.94	13	5.19	15	6.75	7	5.38
Lake chubsucker	1	0.13			4	0.75	11	2.50
Carp	1	2.25						
Golden shiner	1	0.19					1	0.13
Channel catfish	15	17.25	25	27.44	3	3.31	4	4.31
Blue catfish	6	4.75	4	5.25	2	1.50		
Black bullhead	51	35.31	219	190.38	61	22.44	44	21.25
Yellow bullhead	6	5.25	6	8.38	7	2.38	7	6.75
Flathead catfish	1	3.13			1	3.19		
White bass	12	10.09	6	5.56	3	2.25	5	4.06
Spotted bass			4	1.25				
Largemouth bass	11	8.25	10	10.94	9	7.75	9	9.13
Warmouth	9	2.85	3	1.50	8	2.31	6	2.63
Green sunfish								
Spotted sunfish			2	0.25			3	0.56
Redear sunfish	1	0.25			1	0.13		
Bluegill sunfish	7	0.88	8	1.00	18	2.06	7	0.75
Yellowbelly sunfish								
Longear sunfish					5	0.44		
White crappie	6	3.25	2	1.56	8	5.13	3	2.44
Black crappie	2	0.44	3	1.25	6	3.44	3	1.63
Freshwater drum								
Total numbers	188		325		169		152	
Total weight		158.34		300.39		91.83		136.90
Game fish	70	51.14	67	56.00	64	31.51	40	25.51
Rough fish	118	107.20	258	244.39	105	60.32	112	111.39
Percent game fish	37.23	32.30	20.62	18.64	37.87	34.25	26.32	18.63
Percent rough fish	62.77	67.70	79.38	81.36	62.13	65.75	73.68	81.37

Table 3. Results of Netting Collections on Lake O' the Pines. (Continued)

Collection Number Date	FB-G-13 April 29		FB-G-14 May 26	
	No.	Weight	No.	Weight
Shortnose gar				
Spotted gar	24	19.88	23	13.50
Longnose gar				
Bowfin	3	10.00	1	2.44
Gizzard shad	28	12.88	16	10.44
Grass pickerel				
Chain pickerel				
Smallmouth buffalo	13	37.38	1	4.75
Blacktail redhorse				
Spotted sucker	5	2.00	5	1.25
Lake chubsucker				
Carp	1	2.50	1	3.25
Golden shiner				
Channel catfish	11	17.00	8	8.00
Blue catfish	4	4.63	2	3.00
Black bullhead	24	8.38	32	5.37
Yellow bullhead	13	4.50	2	1.06
Flathead catfish				
White bass	5	5.00	3	2.81
Spotted bass	2	2.00	2	1.00
Largemouth bass	1	0.75	1	0.62
Warmouth	9	3.50		
Green sunfish	1	0.13		
Spotted sunfish	12	1.25		
Redear sunfish	1	0.25		
Bluegill sunfish	14	2.50	6	5.81
Yellowbelly sunfish				
Longear sunfish				
White crappie	2	1.25	5	1.37
Black crappie	1	0.13	3	0.31
Freshwater drum				
Total numbers	174		111	
Total weight		135.91		64.98
Game fish	63	38.39	30	22.92
Rough fish	111	97.52	81	42.06
Percent game fish	36.21	28.25	27.03	35.27
Percent rough fish	63.79	71.75	72.97	64.73

Table 3. Results of Netting Collections on Lake O' the Pines.

Species	Total Numbers	Percent Number	Total Weight	Percent Weight	Average Weight
Shortnose gar	3	0.08	8.19	0.27	2.73
Spotted gar	646	18.23	431.50	14.30	0.67
Longnose gar	15	0.42	23.44	0.77	1.56
Bowfin	37	1.04	104.94	3.47	2.84
Gizzard shad	248	7.00	105.88	3.50	0.43
Grass pickerel	16	0.45	6.57	0.22	0.41
Chain pickerel	14	0.40	7.69	0.25	0.55
Smallmouth buffalo	382	10.78	908.83	30.12	2.38
Blacktail redhorse	20	0.56	6.88	0.23	0.34
Spotted sucker	72	2.03	45.44	1.50	0.63
Lake chubsucker	20	0.56	4.26	0.14	0.21
Carp	37	1.04	59.87	1.98	1.62
Golden shiner	2	0.06	0.32	0.01	0.16
Channel catfish	176	4.98	181.50	6.02	1.03
Blue catfish	98	2.78	97.28	3.22	0.99
Black bullhead	617	17.41	405.31	13.43	0.66
Yellow bullhead	130	3.67	79.69	2.64	0.61
Flathead catfish	44	1.24	101.15	3.35	2.30
White bass	76	2.15	54.19	1.80	0.71
Spotted bass	100	2.82	49.04	1.63	0.49
Largemouth bass	229	6.46	144.38	4.79	0.63
Warmouth	159	4.49	54.28	1.80	0.34
Green sunfish	1	0.03	0.13	0.01	0.13
Spotted sunfish	21	0.59	2.93	0.10	0.14
Redear sunfish	19	0.54	3.26	0.11	0.17
Bluegill sunfish	132	3.73	26.94	0.89	0.20
Yellowbelly sunfish	4	0.11	1.06	0.04	0.27
Longear sunfish	9	0.25	0.76	0.03	0.08
White crappie	100	2.82	51.20	1.70	0.51
Black crappie	114	3.22	46.97	1.56	0.41
Freshwater drum	2	0.06	3.00	0.10	1.50
Total numbers	3,543	100.00		100.00	0.85
Total weight			3,016.88		
Game fish	1,282		815.07		
Rough fish	2,261		2,201.81		
Percent game fish	36.18		27.06		
Percent rough fish	63.82		72.94		

