

ILLINOIS NATURAL HISTORY SURVEY  
 CENTER FOR AQUATIC ECOLOGY  
 1999 CREEL SURVEY RESULTS

**1999 PANA LAKE**  
 205 ACRES  
 REGION 3, DISTRICT 9

STRATIFICATION SUMMARY:

Day creel only.  
 Results cover 03/15/1999 through 10/31/1999  
 Year periods stratified.  
 Fishing modes (boat vs. shore) stratified.  
 Day types (weekday vs. weekend/holiday) stratified.  
 Day periods (morning, midday, and afternoon) stratified.  
 Yearperiod 3 coalesced with yearperiod 4.

SAMPLING RATIO: 272/693 = 39.2%

NUMBER OF INTERVIEWS: 1273

Table 1. Total fishing effort, by fishing mode and day type.

FISHING MODE	DAYTYPE	ANGLER-HOURS	95% CI	HOURS/ACRE	95% CI	% EFF
BOAT	WEEKDAY	4092	3553-4630 ( 13%)	20	17-23 ( 13%)	21%
	HOLIDAY	5601	4762-6440 ( 15%)	27	23-31 ( 15%)	42%
	TOTAL	9693	8731-10655 ( 10%)	47	43-52 ( 10%)	33%
SHORE	WEEKDAY	2275	1726-2824 ( 24%)	11	8-14 ( 24%)	17%
	HOLIDAY	2065	1724-2406 ( 17%)	10	8-12 ( 17%)	41%
	TOTAL	4340	3708-4972 ( 15%)	21	18-24 ( 15%)	28%
BOAT & SHORE	WEEKDAY	6366	5633-7100 ( 12%)	31	27-35 ( 12%)	20%
	HOLIDAY	7666	6799-8533 ( 11%)	37	33-42 ( 11%)	42%
	TOTAL	14033	12897-15168 ( 8%)	68	63-74 ( 8%)	32%

Table 2. Total fishing harvest and harvest rates, in numbers of fish.

# HARVESTED	95% CI	#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
5156	4305-6007 ( 17%)	.363	.307-.418 ( 15%)	62.15	25.15	All species
703	17-1389 ( 98%)	.034	.011-.057 ( 69%)	8.47	3.43	Black crappie
286	161-411 ( 44%)	.011	.002-.020 ( 79%)	3.45	1.40	Bluegill
3	0-9 (257%)	.000	.000-.000 (257%)	0.03	0.01	Carp
650	441-860 ( 32%)	.052	.031-.074 ( 41%)	7.84	3.17	Channel catfish
		****	NOT RECORDED ****			Freshwater drum
19	1-36 ( 93%)	.000	.000-.001 (104%)	0.22	0.09	Green sunfish
312	234-389 ( 25%)	.016	.010-.021 ( 34%)	3.76	1.52	Largemouth bass
1	0-7 (430%)	.000	.000-.000 (430%)	0.02	0.01	Tiger muskie
		****	NOT RECORDED ****			Warmouth
3087	2618-3556 ( 15%)	.245	.202-.289 ( 18%)	37.21	15.06	White crappie
33	6-60 ( 81%)	.001	.000-.002 ( 88%)	0.40	0.16	Yellow bullhead
62	13-112 ( 80%)	.002	.000-.005 (111%)	0.75	0.30	Yellow bass

Table 3. Total fishing harvest and harvest rates, in kilograms.

KG HARVESTED	95% CI	KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
1655	1427-1883 ( 14%)	.120	.103-.138 ( 14%)	19.95	0.321	All species
146	27-265 ( 82%)	.007	.003-.012 ( 55%)	1.76	0.208	Black crappie
16	8-23 ( 47%)	.001	.000-.001 ( 99%)	0.19	0.055	Bluegill
7	0-25 (245%)	.000	.000-.000 (257%)	0.09	3.647	Carp
314	216-412 ( 31%)	.026	.017-.035 ( 35%)	3.78	0.483	Channel catfish
		****	NOT RECORDED ****			Freshwater drum
1	0-2 (118%)	.000	.000-.000 (102%)	0.01	0.047	Green sunfish
317	227-407 ( 28%)	.017	.010-.023 ( 38%)	3.82	1.020	Largemouth bass
2	0-8 (318%)	.000	.000-.000 (318%)	0.02	1.851	Tiger muskie
		****	NOT RECORDED ****			Warmouth
848	714-982 ( 16%)	.069	.057-.081 ( 18%)	10.22	0.275	White crappie
2	0-4 ( 89%)	.000	.000-.000 ( 85%)	0.02	0.060	Yellow bullhead
3	0-5 ( 86%)	.000	.000-.000 (126%)	0.03	0.043	Yellow bass

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Table 4. Total fishing harvest and harvest rates, in pounds.

