MILLERS FERRY
CRAPPIE MANAGEMENT REPORT

Spring 2007

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Introduction

Millers Ferry Reservoir is known for its excellent crappie fishery. Black crappie and white crappie are typically sampled by the Alabama Division of Wildlife and Freshwater Fisheries (ADWFF) in the fall using trap nets; however, recent angler complaints and the lack of older fish in the samples have raised concerns of overexploitation or ineffective sampling of older crappie. This report summarizes spring electrofishing data for white crappie and black crappie and access creel data. It also addresses concerns of overexploitation, age biased sampling, and management recommendations based on our findings.

Millers Ferry Reservoir is a 17,200-acre reservoir on the Alabama River, impounded by the U.S. Army Corps of Engineers in 1969 (Table 1, Figure 1). The primary objective in managing the fisheries resources of Millers Ferry Reservoir is to maintain and enhance the sport fishery. Millers Ferry has been sampled according to the reservoir management program protocol since 1985 (Cook 1999). Results of these efforts are summarized in Ricks et al. (2007). Management activities have included standardized sampling, aquatic plant management, access and tailwater creel surveys, general surveillance, and the stocking of Gulf-strain and Atlantic-strain striped bass, hybrid striped bass, and Florida largemouth bass (Table 2).

The sport fishery provided by Millers Ferry Reservoir is economically important to the southwest region of Alabama. Human population growth in south Alabama will result in sustained or increased fishing pressure. The area surrounding Millers Ferry Reservoir is rural; however, the excellent recreational facilities attract anglers from all over the state (Table 10).

Methods

On April 4-5, 2007, ten 30-minute, transects in different coves were selected for a total effort of 5 hours. The coves selected are indicated on the reservoir map (Figure 1) and were the

same backwater areas used in the Fall, 2006, crappie trapnet samples (Ricks et. al 2007). Transects were selected by choosing the best available habitat within the coves. Total length (mm) and weight (g) were recorded for all white crappie and black crappie collected. For age determination, otoliths were removed and preserved. All otoliths were read independently by two readers using a dissecting microscope. Discrepancies in age of the otolith were reconciled during a third read in concert between the two readers.

The access creel survey was conducted March through May, 2007, on 12 weekend days at 4 high-use boat ramps (Table 11). Total length (mm) was recorded for all crappie and black bass harvested. Angler survey questions included fishing effort, residence of angler, catch-and-release reporting, tournament and bass club information, and a specialized set of questions for bass and crappie angler groups (Tables 12 and 13).

Results

Electrofishing Sample

An electrofishing effort of five hours, April 4-5, 2007, produced 143 white crappie and 107 black crappie from 10 coves in the reservoir. Catch-rates for white crappie and black crappie were 28.6 and 21.4 fish/hour (Table 3, Figure 1).

White Crappie:

Relative-stock-density (RSD) values for white crappie collected were 10%, 20%, 32%, 34%, and 4% for stock-, quality-, preferred-, memorable-, and trophy-length fish (Figure 2). White crappie catch-rates were highest for preferred- and memorable-length fish at 9.2 and 9.6 fish/hour (Table 3). Age-2 through age-7 were present in the sample; however, the catch-curve-regression was not statistically significant (P-value = 0.11). Seventy percent of the white crappie sample were age-3 and older (Tables 4 and 5, Figure 3).

Black Crappie:

Relative-stock-density (RSD) values for black crappie collected were 26%, 36%, 15%, 22%, and 1% for stock-, quality-, preferred-, memorable-, and trophy-length fish (Figure 4). Black crappie catch-rates were highest for quality-length fish at 7.6 fish/hour (Table 3). The black crappie sample consisted of ages 1 through 7. Catch-curve-regression was statistically significant for ages 3 through 7 and survival was 50% (P-value = 0.06, r^2 = 73%, Figure 5). Seventy-four percent of the black crappie sample were age-3 and older (Tables 4 and 6, Figure 6).

Access Creel Survey

During 12 creel days, 113 interviews were conducted. Of the anglers interviewed, 23% targeted bass but were not in tournaments, 33% were in bass tournaments, and 33% targeted crappie (Table 7). Of the 494 bass reported being caught, 9% were harvested; 42% of angler-caught crappie were harvested (Table 8). Catch-rates for bass and crappie were 0.83 and 0.6 fish/hour (Table 8).

The mean length for angler harvested white crappie and black crappie was 270 mm (Table 9, Figures 7 and 8). White crappie comprised 67% of angler harvest while black crappie comprised 33% of the angler harvest. Ninety-five percent of white crappie and 91% of black crappie harvested were nine inches or longer.

Largemouth bass (67%) comprised the majority of bass caught by anglers; however, spotted bass (33%) were more prevalent than expected. Mean lengths for harvest and tournament weighed-in largemouth and spotted bass were 373 mm and 369 mm (Figures 9 and 10). All of the spotted bass and 94% and largemouth bass were greater than 12 inches (Table 9, Figures 9 and 10).

After general angler information was collected, a specialized set of questions was asked of anglers targeting crappie and bass. Crappie anglers were asked, "Since you began fishing on Millers Ferry Reservoir have you noticed any changes in the fishing?" Anglers were given a choice of improved, same, or decreased (Table 13). Fifty percent stated that crappie fishing was the same or improved, and 50% stated that it had decreased. Of the anglers that commented further, 25% stated there was an increase in the number of crappie and 25% stated there was a decrease in size of crappie (Table 13).

Bass anglers were asked, "What type of habitat enhancement is needed on this reservoir?" and given the choice of woody debris, aquatic plants, both, none, or other. Fifty-three percent of bass anglers stated that no habitat enhancement was needed (Table 12). When asked the follow-up question, "Would you/your fishing club be willing to assist the ADWFF in a habitat enhancement project on this reservoir?"; from the choices of very interested, interested, and not interested, 66% of people said they would be interested in assisting. Seventy-five percent said manpower would be the assistance they could offer when given the choices of manpower, funding, or both (Table 12).

Other general angler comments were recorded and are included in Table 14.

Discussion

Overexploitation of crappie in Millers Ferry Reservoir is no longer a concern at this time. The Spring, 2007, electrofishing survey and the access creel data showed older crappie are in adequate abundances which was the primary concern prior to sampling. During the trapnet survey in Fall, 2006, few crappie were collected over age 2; however, in this sample, the numbers of fish age-4 to age-7 were in acceptable abundances. This sample included 6 trophy-length crappie, 2% of the sample, and 15% of the crappie were age-5 or greater.

Trapnet samples are useful for indicating the quality of an incoming year class; however, because the larger crappie are not sampled effectively by trapnets in Millers Ferry Reservoir, electrofishing should be used to determine the abundance of larger crappie. With this new data we can better describe crappie year-class strength and give anglers a better idea of what to expect when they fish the lake.

