

FICE

JOB COMPLETION REPORT

As required by

FEDERAL AID IN FISHERIES RESTORATION ACT

TEXAS

Federal Aid Project No. F-4-R-10

FISHERIES INVESTIGATION AND SURVEYS OF THE WATERS OF REGION 2-A

Job No. E-4: A Study of Crappie in Lake Whitney

Project Leader: Leonard D. Lamb

J. Weldon Watson
Executive Director
Parks and Wildlife Department
Austin, Texas

Marion Toole
D-J Coordinator

Eugene A. Walker
Assistant Director for Wildlife

August 11, 1964

ABSTRACT

The trapping and tagging of crappie, in Lake Whitney, have been continued along the same lines as in previous segments. There have been some slight changes in equipment but as yet they have not been noticeably more effective. Low water has hampered the tagging as well as the recovery of tags.

Little change was noted in the gill net collections. A slight gain in the per cent of gizzard shad and approximately the same loss in white crappie was the only significant change.

The number of crappie tagged during the 1962-1963 segment was 2472 which brings the total crappie tagged to 9296. A total of 97 tags were recovered during this segment which raises the recovery for the life of the project to 399. There were 90 crappie recovered during this segment that had been tagged between November 1, 1962 and October 31, 1963. This is 92.78 per cent of the recoveries for this year.

An interesting fact was noted when the length of time the crappie remained free after tagging was examined. During the period from November 1, 1956 and October 31, 1963 the data from returned tags showed that 88.91 per cent of the recovered tags had been at liberty 120 days or less. The shortest period of freedom after tagging, was one day and the longest was 589 days.

There was little correlation between days of freedom and distance traveled. The two fish that traveled 4 miles were at liberty 47 days and 56 days while the one that traveled 5 miles was free 81 days. The crappie that traveled the greatest distance covered 10 miles in 34 days. The crappie at liberty 589 days was recaptured 1/4 mile from the point of tagging.

There is some correlation between the number of crappie tagged and the fluctuations of the water level as the increase appears to precede the lake level movement by about one month.

There appears to be little pattern in the direction or distance of movement by the individual fish. They moved up the lake, down the lake and across the lake at random. Some specimens were removed from the point of capture and were tagged and released to determine if a homing instinct were involved. These fish showed no definite pattern of movement as some went back, some went the opposite direction and some remained where tagged.

Cooperation from the fishermen resulted in 45.36 per cent of the recovered tags being liberated after data were recorded and 4 of these being recaptured a second time. Two tagged fish were released after the second recapture.

JOB COMPLETION REPORT

State of Texas

Project No. F-4-R-10

Name: Fisheries Investigations and Surveys of the Waters of Region 2-A.

Job No. E-4

Title: A Study of Crappie in Lake Whitney.

Period Covered: November 1, 1962 - October 31, 1963

Objectives:

To determine the population of crappie in Lake Whitney and the reasons for the recent small harvest. Study the pattern and extent of travel of tagged or marked crappie and the ecological factors influencing their distribution. To develop satisfactory methods of sampling crappie fry.

Techniques Used:

The tagging and recovery of crappie in Lake Whitney was continued in this segment along the same general lines as had been followed during the previous segments. The majority of the traps used were constructed of one inch mesh galvanized poultry wire stretched on a frame of number ten welded wire reinforcement netting. These traps were five feet long and twenty-three inches in diameter with a funnel shaped throat in one end and a release door in the other. Traps were set at various depths which corresponded with the depth at which crappie were being taken by hook and line fishing. These traps were marked with yellow floats attached to the trap and were suspended from trees and banks to attain the desired depth.

Wire traps were supplemented by the addition of the gang trap during the spring and a line of nylon net traps during the summer and fall. The gang trap is constructed by connecting several traps to each other with small mesh leads. This type of trap is very effective in the spring when the crappie migrate into shallow water to spawn. The effectiveness is lost when they return to deep water. The effectiveness of the trap line type or set has not been fully determined because of the low water level prevailing during the past several months. This type of trapping consists of several nylon mesh traps stretched on steel hoops and extended by means of three supports to which the hoops are wired. These traps are attached to a long line similar to the catfish trotline and may be set at various depths to conform to the contour of the bottom and the depth crappie are being taken by fishermen.

Trapping was less successful during the latter months of this segment and the hook and line method was used to take most of the crappie tagged after the spawning migration was ended. This method allowed more mobility and if crappie were not abundant in one location a move to a spot where they could be taken was quickly made. This was not possible with the traps.