LB HARVESTED	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
3649	3146-4152	( 14%)	.266	.228-.304 ( 14%)	17.80	0.708	All species
321	59-584	( 82%)	.016	.007-.026 ( 55%)	1.57	0.458	Black crappie
35	19-51	( 47%)	.002	.000-.003 ( 99%)	0.17	0.122	Bluegill
16	0-57	(257%)	.000	.000-.001 (257%)	0.08	8.041	Carp
692	476-908	( 31%)	.058	.038-.078 ( 35%)	3.37	1.064	Channel catfish
			****	NOT RECORDED ****			Freshwater drum
2	0-4	(118%)	.000	.000-.000 (102%)	0.01	0.103	Green sunfish
699	500-898	( 28%)	.037	.023-.051 ( 38%)	3.41	2.248	Largemouth bass
4	0-17	(318%)	.000	.000-.001 (430%)	0.02	4.082	Tiger muskie
			****	NOT RECORDED ****			Warmouth
1869	1573-2165	( 16%)	.152	.125-.179 ( 18%)	9.12	0.606	White crappie
4	0-8	( 89%)	.000	.000-.000 ( 85%)	0.02	0.132	Yellow bullhead
6	1-11	( 86%)	.000	.000-.000 (126%)	0.03	0.095	Yellow bass

Table 5. Total fishing catch and catch rates, in numbers of fish.  
Catch includes both harvested and released fish.

# CAUGHT	95% CI		#/HOUR	95% CI	#/HA	#/ACRE	SPECIES	
28518	25611-31425	( 10%)	2.220	2.011-2.430	( 9%)	343.75	139.11	All species
1615	549-2682	( 66%)	.079	.042-.116	( 47%)	19.47	7.88	Black crappie
2471	2037-2905	( 18%)	.226	.174-.279	( 23%)	29.78	12.05	Bluegill
43	17-68	( 60%)	.003	.001-.005	( 68%)	0.51	0.21	Carp
2163	1658-2668	( 23%)	.191	.128-.255	( 33%)	26.08	10.55	Channel catfish
1	0-4	(318%)	.000	.000-.000	(318%)	0.01	0.00	Freshwater drum
38	8-68	( 78%)	.002	.000-.004	(112%)	0.46	0.19	Green sunfish
4901	4330-5472	( 12%)	.281	.241-.321	( 14%)	59.08	23.91	Largemouth bass
177	121-233	( 32%)	.016	.005-.028	( 71%)	2.13	0.86	Tiger muskie
354	282-425	( 20%)	.021	.009-.033	( 58%)	4.26	1.72	Warmouth
14561	12572-16551	( 14%)	1.192	1.029-1.356	( 14%)	175.52	71.03	White crappie
128	63-193	( 51%)	.009	.002-.016	( 76%)	1.54	0.62	Yellow bullhead
2066	1472-2660	( 29%)	.199	.139-.258	( 30%)	24.91	10.08	Yellow bass

Table 6. Total fishing catch and catch rates, in kilograms.

KG CAUGHT	95% CI		KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES	
5890	5357-6423	( 9%)	.418	.352-.484	( 16%)	71.00	0.207	All species
209	56-362	( 73%)	.010	.005-.016	( 50%)	2.52	0.129	Black crappie
118	97-140	( 18%)	.011	.008-.014	( 28%)	1.43	0.048	Bluegill
67	10-123	( 84%)	.003	.001-.006	( 66%)	0.81	1.592	Carp
540	415-664	( 23%)	.047	.034-.060	( 27%)	6.51	0.250	Channel catfish
1	0-4	(430%)	.000	.000-.000	(430%)	0.01	0.678	Freshwater drum
2	0-3	( 85%)	.000	.000-.000	(106%)	0.02	0.044	Green sunfish
2706	2369-3042	( 12%)	.166	.118-.215	( 29%)	32.61	0.552	Largemouth bass
365	245-484	( 33%)	.028	.008-.048	( 72%)	4.40	2.073	Tiger muskie
77	58-97	( 25%)	.005	.001-.009	( 81%)	0.93	0.219	Warmouth
1714	1482-1946	( 14%)	.139	.119-.159	( 14%)	20.66	0.118	White crappie
13	5-21	( 62%)	.001	.000-.002	( 94%)	0.16	0.102	Yellow bullhead
79	58-100	( 26%)	.008	.005-.010	( 30%)	0.95	0.038	Yellow bass

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Table 7. Total fishing catch and catch rates, in pounds.