Regardless of the species it seems that bass anglers are generally happy with the fishing and available habitat types on Millers Ferry Reservoir. However, based on angler creels in 2007 and 2002, there seems to be a shift in the black bass populations. Spotted bass are increasing in abundance (33% in 2007 creel and 7% in 2002 creel) at tournament weigh-ins and in angler harvest in Millers Ferry Reservoir (Armstrong et al 2002). However, spotted bass composition has increased only slightly in the electrofishing surveys from 6 % in 2002 (Armstrong et. al. 2002) to 10% in 2006 (Ricks et al 2007). A possible reason for this is that our electrofishing surveys target largemouth bass and are conducted in backwater areas because they are more suitable habitats for this target species. Spotted bass are not a target species in Millers Ferry Reservoir; however this data suggest future sampling of this reservoir should include an investigation of the spotted bass population in Millers Ferry Reservoir.

Management Recommendations

1. Crappie sampling in Millers Ferry Reservoir should include fall trapnet and spring electrofishing to evaluate the entire fishery.
2. Consider targeted sampling to evaluate the spotted bass population in Millers Ferry Reservoir.

LITERATURE CITED

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APPENDIX A

TABLES AND FIGURES

Table 1. Morphometric, physical, and chemical characteristics of Millers Ferry Reservoir.

Surface area	17,200	acres
Drainage area	20,637	sq. mi.
Full pool elevation	80	feet-msl
Mean annual fluctuation	1	foot
Shoreline distance	516	miles
Shoreline development index	28.1	
Mean depth	19.3	feet
Maximum depth	60	feet
Total dissolved solids	100	mg/l
Morphoedaphic index	5.2	TDS/mean depth(ft) (Ryder 1965)
Growing season	230	frost free days (Jenkins 1967)
Year of impoundment	1969	

Table 2. Fish stocking in Millers Ferry Reservoir, 1993-2007.

Species	Year	No/Ac	Size (in)	Total
Largemouth Bass (Florida)	1993	2	1 - 2	34,520
	1994	4	1 - 2	70,611
Hybrid Striped Bass	1993	11	1 - 2	182,040
	1994	3	1 - 2	55,060
	1995	3	1 - 2	51,600
	1996	3	1 - 2	51,800
	1997	5	1 - 2	78,728
	1998	3	1 - 2	51,085
	1999	3	1 - 2	52,072
	2000	5	1 - 2	89,837
	2001	4	1 - 2	69,200
	2002	3	1 - 2	52,000
	2003	3	1 - 2	52,100
Striped Bass (Atlantic)	1999	2	1 - 2	33,600
	2001	2	1 - 2	34,020
Striped Bass (Gulf)	1993	2	1 - 2	34,487
	1994	< 1	1 - 2	3,400
	1995	2	1 - 2	34,400
	1996	5	1 - 2	80,375
	1997	3	1 - 2	45,265
	1998	4	1 - 2	68,448
	2000	3	1 - 2	51,200
	2003	2	1 - 2	34,160
	2004	2	1 - 2	34,050
	2005	2	1 - 2	34,166
	2006	2	1 - 2	34,103

Table 3. Relative stock density, catch-per-unit effort, and relative weight of white crappie and black crappie in Millers Ferry Reservoir, 1991-2007.

				TOTAL NUMBER, CPE, PERCENT OF SAMPLE AND Wr																							
			Net	SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL SUB - MT	
Species	Year	Gear	Nights	no.	cpe	ssr[1]	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe
White Crappie	1991[2]	Trap	42	87	2.1	20	336	8	76	72	92	2.2	21	89	13	0.3	3	92	3	0.1	1	97	.	.	.	.	532	12.6
White Crappie	1992	Trap	20	16	0.8	10	17	0.9	11	74	65	3.3	41	88	68	3.4	43	96	9	0.5	6	99	.	.	.	.	175	8.8
White Crappie	1993	Trap	30	1057	35	263	170	5.7	42	72	126	4.2	31	92	72	2.4	18	97	34	1.1	8	99	.	.	.	.	1459	48.6
White Crappie	1994	Trap	40	154	3.9	24	560	14	89	69	50	1.3	8	81	15	0.4	2	92	5	0.1	1	97	.	.	.	.	784	19.6
White Crappie	1995	Trap	53	289	5.5	44	188	3.5	28	76	201	3.8	30	89	253	4.8	38	95	21	0.4	3	98	.	.	.	.	951	18
White Crappie	1998	Trap	21	152	7.2	75	42	2	21	76	82	3.9	40	90	71	3.4	35	96	9	0.4	4	100	.	.	.	.	356	17
White Crappie	1999	Trap	30	111	3.7	161	53	1.8	77	69	8	0.3	12	77	2	0.1	3	97	6	0.2	9	101	.	.	.	.	180	6.0
White Crappie	2000[2]	Trap	30	80	2.7	37	46	1.5	21	79	117	3.9	54	84	37	1.2	17	90	17	0.6	8	86	.	.	.	.	298	9.9
White Crappie	2002	Trap	25	184	7.4	54	302	12	88	71	30	1.2	9	76	10	0.4	2.3	80	0	.	.	.	.	.	.	.	526	21.0
White Crappie	2006	Trap	32	233	7.3	33	474	14.8	68	76	168	5.3	24	87	47	1.5	7	95	8	0.3	1	98	.	.	.	.	930	29.1
LAKE AVERAGE		**Trap**	**32**	**.**	**7.6**	**72.0**	**.**	**6.4**	**52**	**73**	**.**	**2.9**	**27**	**85**	**.**	**1.8**	**17**	**93**	**.**	**0.4**	**5**	**97**	.	.	.	.	**.**	**19.1**
Black Crappie	2006	Trap	32	47	1.5	57	58	1.8	71	74	17	0.5	21	84	6	0.2	7	98	1	<0.1	1	105	.	.	.	.	129	4.0

				SUBSTOCK			RSD-S				RSD-Q				RSD-P				RSD-M				RSD-T				TOTAL SUB - MT	
Species	Year	Gear	Effort	no.	cpe	ssr[1]	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe	pct.	Wr	no.	cpe
White Crappie	2007[3]	Electro	5	1	0.2	1	14	2.8	10	80	29	5.8	20	92	46	9.2	32	11	48	9.6	34	97	5	1.0	4	90	143	28.6
Black Crappie	2007[3]	Electro	5	0	0.0	0	28	5.6	26	79	38	7.6	36	84	16	3.2	15	92	24	4.8	22	90	1	0.2	1	91	107	21.4

[1] ssr is Substock Ratio, the number of substock fish per 100 fish stock size and larger.

[2] Sample included 1 individual RSD - TROPHY group white crappie.