Small mesh wire traps were used in an effort to locate crappie fry after seining had failed to produce even one crappie of this size. Gill net collections with small mesh nets also failed to produce crappie fry. Some of these nets were sunk to a depth of 30 to 40 feet without results.

The use of the monel strap tag has been continued together with the program of attempting to interest the public in reporting the catch of tagged crappie. Signs have been placed at strategic locations on the lake explaining the purpose of the project and requesting public cooperation. The data recorded for each tagged fish includes; tag number, date and location of tagging, length, weight, date and place of recapture, length at recapture and weight at recapture. The above information makes it possible to determine the number of days of freedom after tagging, the loss or gain in length or weight as well as the distance and direction of travel between tagging and recapture.

Findings:

The results of gill net collections from Lake Whitney offer comparative data on fish populations present and show the predominance of gizzard shad (Table 1). This species provides 54.63 per cent of the total number followed by white bass with 15.12 per cent and white crappie with 9.63 per cent. The total weight is also dominated by the gizzard shad with 31.56 per cent followed by longnose gar and white bass with 25.62 and 11.34 per cent respectively.

The results of gill net collections during the 1962-1963 segment were rather similar to those from the 1961-1962 segment. The change in the per cent of the total catch provided by white crappie and gizzard shad was the only significant difference and they counter-balanced each other. The crappie lost 3.76 per cent while shad gained 3.80 per cent, (Table 2).

Seine samples were not successful in obtaining crappie fry. The rapid fluctuation of the water level during the spring and summer made seining difficult, as previously prepared sites could not be used. The lack of rainfall caused the lake level to recede in July until a low of 514.20 was reached on October 30, 1963, (Table 3). This level is 5.8 feet below the normal level of 520.00. This low water condition caused the seine samples to be taken in deep, soft mud which prevented adequate sampling.

The information presented in Table 4 gives all the data concerning the tags that were recovered during the 1962-1963 segment. A total of 2,472 crappie were tagged from November 1, 1962 to October 31, 1963, and 97 tags representing 3.92 per cent were recovered. A total of 9,296 crappie have been tagged between November 1, 1956 and October 31, 1963 and 399 have been recaptured, or 4.3 per cent. A total of 90 tag recoveries have been made from crappie tagged during the present segment or 92.78 per cent. The 1961-1962 segment provided 6 tags or 6.18 per cent of the recoveries while the remaining tag was from the 1960-1961 segment having been tagged on August 29, 1961. Further examination of these data reveal that the harvest of tagged crappie is limited still further, because 88 of the 97 tagged crappie recovered during this segment had been at liberty no more than 120 days. This represents 90.07 per cent of the total recoveries for this period. An examination of the recoveries for the 1960-1961 and 1961-1962 segments show that the recovery during the first 120 days after tagging was 88.06 and 75.00 per cent respectively. A check of all previous segments reveals that 88.91 per cent of all tagged crappie recovered had been at liberty less than 121 days after tagging.

The shortest period of freedom after tagging was one day while the longest was 589 days. One fish at liberty one day traveled 1/2 mile while the other showed no travel. The fish tagged with number D488 was recaptured 1/4 mile from the place of tagging but was at liberty 589 days. The crappie bearing tag number C-5518 was at liberty 444 days but it too was recaptured only 1/4 mile from the point of tagging. The greatest distance traveled by a fish that was at liberty more than 200 days was exhibited by two crappie with tags numbered C-5758 and C-3441 who traveled one mile in 373 and 234 days respectively.

There appears to be little correlation between days of freedom and distance traveled by tagged crappie. The two fish that traveled four miles were at liberty 47 days and 56 days while the one that traveled 5 miles enjoyed 81 days of freedom. The crappie that traveled the greatest distance was tag number 10045 who traveled 10 miles in 34 days. This fish was tagged on April 22, 1963 in the Lakeside Village Slough and was recaptured on May 26, 1963 at the MK&T Railway Bridge at the mouth of Cedron Creek. This travel may be due to the return from spawning migration as this is the period during which such a movement occurs.

An analysis of the tagging data shows some variations from year to year in the peak periods of tag returns (Table 5). April is the month of the most returns in 1956-57, 1957-58, 1958-59, 1959-60, 1960-61 and 1961-62 but the last two years of this period find the March catch increasing and in 1962-63 the majority of the recoveries were made in March. The increase in tag returns during March for the last two segments is not enough to prevent the April returns from maintaining a dominance as far as the overall monthly return of tags is concerned.