LB CAUGHT	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
12985	11810-14161	( 9%)	.922	.776-1.067 ( 16%)	63.34	0.455	All species
460	122-798	( 73%)	.023	.012-.034 ( 50%)	2.25	0.285	Black crappie
261	213-308	( 18%)	.023	.017-.030 ( 28%)	1.27	0.106	Bluegill
147	23-272	( 84%)	.007	.003-.012 ( 66%)	0.72	3.510	Carp
1190	916-1465	( 23%)	.103	.075-.131 ( 27%)	5.81	0.550	Channel catfish
1	0-8	(430%)	.000	.000-.000 (318%)	0.01	1.495	Freshwater drum
4	1-7	( 85%)	.000	.000-.000 (106%)	0.02	0.098	Green sunfish
5965	5223-6707	( 12%)	.367	.260-.474 ( 29%)	29.10	1.217	Largemouth bass
804	540-1068	( 33%)	.062	.017-.107 ( 72%)	3.92	4.569	Tiger muskie
170	127-213	( 25%)	.011	.002-.019 ( 81%)	0.83	0.482	Warmouth
3779	3268-4291	( 14%)	.306	.263-.350 ( 14%)	18.44	0.260	White crappie
29	11-46	( 62%)	.002	.000-.004 ( 94%)	0.14	0.225	Yellow bullhead
174	129-220	( 26%)	.017	.012-.022 ( 30%)	0.85	0.084	Yellow bass

Table 8. Hours per completed trip and supplementary questions for all trips.

	MEAN	95% CI	MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*					
BOAT	3.3	3.1-3.6 ( 9%)	0.2	15.0	244
SHORE	2.1	1.8-2.5 ( 17%)	0.5	6.0	54
BOAT & SHORE	3.1	2.9-3.4 ( 8%)	0.2	15.0	298
MILES TRAVELED	44.3	39.8-48.9 ( 10%)	1	209	1042
SUCCESS RATING (1-10)	4.2	4.0-4.4 ( 4%)	1	10	1026

\*81 samples were from split interviews of completed trips.  
25.0% of all 1190 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 29 out of 1190 interviews with illegal harvests.

Table 9. Frequency distribution of angler party size for all interviews.

PARTY SIZE:	1	2	3	4	5	6	7	8	9	10+
BOAT INTERVIEWS	358	416	21	12	7	1	2			
SHORE INTERVIEWS	223	108	26	11	2	2		1		

Table 10. Number of interviews (and %) per species sought for all interviews.

402 ( 33.8%)	ANY	All species
22 ( 1.8%)	BLC	Black crappie
1 ( 0.1%)	BLG	Bluegill
49 ( 4.1%)	CCF	Channel catfish
5 ( 0.4%)	CRP	Crappie spp.
541 ( 45.5%)	LMB	Largemouth bass
2 ( 0.2%)	MUE	Muskellunge
5 ( 0.4%)	TGM	Tiger muskie
163 ( 13.7%)	WHC	White crappie