[3] 2007 Electrofishing was conducted in the spring; 10 sites consisting of 30 minute transects

Table 4. Age composition and mean length of white crappie and black crappie collected by electrofishing from Millers Ferry Reservoir, Spring, 2007.

Species	Age	Year-Class	Number	Percent	Mean CPE	Mean Length (mm)	Standard Error	Range (mm)
White Crappie	2	2005	43	30.1	8.6	216.1	5.8	80-300
White Crappie	3	2004	63	44.1	12.6	283.3	3.8	210-350
White Crappie	4	2003	13	9.1	2.6	341.8	10.9	220-370
White Crappie	5	2002	5	3.5	1.0	368.8	5.7	350-380
White Crappie	6	2001	16	11.2	3.2	360.9	5.1	320-400
White Crappie	7	2000	3	2.1	0.6	366.7	6.2	350-370
	TOTAL		143	100	28.6			
Black Crappie	1	2006	2	1.9	0.4	168.5	18.5	150-180
Black Crappie	2	2005	26	24.3	5.2	184.2	4.8	140-230
Black Crappie	3	2004	42	39.3	8.4	227.1	4.8	180-300
Black Crappie	4	2003	23	21.5	4.6	291.6	7.8	220-340
Black Crappie	5	2002	3	2.8	0.6	308.0	11.1	290-330
Black Crappie	6	2001	9	8.4	1.8	321.6	13.2	330-360
Black Crappie	7	2000	2	1.9	0.4	347.5	32.5	310-380
	TOTAL		107	100	21.4			

Total effort = 5 Hours

Table 5. Length at age of white crappie from Millers Ferry Reservoir, Spring, 2007.

Length (mm)	Age - 2	Age - 3	Age - 4	Age - 5	Age - 6	Age - 7	Total
80	1						1
90							0
100							0
110							0
120							0
130							0
140							0
150	1						1
160							0
170	2						2
180	2						2
190	9						9
200	2						2
210	5	2					7
220	9	3	1				13
230	1	2					3
240	3	1					4
250	3	2					5
260	2	3					5
270	2	9					11
280		15					15
290		10					10
300	1	8					9
310		1					1
320		4	1		1		6
330			1		1		2
340		1	4		3		8
350		2		2	3	1	8
360			5		3	1	9
370			1	1	2	1	5
380				2	1		3
390					1		1
400					1		1
Total	43	63	13	5	16	3	143

Table 6. Length at age of black crappie from Millers Ferry Reservoir, Spring, 2007.

Length (mm)	Age - 1	Age - 2	Age - 3	Age - 4	Age - 5	Age - 6	Age - 7	Total
140		1						1
150	1	2						3
160		5						5
170		6						6
180	1	3	6					10
190		1	2					3
200		4	4					8
210		2	4					6
220			10	2				12
230		2	4	1		1		8
240			3	1				4
250			2	1				3
260			3	1				4
270			1					1
280			1	4				5
290				1	2			3
300			2	2		1		5
310				2		1	1	4
320				5		2		7
330				2	1	1		4
340				1				1
350						2		2
360						1		1
370								0
380							1	1
Total	2	26	42	23	3	9	2	107

Table 7. Creel statistics for the Millers Ferry Reservoir access creel survey, March through May, 2007.

Anglers	No. of Parties	No. of Anglers	Pct.*	Fishing effort Hrs.	Pct.*
Bass anglers					
Non-tournament anglers	24	46	23	300	20
Tournament anglers	44	65	33	645	43
Crappie anglers	35	66	33	431	29
Other anglers	14	32	16	136	9
Total	**113***	**200***		**1512***	

* Some anglers targeted more than one type of fish.

Table 8. The catch and harvest rates of bass and crappie by anglers for the Millers Ferry Reservoir access area creel survey, March through May, 2007.

	Target anglers*		Non-target anglers		All anglers*	
	No. fish harvested	No. fish released (T/NT**)	No. fish harvested	No. fish released	No. fish harvested	No. fish released
Bass						
< 12"	8	175/41	2	26	10	242
> 12"	34	176/31	0	1	34	208
Total	**42**	**351/72**	**2**	**27**	**44**	**450**
Crappie						
< 9"	37	246	0	7	37	253
> 9"	154	9	2	1	156	10
Total	**191**	**255**	**2**	**8**	**193**	**263**

Harvest and Catch Rates

	Target anglers*		Non-target anglers		All anglers*	
	HPH***	CPH**** (T/NT**)	HPH	CPH	HPH	CPH
Bass						
< 12"	0.03	0.27/0.14	0.003	0.050	0.03	0.46
> 12"	0.11	0.27/0.10	0.000	0.002	0.11	0.37
Subtotal	**0.14**	**0.54/0.24**	**0.003**	**0.052**	**0.14**	**0.83**
Crappie						
< 9"	0.09	0.57	0.000	0.006	0.09	0.58
> 9"	0.36	0.02	0.002	0.001	0.36	0.02
Total	**0.45**	**0.59**	**0.002**	**0.007**	**0.45**	**0.60**

* Some anglers targeted both bass and crappie.
** T/NT: Tournament/Non-tournament
*** HPH: Harvest per hour
****CPH: Catch per hour

Table 9. Length frequency of bass and crappie caught by anglers during the Millers Ferry Reservoir access area creel survey, March through May, 2007.

	Crappie					Bass*			
	WCP		BCP			LMB		SPB	
Length (mm)	No.	%**	No.	%**	Length (mm)	No.	%**	No.	%**
200	1	1	.	.	225	3	2	.	.
210	0	0	1	2	250	2	2	.	.
220	4	4	4	7	275	3	2	.	.
230	14	13	7	13	300	26	20	10	16
240	15	14	6	11	325	11	9	12	19
250	17	16	5	9	350	27	21	13	20
260	14	13	10	19	375	14	11	12	19
270	7	6	3	6	400	24	19	10	16
280	10	9	3	6	425	6	5	3	5
290	10	9	3	6	450	1	1	3	5
300	3	3	3	6	475	2	2	1	2
310	4	4	2	4	500	4	3	.	.
320	4	4	3	6	525	6	5	.	.
330	0	0	1	2					
340	0	0	1	2					
350	1	1	1	2					
360	1	1	0	0					
370	3	3	0	0					
380	1	1	1	2					
390	1	1	.	.					
	No.	%***	No.	%***		No.	%***	No.	%***
Total	**110**	**67**	**54**	**33**	**Total**	**129**	**67**	**64**	**33**

*Not all bass were harvested; some lengths were taken at tournament weigh-ins
**Percent of fish in length group
***Percent of fish species composition

Table 10: Angler origins for the Millers Ferry access creel survey, March through May, 2007.