The returned tags were examined with regard to the month of tagging and Table 6 shows that there is a definite trend in the number of tags returned from fish tagged in certain months. The majority of the returned tags from 1956-57 and 1957-58 were tagged in April while in 1958-59, 43.32 per cent of the returns were from that month. The fish tagged in March made up 36.55 and 30.44 per cent of the 1959-60 and 1960-61 returns respectively. The 1961-62 and 1962-63 tag returns were dominated by those fish tagged in February. This trend is not because the majority of the crappie were tagged in these months as the shift in percentages of crappie tagged showed a tendency to favor the latter months of the segment (Table 7).

A graphic illustration of the comparison between the number of crappie tagged each month and the tags returned each month is found in Figure 1. The tag returns are broken down to show the number returned each month, by both month of tagging and month of recapture. The returns do not correspond with the success of tagging as the peak month of recapture is April while the greatest number of recaptured tags were placed on the fish in February. This is further complicated when the number of fish tagged each month is checked. The greatest number of fish were tagged in October followed closely by August and September with February fourth in abundance and April and March just ahead of May, the low month. This pattern is quite similar to that of Figure 2 where the same comparison is made using the data from Table 7 which presents information concerning the crappie tagged between February 1957 and October 1963.

In an attempt to find an explanation for the monthly variations in tagging success the lake level data obtained from U.S. Corps of Engineers were plotted on a graph, Figure 3, which shows the variations above and below the normal elevation for the 1962-1963 segment. The normal lake level is at 520 feet above sea level.

It will be noted that the fluctuation was slight during November and December 1961 and January 1962. There was a slight drop in February but a sharp drop came in March followed by a sharp rise then another drop came in April. This drop was followed by an abrupt rise with the high point of the rise being 520.14. This is the second highest level attained during this segment. In July the lake level again rose to 520.14 but immediately started dropping and fell to a low of 514.20 by October 31, 1963.

An attempt was made to correlate the lake level fluctuations with the tagging recovery and success by a comparison of the data contained in Figures 1 and 3. The monthly total of crappie tagged during 1962-1963 segment fluctuates little when compared to the lake level fluctuations but tends to precede the lake level movement by about one month. The first major change in crappie tagging occurs in February when the per cent of crappie tagged rose from 7.12 to 10.60 but the change in lake level did not come until March when a marked drop in lake level coincided with a drop in the tagging of crappie. The lake level experienced sharp fluctuation during March and April during which time the tagging of crappie was comparatively low but the rise of the level in May was not coupled with a corresponding rise in the tagging of crappie. In fact the opposite was true as the lowest point in the per cent of crappie tagged was reached in May while the lake level was near it's highest point. June was another month when the lake level was high but the crappie tagging began a steady rise that continued for the remainder of the segment despite the constant drop in lake level. This trend continued until the lowest lake level and the highest per cent of crappie tagged were in October. The results of tag returns is further broken down in Figure 1, to show the returns by month of tagging and by month of recapture. The returned tags grouped by month of tagging appears to follow a distinct pattern that is unlike that of the total tagging or the lake level. This grouping shows a trend toward reduced catches when the lake level recedes but tends to be slightly behind the fluctuation of water level. The pattern presented by the return of tags by month of capture tends to follow more closely the fluctuation of the lake level but is not in complete agreement with it. The highest catch was in March at which time the lake level was at the second lowest point during the segment. The October low was 1.96 feet below that of March but the return of tagged crappie during October did not show a marked difference from the preceeding months. This was not true with regard to the tagging of crappie during August, September and October as the catch during that period was considerably greater than in previous months.

The validity of data regarding the gain in length and the gain or loss in weight of the tagged crappie, recovered during this segment, is open to question as the sample is small and weights and lengths are not always accurate. The fact that 90.07 per cent of these recoveries came in 120 days after tagging did not allow much time for growth. The gains or losses in weight could have been due to the differences in the amount of food present in the stomach at tagging and recapture. The absence of data regarding length and weight was a limiting factor in 21.64 per cent of the recaptures and this added to the 53.61 per cent afforded no change in either length or weight leaves 24.75 per cent that showed some change. Tests made with project personnel indicate that slight weight increases may be the result of variations due to different field conditions. Strong winds tend to cause scale readings to vary and it is well known that all scales are not accurate. For this reason the variations in length are considered of more value than those of weight which are subject to more mechanical and human errors. Only seven crappie were reported to have showed a gain in length. Two of these are probably due to inaccurate measuring or to gain due to conversion from English to Metric scale. They had been at liberty 54 and 40 days respectively and have a recorded gain of

10 millimeters. A third specimen at liberty 83 days is also credited with a 10 millimeter gain. The remaining four crappie have greater reason for the gain in length that is recorded for them. Tag number D488 was at liberty 589 days and has a recorded length gain of 20 millimeters. This amount of gain is also found for tags number C5518 and C3441 who had been at liberty 444 and 234 days respectively. Tag number's C5789 gained 15 millimeters in 373 days after tagging.