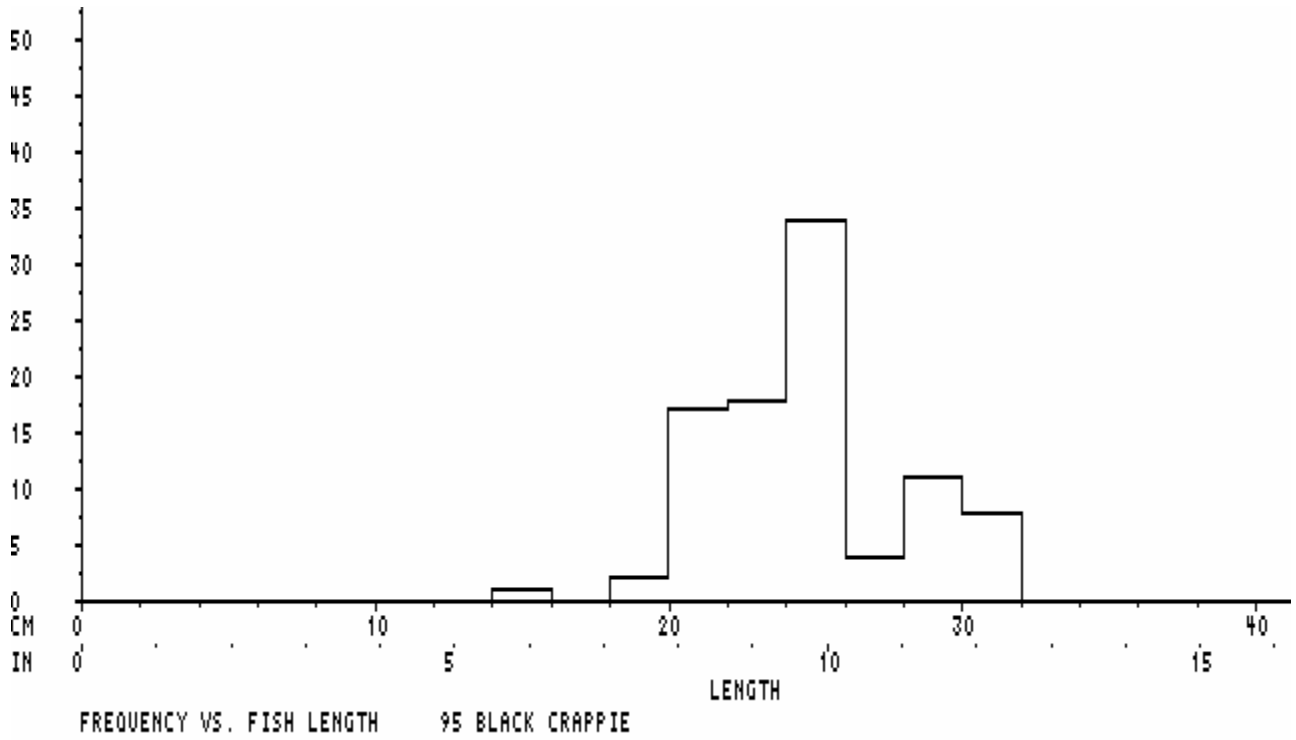


Figure 1. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of black crappie harvested by all anglers.