State	County	No. Parties	% Parties	No. Anglers	% Anglers
Alabama	Autauga	1	0.9	2	1.0
Alabama	Baldwin	6	5.3	11	5.5
Alabama	Bibb	4	3.5	8	4.0
Alabama	Butler	1	0.9	1	0.5
Alabama	Chilton	1	0.9	2	1.0
Alabama	Choctaw	1	0.9	2	1.0
Alabama	Clarke	7	6.2	13	6.5
Alabama	Conecuh	5	4.4	12	6.0
Alabama	Covington	2	1.8	3	1.5
Alabama	Dallas	5	4.4	9	4.5
Alabama	Escambia	3	2.7	5	2.5
Alabama	Geneva	1	0.9	3	1.5
Alabama	Hale	1	0.9	1	0.5
Alabama	Jefferson	3	2.7	8	4.0
Alabama	Marengo	10	8.8	17	8.5
Alabama	Mobile	10	8.8	17	8.5
Alabama	Monroe	10	8.8	19	9.5
Alabama	Montgomery	1	0.9	2	1.0
Alabama	Shelby	2	1.8	6	3.0
Alabama	Tuscaloosa	1	0.9	1	0.5
Alabama	Walker	5	4.4	9	4.5
Alabama	Wilcox	9	8.0	15	7.5
Florida	All Counties	24	21.2	34	17.0
Total		**113**	**100**	**200**	**100**

Table 11. Angler access area use during the Millers Ferry Reservoir access area creel survey, March through May, 2007.

Access Area	No. Days	No. Parties	No. Anglers	% Anglers	Anglers/day
Bogue Chitto	1	3	5	2.5	5
Chilatchee	2	25	52	26.0	26
Ellis	7	69	111	55.5	16
Roland Cooper	2	16	32	16.0	16
Total	**12**	**113**	**200**	**Avg anglers/day: 16**	

Table 12. Responses and comments of Millers Ferry Reservoir bass anglers during the access area creel survey, March through May, 2007.

What type of habitat enhancement is needed on this reservoir?	Woody debris		Aquatic plants		Both		None		Other*	
	No.	%**	No.	%	No.	%	No.	%	No.	%
	5	7.5	18	27.0	5	7.5	35	53.0	3	4.5

Would you/your fishing club be willing to assist in a habitat enhancement project on this reservoir?	Very interested		Interested		Not interested	
	No.	%	No.	%	No.	%
	5	14	23	66	7	20

What type of assistance would you/your fishing club be most interested in providing?	Manpower		Funding		Both	
	No.	%	No.	%	No.	%
	21	75	1	4	6	21

Comments on these questions:	Comment freq.***	
	No.	%
Woody debris needed on main river	1	7.7
Grass mats gone	2	15.4
Needs spraying	1	7.7
Hydrilla disappeared	1	7.7
Fine how it is	7	53.8
Like hyacinth but glad its gone	1	7.7

*Other habitat enhancment included deeper water, don't spray plants, and size limit
** Percentages computed from number of people who answered question not total number of interviews
***Freq. = frequency

Table 13. Responses and comments of Millers Ferry Reservoir crappie anglers during the access area creel survey, March through May, 2007.

Since you began crappie fishing on this reservoir have you noticed any changes in the fishing?	Improved		Same		Decreased	
	No.	%*	No.	%	No.	%
	3	12	10	38	13	50

Comments on these questions:	Comment freq.**	
	No.	%
Used to be better	2	12.5
Decreased size	4	25.0
Decreased number	2	12.5
More people fishing	2	12.5
Too many people harvesting small fish	2	12.5
Increased number fish	4	25.0

* Percentages computed from number of people who answered question not total number of interviews
**Freq. = frequency

Table 14. General comments of Millers Ferry Reservoir anglers during the access area creel survey, March through May, 2007.

Comment	Bass anglers		Crappie anglers		Other anglers		All Anglers*	
	No.	%**	No.	%**	No.	%**	No.	%***
Best crappie fishing	0	0	0	0	1	13	1	2
Boat ramp maintience needed	2	5	0	0	0	0	2	3
Boat traffic dangerous	1	2	0	0	0	0	1	2
Clear water	1	2	0	0	0	0	1	2
Cormorant/more shad	1	2	0	0	0	0	1	2
Fish not biting	5	12	2	13	1	13	8	12
General like or compliment	9	21	9	60	3	38	21	32
High water	1	2	0	0	0	0	1	2
Keep water level stable	1	2	0	0	0	0	1	2
Low water	7	16	0	0	1	13	8	12
More ramps	1	2	0	0	0	0	1	2
Nice ramps	1	2	1	7	0	0	2	3
No wake signs needed	1	2	0	0	0	0	1	2
Pave access roads	3	7	1	7	0	0	4	6
People keeping undersized crappie	0	0	0	0	1	13	1	2
Size limit	3	7	0	0	0	0	3	5
Typical trip	1	2	0	0	0	0	1	2
Water cold	1	2	0	0	0	0	1	2
Weather	4	9	2	13	1	13	7	11

* Some anglers targeted more than one type of fish.
**Percent within angler type
***Percent among angler types

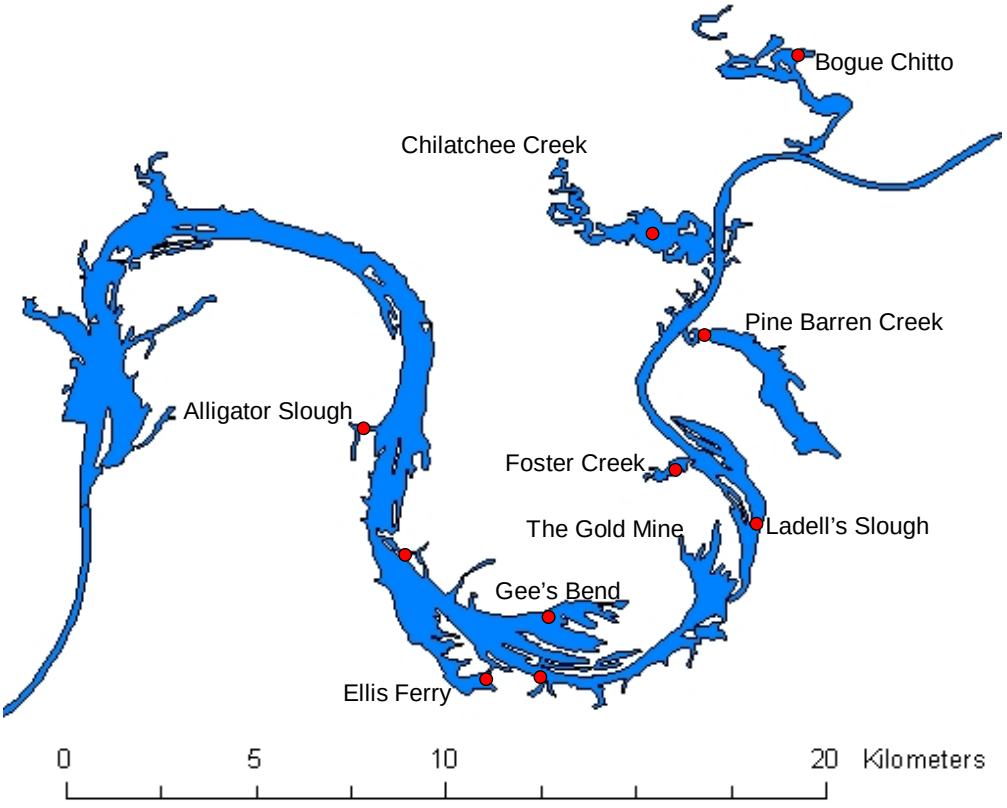

Figure 1. Millers Ferry Reservoir Spring, 2007, sampling sites.