An attempt has been made to determine any pattern of movement that may exist, determined by the recaptures. The point of original capture is recorded as is the point of tagging and release. This information is augmented by the information as to the point of recapture. The above data is not able to show all the movement of each individual specimen but it, at least, provides terminal data. A breakdown of the data concerning movement of tagged fish shows little pattern. The movement was divided into three categories with 26 fish moving up the lake, 22 moving down the lake, and one moving across the lake. There was one tagged fish returned with no data as to place of recapture and 47 were recaptured at the point of release. Many of these fish were taken away from the point of original capture to be tagged and released. There appears to be little pattern in their movement as only 5 of them returned to the point of original capture.

The information on movement may be combined with the time lapse between tagging and recapture to give some definite indication of movement. This phase of the study is gaining support by the fishermen many of whom weigh and measure the tagged fish then release it in order that further data may be obtained by subsequent recaptures. A total of 44 tagged crappie have been reported and released which is 45.36 per cent of the 97 tags recovered during this segment. This cooperation has resulted in 4 tagged fish being recovered a second time and two of these are still at liberty as they were released after data were recorded.

Prepared by: Leonard D. Lamb
Project Leader

Approved by: Marion Toole

Date: August 11, 1964

JOHN E. TILTON
Regional Supervisor

Table 1. Results of gill net collections, Lake Whitney November 1, 1962 - October 31, 1963

Species	Number	Per Cent of Total Number	Weight in Pounds	Per Cent of Total Weight	Average Weight in Pounds	Fish Per 100 Feet of Net	Pounds Per 100 Feet of Net
Spotted gar	9	0.86	10.09	1.16	1.12	0.20	0.22
Longnose gar	84	8.09	222.32	25.62	2.65	1.91	5.06
Gizzard shad	567	54.63	273.87	31.56	0.48	12.89	6.22
Smallmouth buffalo	23	2.21	76.59	8.83	3.33	0.52	1.74
River carpsucker	29	2.80	46.00	5.30	1.59	0.66	1.05
Carp	9	0.87	28.07	3.23	3.12	0.20	0.64
Channel catfish	28	2.69	34.76	4.01	1.24	0.64	0.79
Flathead catfish	1	0.10	2.37	0.27	2.37	0.02	0.05
White bass	157	15.12	98.38	11.34	0.63	3.57	2.24
Largemouth bass	14	1.35	26.34	3.04	1.88	0.32	0.59
Bluegill sunfish	1	0.10	0.18	0.02	0.18	0.02	0.01
White crappie	100	9.63	36.20	4.17	0.36	2.27	0.82
Freshwater drum	16	1.55	12.56	1.45	0.78	0.37	0.29
Totals	1,038	100.00	867.73			23.59	19.72

Table 2. Results of gill net collections, Lake Whitney November 1, 1961 - October 31, 1962

Species	Number	Per Cent of Total Number	Weight in Pounds	Per Cent of Total Weight	Average Weight in Pounds	Fish Per 100 Feet of Net	Pounds Per 100 Feet of Net
Spotted gar	1	0.09	1.00	0.13	1.00	0.02	0.02
Longnose gar	69	6.08	154.06	20.53	2.23	1.68	3.76
Gizzard shad	577	50.83	274.55	36.60	0.47	14.08	6.69
Smallmouth buffalo	8	0.70	19.08	2.54	2.38	0.19	0.47
River carpsucker	39	3.44	49.69	6.62	1.27	0.95	1.21
Carp	4	0.35	6.74	0.90	1.68	0.10	0.17
Channel catfish	34	3.00	25.82	3.44	0.75	0.83	0.62
Flathead catfish	1	0.09	6.74	0.90	6.74	0.02	0.17
White bass	179	15.77	119.18	15.89	0.66	4.37	2.91
Largemouth bass	9	0.79	10.14	1.35	1.12	0.22	0.24
Redear sunfish	1	0.09	0.30	0.04	0.30	0.02	0.01
Bluegill sunfish	11	0.97	2.12	0.28	0.19	0.27	0.05
White crappie	152	13.39	59.95	7.99	0.39	3.71	1.46
Freshwater drum	50	4.41	20.88	2.79	1.04	1.22	0.51
Total	1,135	100.00	750.25	100.00		27.68	18.29