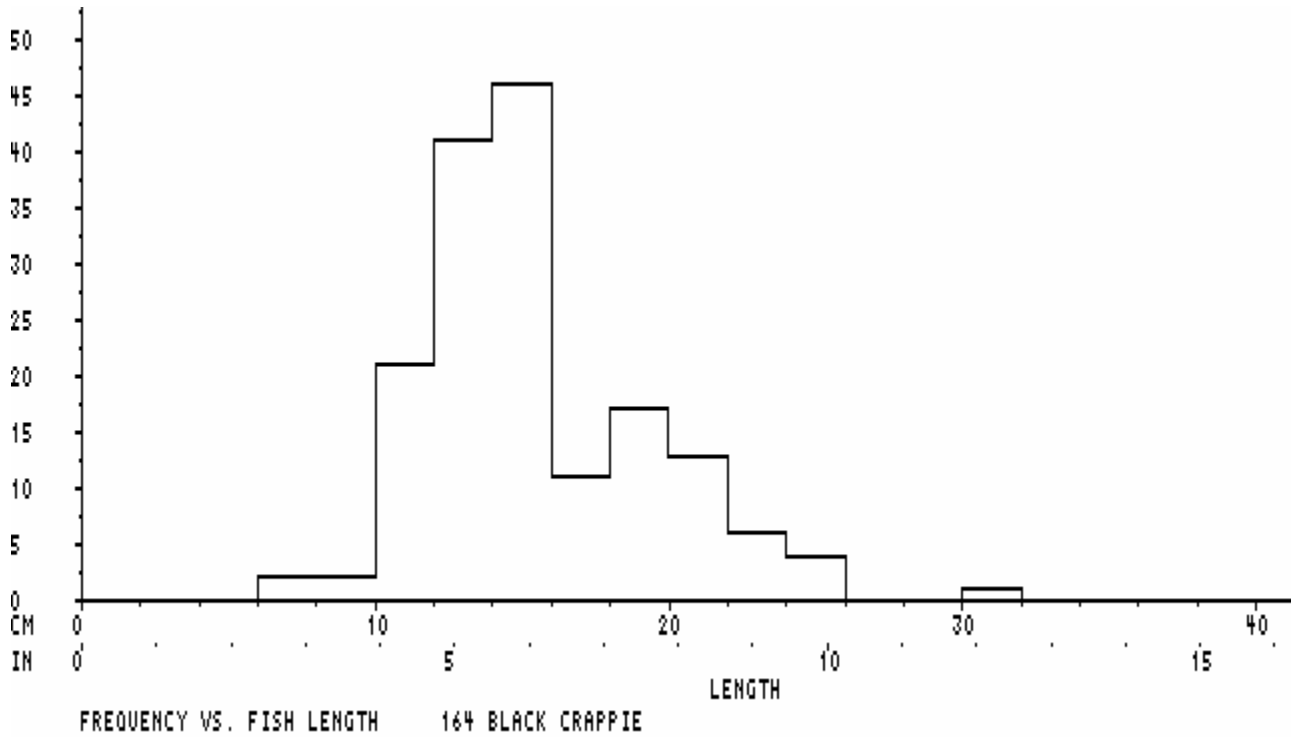


Figure 2. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of black crappie released by all anglers.

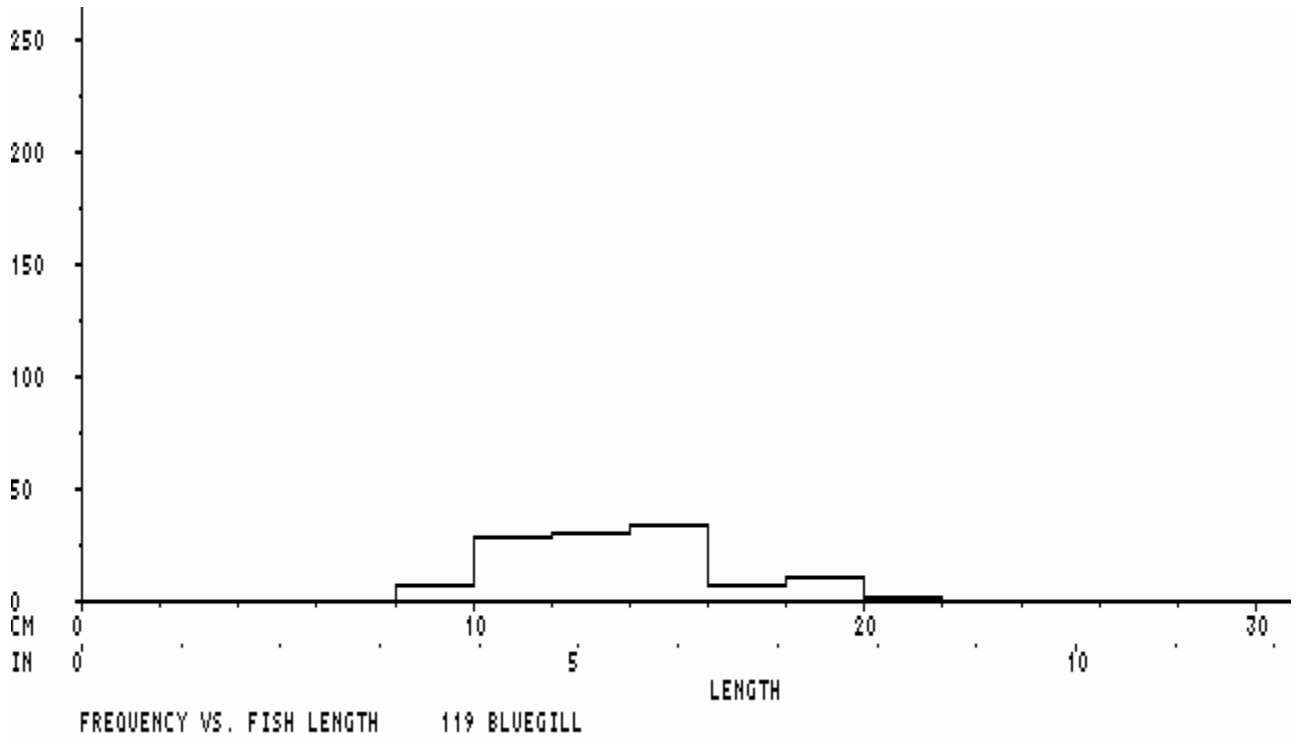


Figure 3. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of bluegill harvested by all anglers.