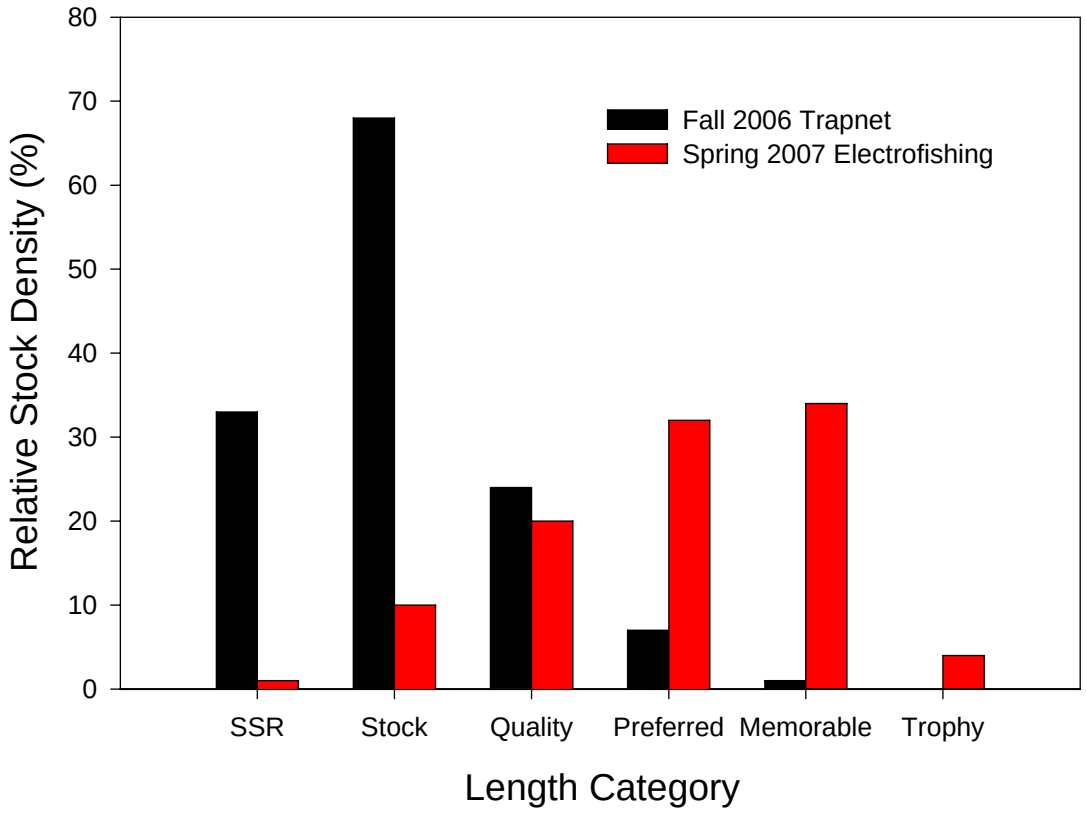

Figure 2. Relative stock density (RSD) of white crappie from Millers Ferry Reservoir Fall 2006 and Spring 2007.

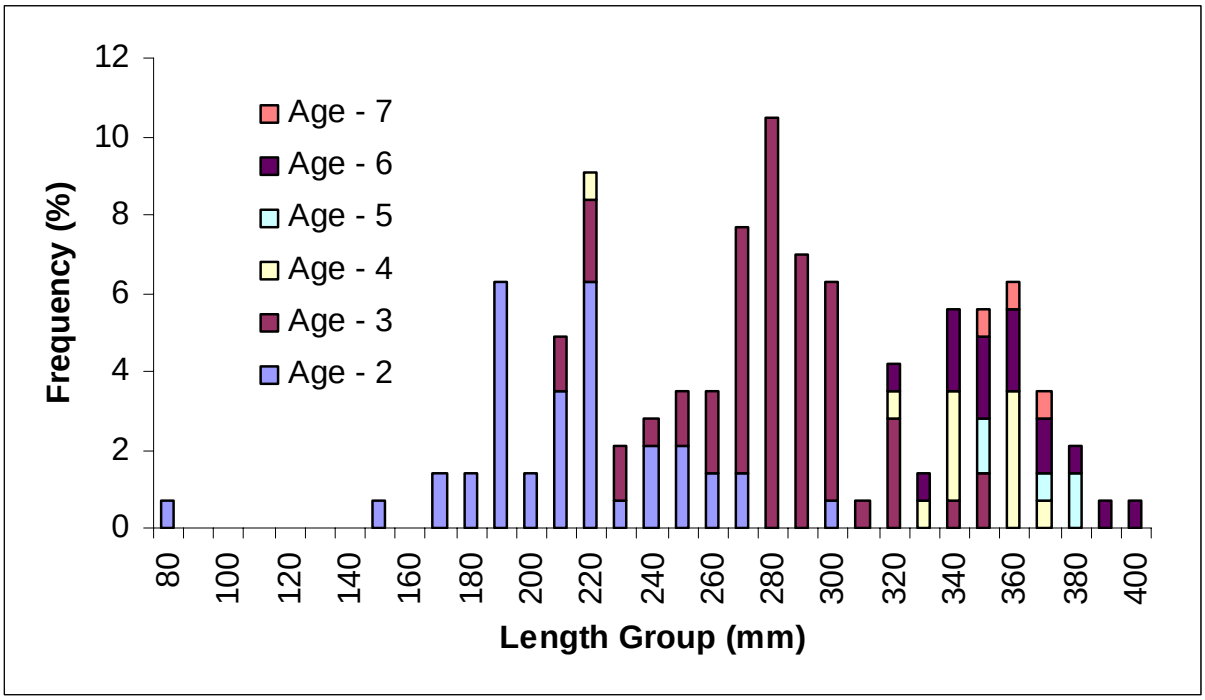

Figure 3. Length-at-age frequency of white crappie from Millers Ferry Reservoir, Spring, 2007.