Table 3. Lake Whitney Water Level Elevations, November 1962-October 1963

Date	Lake Elevations
November 7, 1962	519.88
November 14, 1962	519.75
November 21, 1962	520.00
November 28, 1962	519.85
December 5, 1962	520.00
December 12, 1962	520.02
December 19, 1962	520.07
December 26, 1962	519.86
January 2, 1963	520.07
January 9, 1963	519.92
January 16, 1963	520.00
January 23, 1963	520.20
January 30, 1963	520.00
February 6, 1963	520.02
February 13, 1963	519.77
February 20, 1963	519.46
February 27, 1963	519.41
March 6, 1963	519.43
March 13, 1963	519.51
March 20, 1963	516.16
March 27, 1963	518.54
April 3, 1963	517.99
April 10, 1963	517.46
April 17, 1963	516.91
April 24, 1963	516.64
May 1, 1963	519.65
May 8, 1963	519.88
May 15, 1963	519.98
May 22, 1963	520.14
May 29, 1963	519.93
June 5, 1963	519.36
June 12, 1963	519.95
June 19, 1963	520.08
June 26, 1963	520.05
July 3, 1963	520.14
July 10, 1963	519.12
July 17, 1963	519.34
July 24, 1963	518.50
July 31, 1963	518.32
August 7, 1963	518.32
August 14, 1963	518.51
August 21, 1963	518.32
August 28, 1963	517.75
September 4, 1963	518.05
September 11, 1963	517.81
September 18, 1963	517.80
September 25, 1963	517.29
October 2, 1963	516.21
October 9, 1963	515.65
October 16, 1963	515.06
October 23, 1963	514.70
October 30, 1963	514.20

Normal surface elevation is 520.00

Table 4. Tagged crappie recaptures in Lake Whitney, November 1, 1962 through October 31, 1963

Tag No.	Tagging Information		Recapture Information		Days of Freedom	Distance Traveled
	Date	Location	Date	Location		
D-488*	8-29-61	Near Lakeside Village	4-10-63	Lakeside Village	589	1/4 mile
C-5518*	2-7-62	Lakeside Village	4-27-63	Lakeside Village	444	0
C-5700	3-13-62	Nolan River	11-17-62	Mouth of Nolan River	249	0
C-5758*	3-27-62	Near Lakeside Village	4-4-63	Hills Barge	373	1 mile
C-5769	3-27-62	Lakeside Village	12-29-63	Lakeside Village	277	0
C-3312*	7-24-62	Near Circle "D"	3-19-63	Near Circle "D"	238	0
C-3441*	9-6-62	Hills Barge	4-28-63	Powell's Barge	234	1 mile
C-3781	11-7-62	Near Circle "D"	12-28-62	Hills Barge	51	1/2 mile
C-3826	11-14-62	Lakeside Village	12-9-62	Lakeside Village	35	0
C-3876*	11-28-62	Near Circle "D"	1-4-63	Hills Barge	37	1/2 mile
C-3935*	12-4-62	Lakeside Village	3-31-63	Lakeside Village	117	0
A-4451*	12-5-62	Near Circle "D"	3-25-63	Near Circle "D"	110	0
A-4453	12-5-62	Near Circle "D"	2-14-63	Hills Barge	71	1 mile
A-4454*	12-5-62	Near Circle "D"	12-24-62	Lakeside Village	19	1/2 mile
A-4454**	12-24-62	Lakeside Village	3-28-63	Lakeside Village	94	0
A-4456*	12-5-62	Near Circle "D"	2-3-63	Lakeside Village	60	1/2 mile
A-4470	12-10-62	Near Circle "D"	12-31-62	Powell's Barge	21	0
A-4473	12-10-62	Near Circle "D"	12-18-62	Lakeside Village	8	1/2 mile
A-4480*	12-11-62	Lakeside Village	3-2-63	Mesquite Creek	81	1/4 mile
A-4495	12-11-62	Redwood Lodge Slough	5-23-63	Cedar Creek Dock	166	1/2 mile
A-4498	12-17-62	Redwood Lodge Slough	Sept. 63	Cedar Creek Dock	-	-
A-4506*	12-18-62	Powells Barge	2-25-63	Powell's Barge	69	0
A-4514	12-18-62	Lakeside Village	3-17-63	Lakeside Village	89	0
A-4543	12-18-62	Lakeside Village	3-10-63	Hills Barge	82	1 mile
A-4558*	12-18-62	Lakeside Village	2-26-63	Powell's Barge	70	1/4 mile
A-4595	1-3-63	Lakeside Village	3-1-63	Lakeside Village	60	0
A-4603	1-3-63	Lakeside Village	3-26-63	Lakeside Village	82	0
A-4604	1-3-63	Lakeside Village	3-26-63	Lakeside Village	82	0
A-4633*	1-4-63	Lakeside Village	2-11-63	Lakeside Village	38	0
A-4637*	1-4-63	Lakeside Village	2-25-63	Hills Barge	52	1 mile
A-4652*	1-4-63	Parvin's Barge	3-23-63	Benson Slough	78	1/2 mile
A-4655	1-4-63	Parvin's Barge	4-22-63	Benson Slough	108	1/2 mile
A-4673	1-4-63	Parvin's Barge	2-18-63	Powell's Barge	45	1/4 mile
A-4691*	1-10-63	Hill's Barge	3-22-63	Lakeside Village	71	1 mile
A-4698	1-10-63	Hill's Barge	4-19-63	Hill's Barge	99	0
A-4702*	1-10-63	Hill's Barge	4-26-63	Powell's Barge	106	0