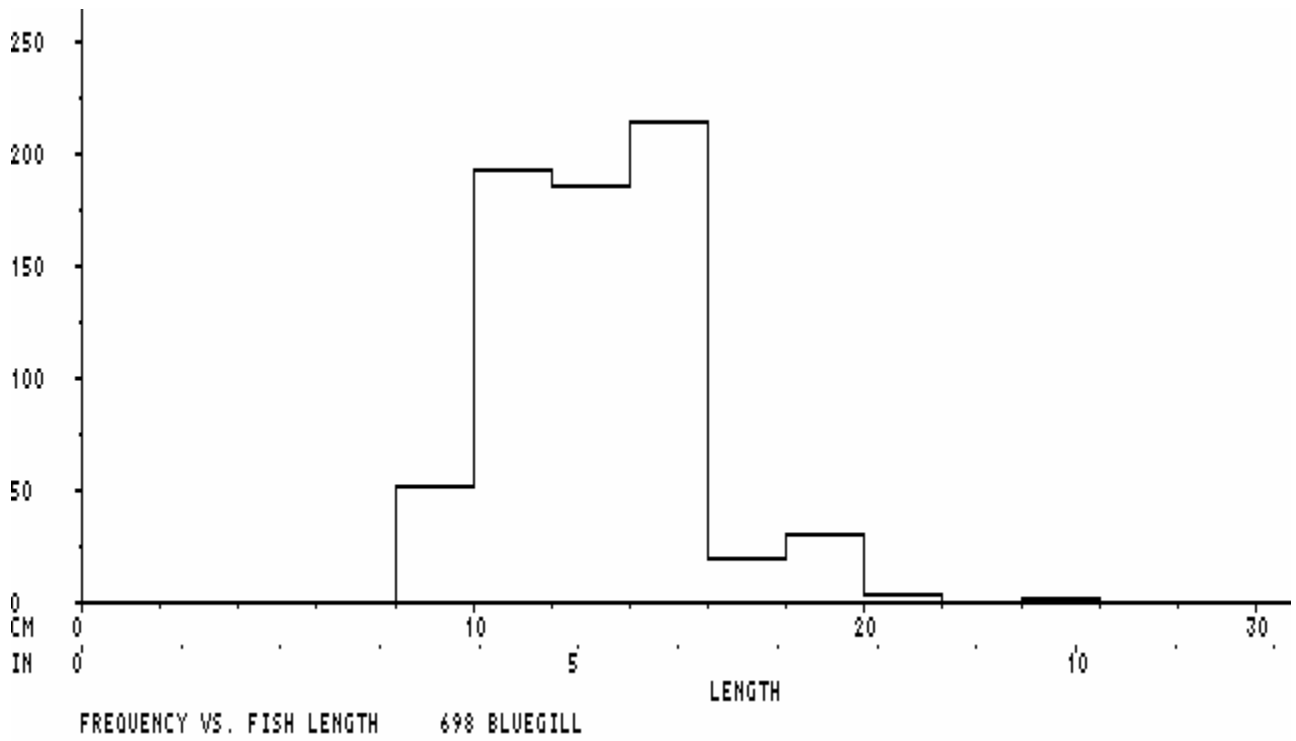


Figure 4. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of bluegill released by all anglers.