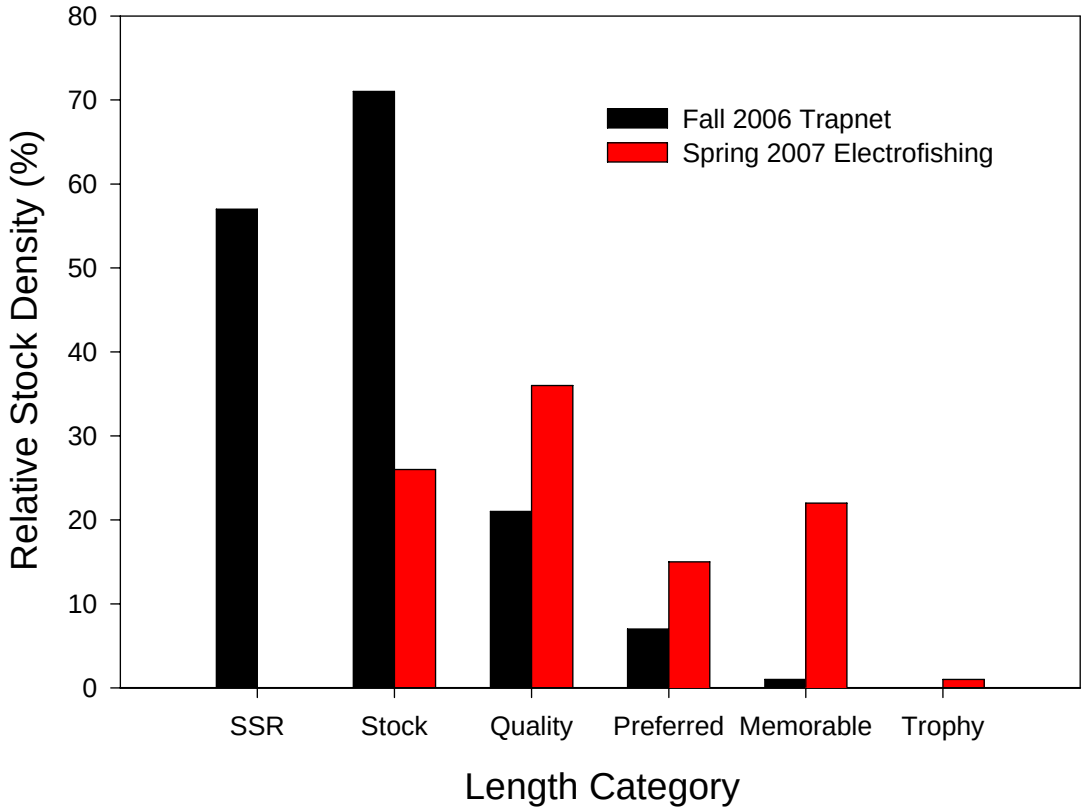

Figure 4. Relative stock density (RSD) of black crappie from Millers Ferry Reservoir Fall 2006 and Spring 2007.

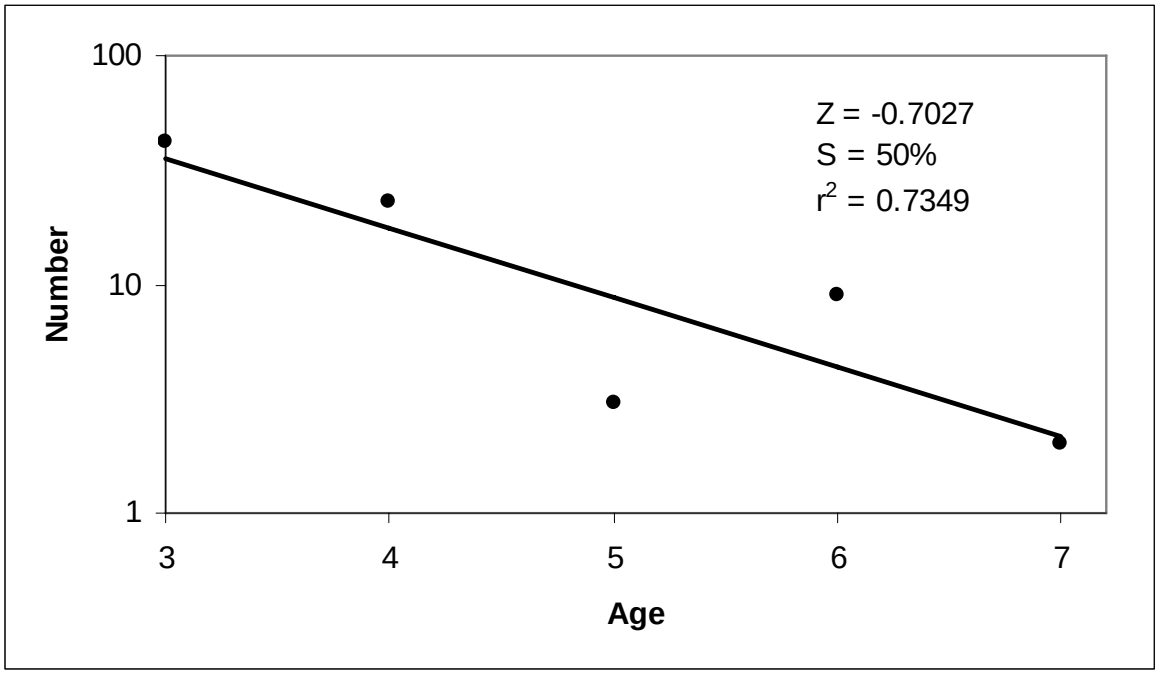

Figure 5. Catch-curve-regression for black crappie from Millers Ferry Reservoir, Spring, 2007.