Table 4. Data on Condition of Some Game Fish from Lake O' the Pines.

Species	Number	Standard length Range (millimeters)	Average Standard Length	Weight Range (grams)	Average Weight (grams)	"K" Range	Average "K"
Channel catfish	136	170-420	292.40	70-1588	481.69	1.23-4.45	1.72
Blue catfish	61	180-395	281.68	92-1361	421.21	1.42-2.28	1.73
Flathead	29	240-475	365.44	251-2268	1,030.24	1.64-2.29	1.95
White bass	69	131-265	210.82	73- 595	324.59	2.68-5.90	3.28
Spotted bass	55	89-313	200.87	73- 964	291.63	1.07-3.63	2.73
Largemouth bass	146	148-360	219.97	50-1276	336.26	2.00-4.94	2.74
Warmouth	114	103-184	147.12	46- 324	155.77	3.35-5.89	4.58
Bluegill	72	85-155	116.15	26- 176	80.02	3.51-5.83	4.53
White crappie	76	95-298	185.00	30- 539	235.77	2.27-4.48	3.39
Black crappie	88	101-285	161.29	28- 907	184.71	2.40-4.97	3.59

Table 5. Tabulation of Seining Collections from Lake O' the Pines.

Species	June	July	Aug	Sep	Oct	Nov	Jan	Feb	Mar	Apr	May	Total
<u>Dorosoma petenense</u>		2	21	22	3	39						87
<u>D. cepedianum</u>		28*	81	110	213	220	1	1				654
<u>Esox americanus</u>	1	3	2	2					1	3		12
<u>Moxostoma poecilurum</u>	61		8	2								71
<u>Notemigonus crysoleucas</u>	14	3	15		3	11			3	13		62
<u>Notropis fumeus</u>	21	15	1		7							44
<u>N. venustus</u>	22	1	10	43	18	6	1	5	1			107
<u>N. lutrensis</u>	7			5			1	14				27
<u>N. stramineus</u>	68	15	15	121	33	34		2	17	10	38	353
<u>N. volucellus</u>			1	7								8
<u>Hybognathus nuchalis</u>	186	125	1	5	17	19			1			354
<u>Pimephales vigilax</u>	1				1							2
<u>Ictalurus melas</u>	201*		1				1					203
<u>Fundulus chrysotus</u>	1											1
<u>F. notatus</u>	25	156	2	1		3				2		189
<u>Gambusia affinis</u>	73	9		2		5		4		4	12	109
<u>Aphredoderus sayanus</u>					1							1
<u>Labidesthes sicculus</u>	2	10	9		2				1	1	3	28
<u>Micropterus punctulatus</u>	17	20	32	8	1	5		1				84
<u>M. almoides</u>	41	10	6	1	4	1		3	3		6	75
<u>Chaenobryttus gulosus</u>					3							3
<u>Lepomis punctatus</u>	12	26	3	1				1	1			44
<u>L. microlophus</u>	3		1	1	1	1						7
<u>L. macrochirus</u>	2	12	8	15	6	4			9	1	2	59
<u>Pomoxis nigromaculatus</u>	1				11	2				1		15
<u>Centrarchus macropterus</u>	1											1
<u>Hadropterus maculatus</u>			4									4
<u>Percina caprodes</u>	1	1	6			1						9
Total	761	436	227	346	324	352	3	31	37	35	61	2,612
Number of hauls	15	13	11	10	9	8	4	5	7	7	7	96

* Indicates that only a portion of those fish caught were picked up and preserved.



Figure 1. These photos are of Lake O' the Pines near



Figure 2. Alley Creek when the lake elevation was



Figure 3. about 205 feet msl. Photos were taken from
228 feet msl.



Figure 4. Note the brush and snags which made seining difficult.
(All photos by the author)