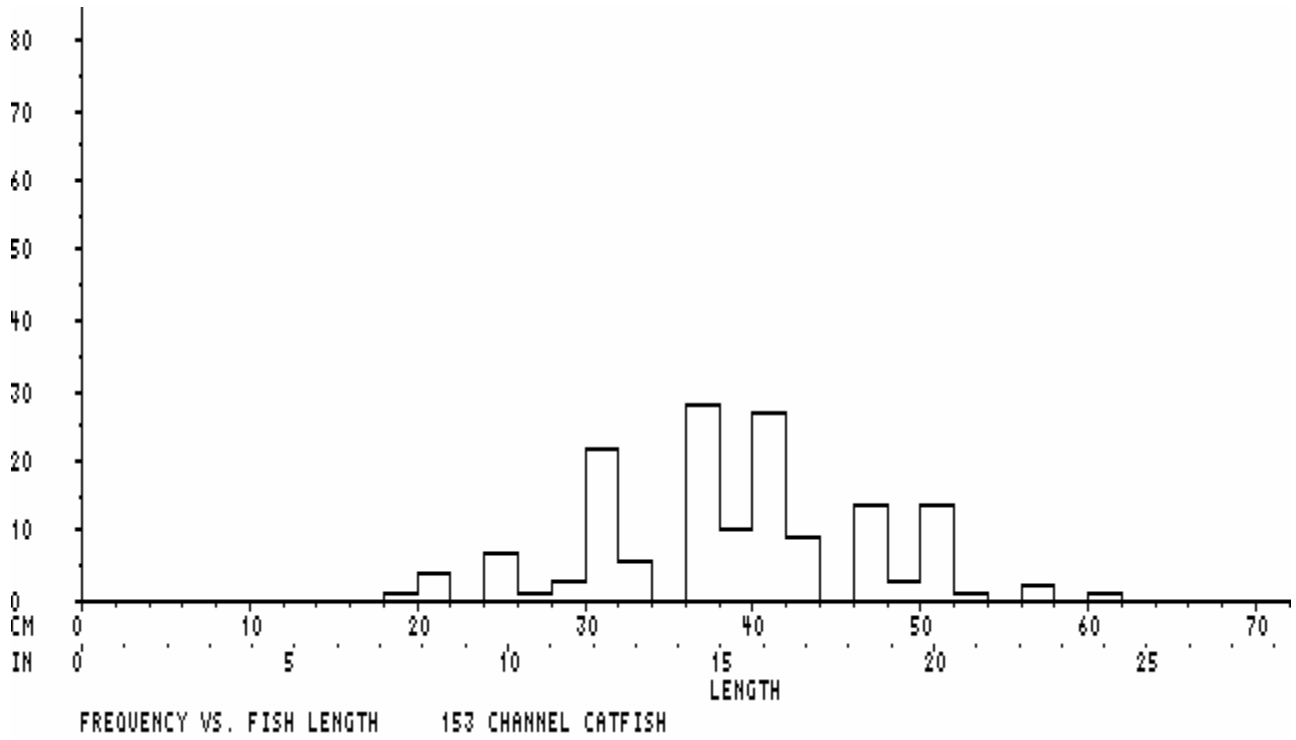


Figure 5. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of channel catfish harvested by all anglers.