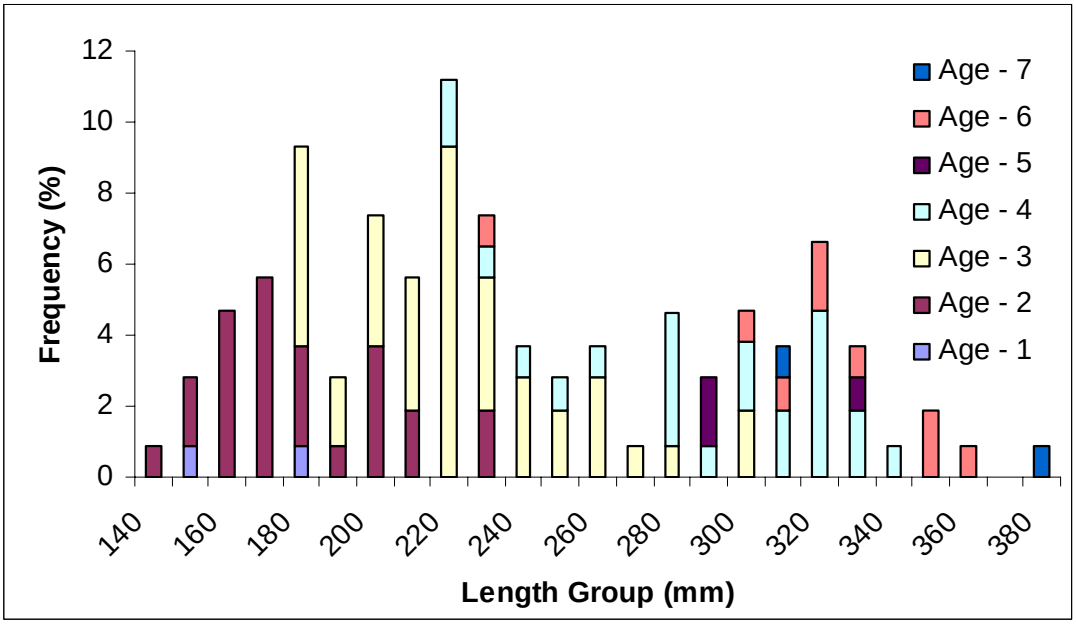

Figure 6. Length-at-age frequency of black crappie from Millers Ferry Reservoir, Spring, 2007.

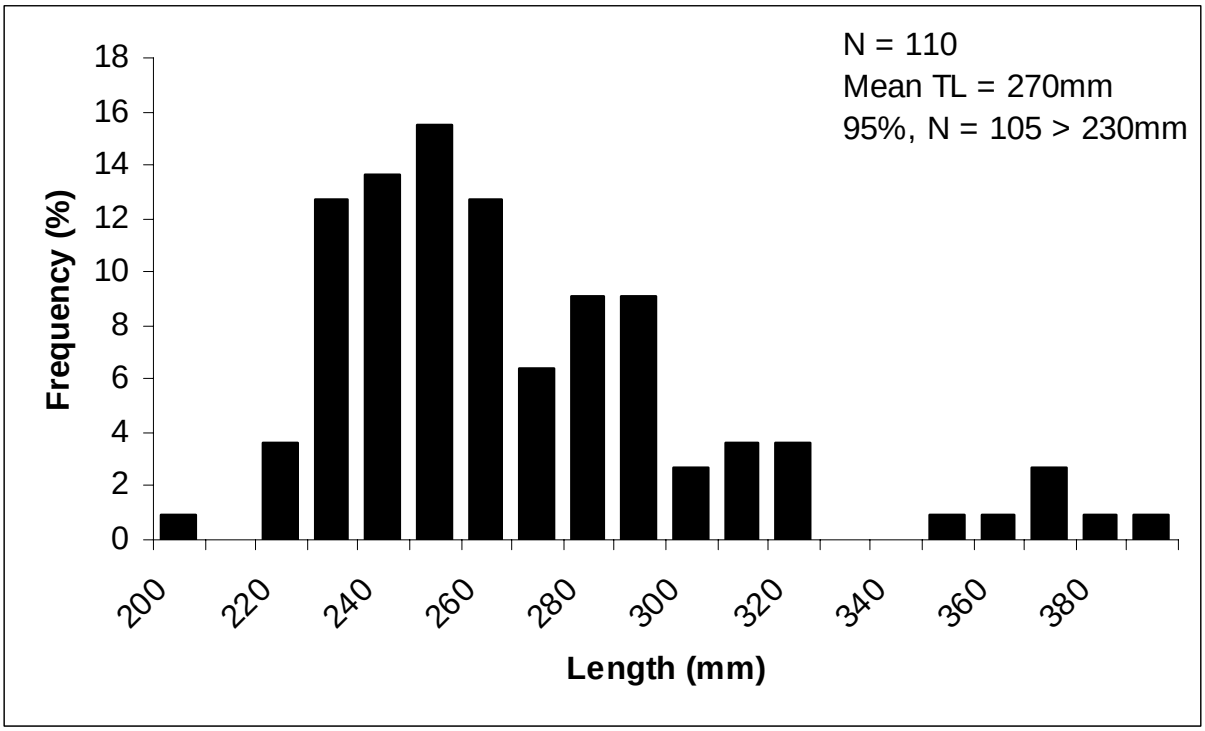

Figure 7. Length frequency of white crappie from Millers Ferry Reservoir access creel survey, March through May, 2007.

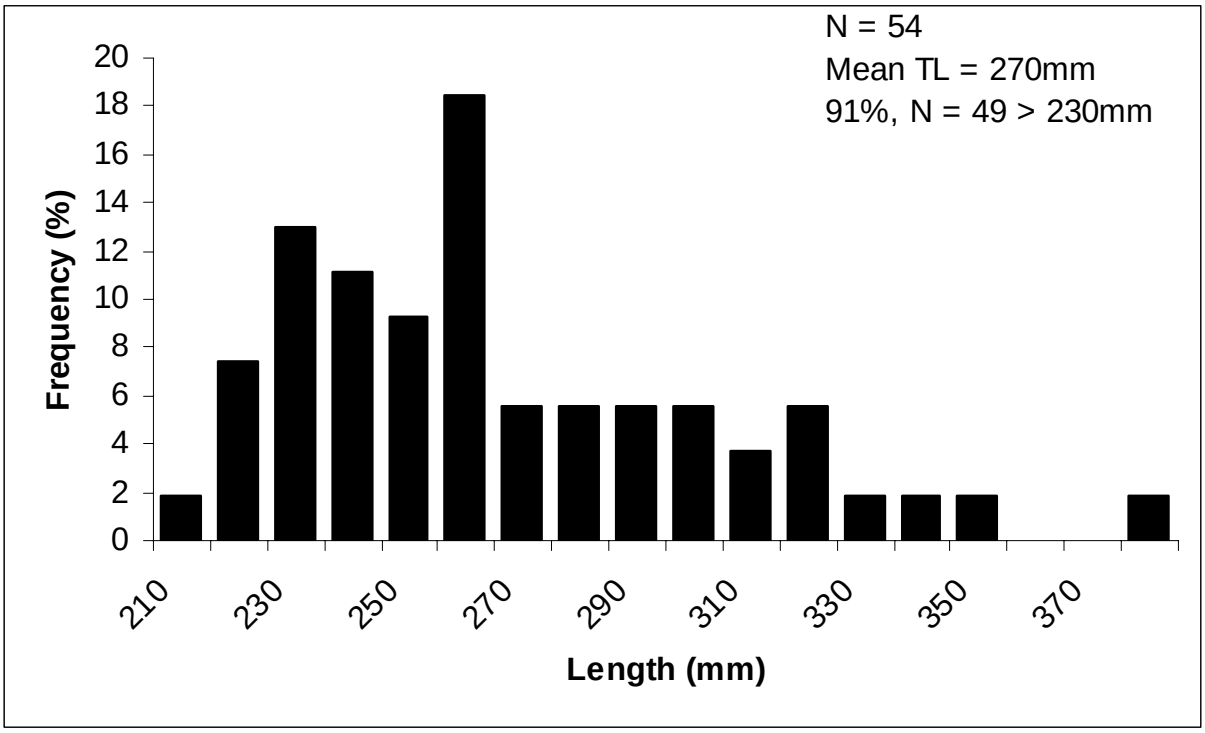

Figure 8. Length frequency of black crappie from Millers Ferry Reservoir access creel survey, March through May, 2007.