Table 4. (Continued) Tagged crappie recaptures in Lake Whitney, November 1, 1962 through October 31, 1963

Tag No.	Tagging Information		Recapture Information		Distance Traveled
	Date	Location	Date	Location	
A-4704	1-10-63	Hill's Barge	2-16-63	Hills Barge	0
A-4745	1-29-63	Lakeside Village	1- 2-63	Lakeside Village	0
A-4762	2- 4-63	Lakeside Village	3- 4-63	Lakeside Village	0
A-4788	2- 6-63	Lakeside Village	4-21-63	Lakeside Village	0
A-4792*	2- 6-63	Near Lakeside Village	3- 3-63	Powell's Barge	0
A-4798	2- 6-63	Lakeside Village	2- 9-63	Lakeside Village	0
A-4802	2- 6-63	Lakeside Village	4-28-63	White Bluffs	5 miles
A-4803*	2- 6-63	Lakeside Village	4-25-63	Lakeside Village	0
A-4809*	2- 6-63	Near Lakeside Village	3- 7-63	Lakeside Village	0
A-4812	2- 6-63	Lakeside Village	2-10-63	Lakeside Village	0
A-4816	2- 6-63	Near Lakeside Village	4-26-63	Parvins Barge	0
A-4825*	2- 6-63	Near Lakeside Village	3- 8-63	Powell's Barge	0
A-4838	2- 6-63	Redwood Lodge Slough	3- 5-63	Redwood' Slough	0
A-4846*	2-11-63	Lakeside Village	3- 3-63	Powell's Barge	1/4 mile
A-4861*	2-11-63	Lakeside Village	4- 4-63	Hill's Barge	1 mile
A-4875*	2-13-63	Lakeside Village	3-17-63	Hill's Barge	1 mile
A-4887*	2-18-63	Lakeside Village	3-16-63	Lakeside Village	0
A-4887***	3-16-63	Lakeside Village	3-19-63	Lakeside Village	0
A-4910*	2-19-63	Parvin's Barge	3- 2-63	Lakeside Village	1/4 mile
A-4919	2-19-63	Hill's Barge	4-13-63	Steele Creek	4 miles
A-4923*	2-19-63	Hill's Barge	4- 4-63	Hill's Barge	0
A-4938	2-19-63	Hill's Barge	3- 6-63	Hill's Barge	0
A-4940*	2-19-63	Hill's Barge	4-13-63	Lakeside Village	1 mile
A-4956*	2-25-63	Lakeside Village	3-15-63	Lakeside Village	0
A-4957*	2-25-63	Lakeside Village	3-28-63	Hill's Barge	1 mile
A-4984	2-25-63	Lakeside Village	3-23-63	Hill's Barge	1 mile
A-4993*	2-25-63	Hill's Barge	3-12-63	Lakeside Village	0
A-4993***	3-12-63	Lakeside Village	3-19-63	Lakeside Village	0
A-4995*	2-25-63	Hill's Barge	4-26-63	Parvin's Barge	1 mile
A- 814	3- 5-63	Near Circle "D"	3-17-63	Lakeside Village	1/2 mile
A- 815*	3- 5-63	Near Circle "D"	3- 6-63	Lakeside Village	1/2 mile
A- 816*	3- 5-63	Near Circle "D"	4-13-63	Lakeside Village	1/2 mile
A- 820	3- 5-63	Near Circle "D"	3- 8-63	Lakeside Village	1/2 mile
A- 821*	3- 5-63	Near Circle "D"	3-28-63	Lakeside Village	1/2 mile
A- 835	3-12-63	Hill's Barge	4-28-63	White Bluffs	4 miles
A- 839*	3-12-63	Hill's Barge	3-24-63	Lakeside Village	1 mile
A- 840	3-12-63	Hill's Barge	4-29-63	Hill's Barge	0