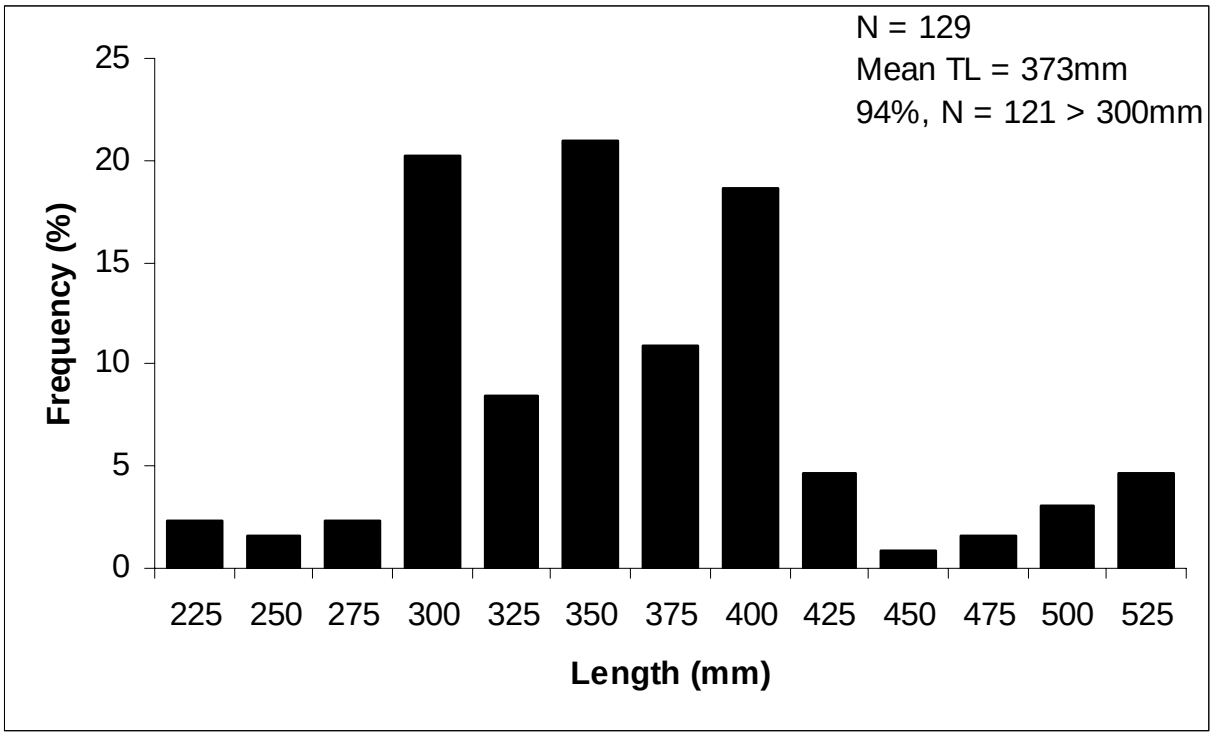

Figure 9. Length frequency of largemouth bass from Millers Ferry Reservoir access creel survey, March through May, 2007.

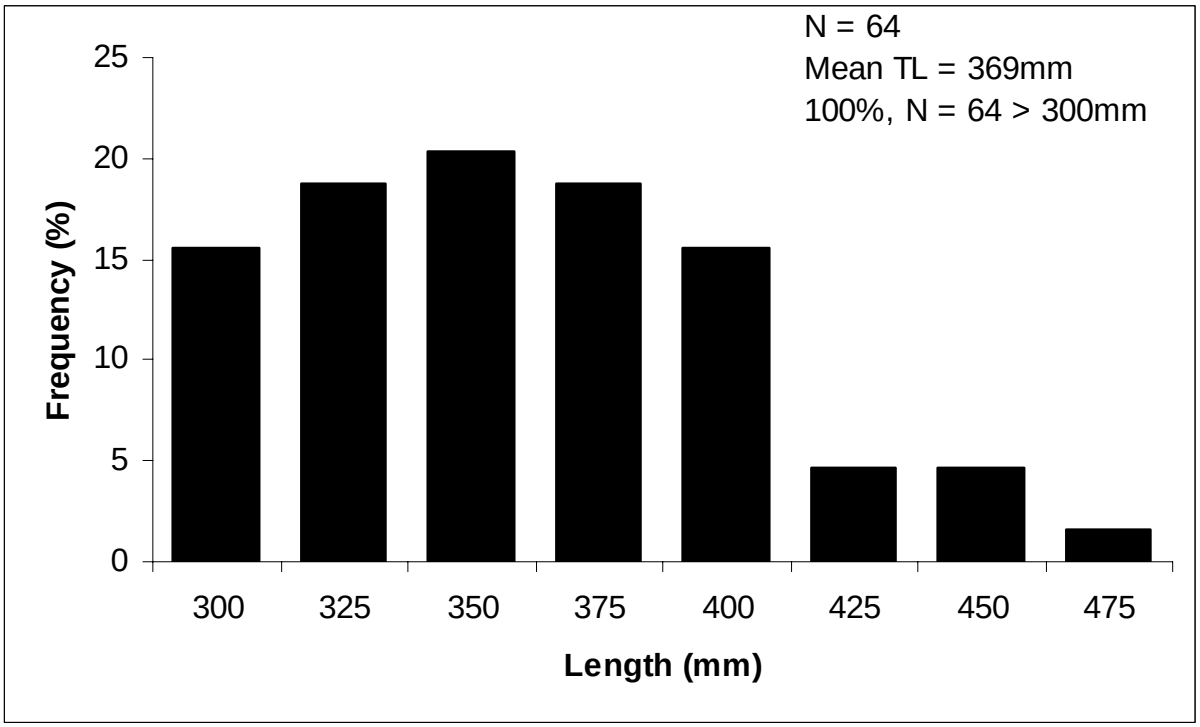

Figure 10. Length frequency of spotted bass from Millers Ferry Reservoir access creel survey, March through May, 2007.