Table 4. (Continued) Tagged crappie recaptures in Lake Whitney, November 1, 1963 through October 31, 1963

Tag No.	Tagging Information			Recapture Information		
	Date	Location	Date	Location	Days of Freedom	Distance Traveled
A- 842*	3-12-63	Hill's Barge	3-25-63	Lakeside Village	13	1 mile
A- 883	3-19-63	Near Lakeside Village	3-26-63	Parvin's Barge	7	1/4 mile
A- 886*	3-19-63	Lakeside Village	3-28-63	Lakeside Village	9	0
A- 886**	3-28-63	Lakeside Village	4- 1-63	Lakeside Village	4	0
A- 895	3-20-63	Lakeside Slough	4- 1-63	Lakeside Village	12	0
A- 896	3-20-63	Lakeside Village	3-30-63	Lakeside Village	10	0
A- 899*	3-20-63	Lakeside Slough	3-21-63	Lakeside Village	1	0
A- 900*	3-20-63	Lakeside Slough	3-25-63	Powell's Barge	4	1/4 mile
A-1000	3-26-63	Hill's Barge	4-29-63	Hill's Barge	34	0
10002*	4-16-63	Hill's Barge	4-20-63	Hill's Barge	4	1 mile
10005	4-16-63	Hill's Barge	7- 8-63	Smith's Barge	83	1 mile
10006	4-16-63	Hill's Barge	4-19-63	Hill's Barge	3	0
10045	4-22-63	Lakeside Village	5-26-63	Katy Bridge	34	10 miles
10095	5- 8-63	Lakeside Village	5-27-63	Hill's Barge	19	1 mile
10102	5-14-63	No. 8 Marker	7-26-63	Hillcrest Lodge	73	1/2 mile
10453	7-29-63	Walker Barge	9- 2-63	Lakeside Village	35	1/4 mile
10141	6- 6-63	1/4 mile from Red-wood Lodge	6-11-63	No. 8 Marker	5	0
10428	7-31-63	Walker Barge	8-18-63	Near Hills Barge	18	1/4 mile
10429	7-31-63	Walker Barge	8-26-63	Smith Barge	26	1/2 mile
10438	7-31-63	Walker Barge	8-27-63	Smith Barge	27	1/2 mile
10531*	8-12-63	Walker Barge	9-30-63	Smith Barge	54	1/2 mile
10748	8-23-63	Walker Barge	10- 2-63	Walker Barge	40	0
11118*	9-25-63	Walker Barge	10-14-63	Walker Barge	19	0
11135	9-30-63	Lakeside Village	10-11-63	Lakeside Village	12	0

* These fish were released after number and data were recorded.

** These fish were recaptured a second time.

*** These fish were released after second recapture.

Table 5. A comparison of the tag returns, from Lake Whitney by the month of recapture during the period from November 1, 1956 through October 31, 1963.

Year Month	1956-1957		1957-1958		1958-1959		1959-1960		1960-1961		1961-1962		1962-1963		Totals	
	No.	Per Cent	No.	Per Cent												
November	0	0	0	0	1	1.67	0	0	0	0	2	2.50	1	1.03	4	1.01
December	0	0	0	0	1	1.67	0	0	2	2.98	12	15.00	12	12.37	27	6.84
January	0	0	0	0	7	11.67	6	11.54	13	19.40	17	21.25	39	40.20	84	21.26
February	0	0	0	0	32	53.32	30	57.61	19	28.36	18	22.50	23	23.70	145	36.71
March	1	2.94	1	20.00	13	21.67	7	13.46	9	13.43	13	16.25	3	3.10	46	11.65
April	19	55.88	4	80.00	2	3.33	2	3.84	4	5.97	6	7.50	1	1.03	17	4.31
May	1	2.94	0	0	0	0	2	3.84	8	11.94	4	5.00	2	2.06	17	4.31
June	2	5.88	0	0	1	1.67	0	0	3	4.48	1	1.25	3	3.10	15	3.79
July	1	2.94	0	0	1	1.67	2	3.84	5	7.46	1	1.25	3	3.10	15	3.79
August	7	20.59	0	0	0	0	3	5.77	3	4.48	1	1.25	3	3.10	10	2.53
September	3	8.83	0	0	2	3.33	0	0	1	1.50	2	2.50	1	1.03	6	1.52
October	0	0	0	0	0	0	0	0	0	0	3	3.75	6	6.18	9	2.28
Total	34	100.00	5	100.00	60	100.00	52*	100.00	67	100.00	80*	100.00	97	100.00	395	100.00

* A total of 4 tags were returned without date of recapture and are not included.

Table 6. A comparison of the tag returns, from Lake Whitney, by the month of tagging between November 1, 1956 through October 31, 1963

Year	1956-1957		1957-1958		1958-1959		1959-1960		1960-1961		1961-1962		1962-1963		Totals	
	No.	Per Cent	No.	Per Cent												
November	0	0	0	0	2	3.34	0	0	4	5.79	6	7.32	3	3.09	15	3.76
December	0	0	0	0	3	5.00	0	0	2	2.90	4	4.88	15	15.47	24	6.01
January	0	0	0	0	3	5.00	3	5.76	4	5.79	7	8.53	13	13.40	30	7.52
February	1	2.94	1	20.00	9	15.00	5	9.62	7	10.15	25	30.49	26	26.80	74	18.55
March	0	0	0	0	9	15.00	19	36.55	21	30.44	10	12.19	22	22.68	81	20.30
April	23	67.64	4	80.00	26	43.32	14	26.93	9	13.05	9	10.28	4	4.13	89	22.30
May	5	14.71	0	0	5	8.33	3	5.76	4	5.79	5	6.10	2	2.06	24	6.10
June	5	14.71	0	0	1	1.67	1	1.92	0	0	1	1.22	1	1.03	9	2.26
July	0	0	0	0	1	1.67	1	1.92	10	14.50	1	1.22	5	5.16	18	4.51
August	0	0	0	0	0	0	1	1.92	2	2.90	1	1.22	3	3.09	7	1.76
September	0	0	0	0	0	0	5	9.62	2	2.90	3	3.66	3	3.09	13	3.26
October	0	0	0	0	1	1.67	0	0	4	5.79	10	12.19	0	0	15	3.75
Total	34	100.00	5	100.00	60	100.00	52	100.00	69	100.00	82	100.00	97	100.00	399	100.00

Table 7. A comparison of the monthly total of crappie tagged in Lake Whitney, from November 1, 1956 through October 31, 1963

Year	1956-1957		1957-1958		1958-1959		1959-1960		1960-1961		1961-1962		1962-1963		Totals	
	No.	Per Cent	No.	Per Cent												
November	0	0	3	1.26	13	1.44	21	1.40	63	3.57	66	4.18	157	6.35	323	3.47
December	0	0	0	0	37	4.02	8	0.54	32	1.81	71	4.50	148	5.98	296	3.18
January	0	0	2	0.84	41	4.46	31	2.08	9	0.51	113	7.16	176	7.12	372	4.01
February	32	3.83	6	2.55	64	6.95	40	2.68	81	4.59	196	12.42	262	10.60	681	7.32
March	13	1.55	37	15.67	134	14.57	182	12.21	184	10.43	141	8.93	136	5.50	827	8.90
April	214	25.63	48	20.34	369	40.11	305	20.45	170	9.64	156	9.89	136	5.50	1398	15.04
May	62	7.43	19	8.05	151	16.41	100	6.71	84	4.76	83	5.26	49	1.99	548	5.89
June	0	0	43	18.22	25	2.72	156	10.46	51	2.89	107	6.78	201	8.13	583	6.27
July	135	16.17	46	19.50	52	5.65	51	3.42	311	17.63	189	11.98	198	8.03	982	10.57
August	223	26.70	4	1.69	29	3.15	225	15.10	517	29.31	111	7.03	365	14.76	1474	15.85
September	114	13.66	14	5.94	4	0.44	120	8.04	169	9.58	170	10.78	275	11.13	866	9.32
October	42	5.03	14	5.94	1	0.11	252	16.91	93	5.28	175	11.09	369	14.93	946	10.78
Total	835	100.00	236	100.00	920	100.00	1491	100.00	1764	100.00	1578	100.00	2472	100.00	9296	100.00