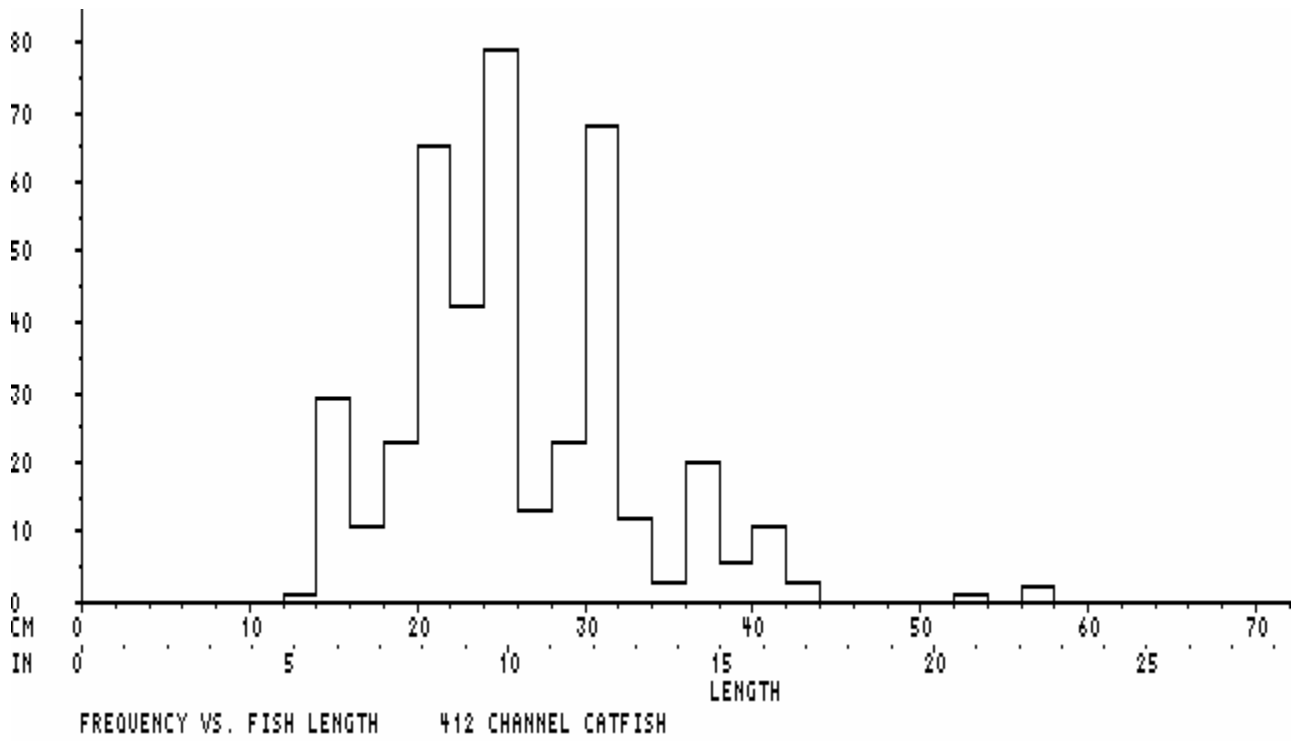


Figure 6. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of channel catfish released by all anglers.

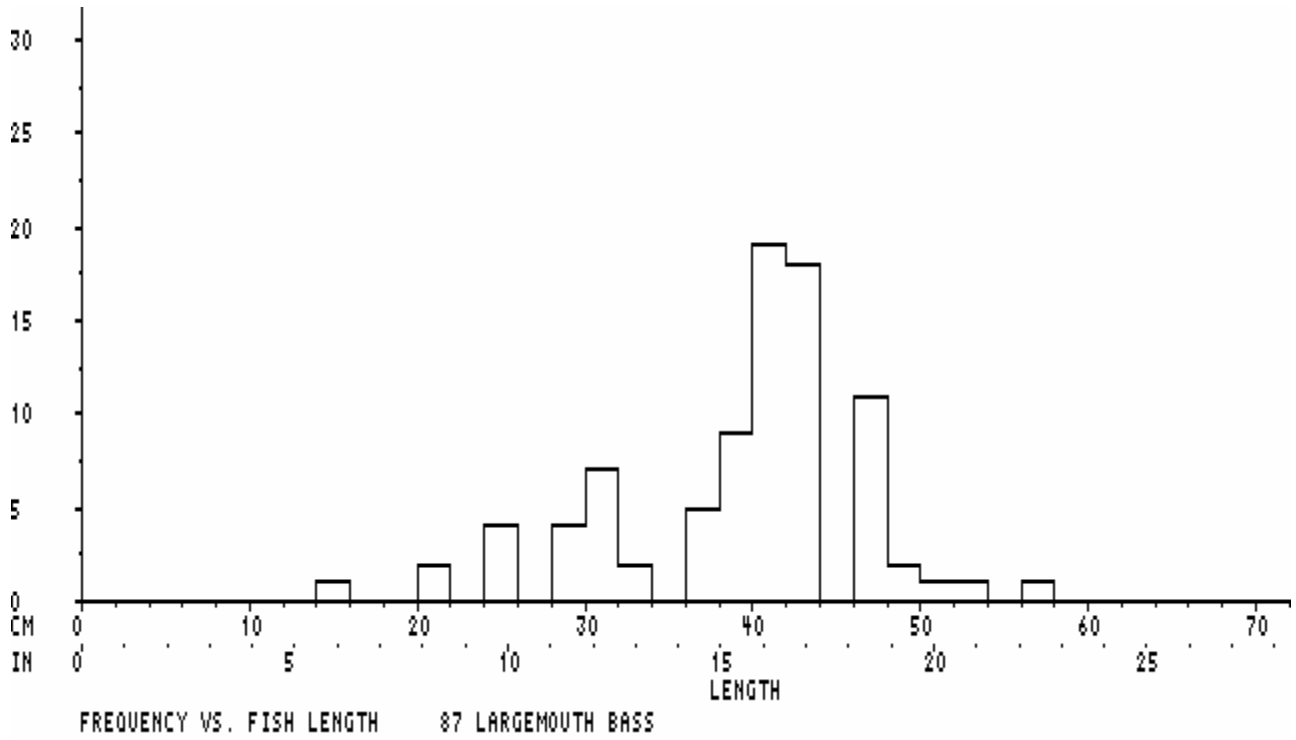


Figure 7. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of largemouth bass harvested by all anglers.

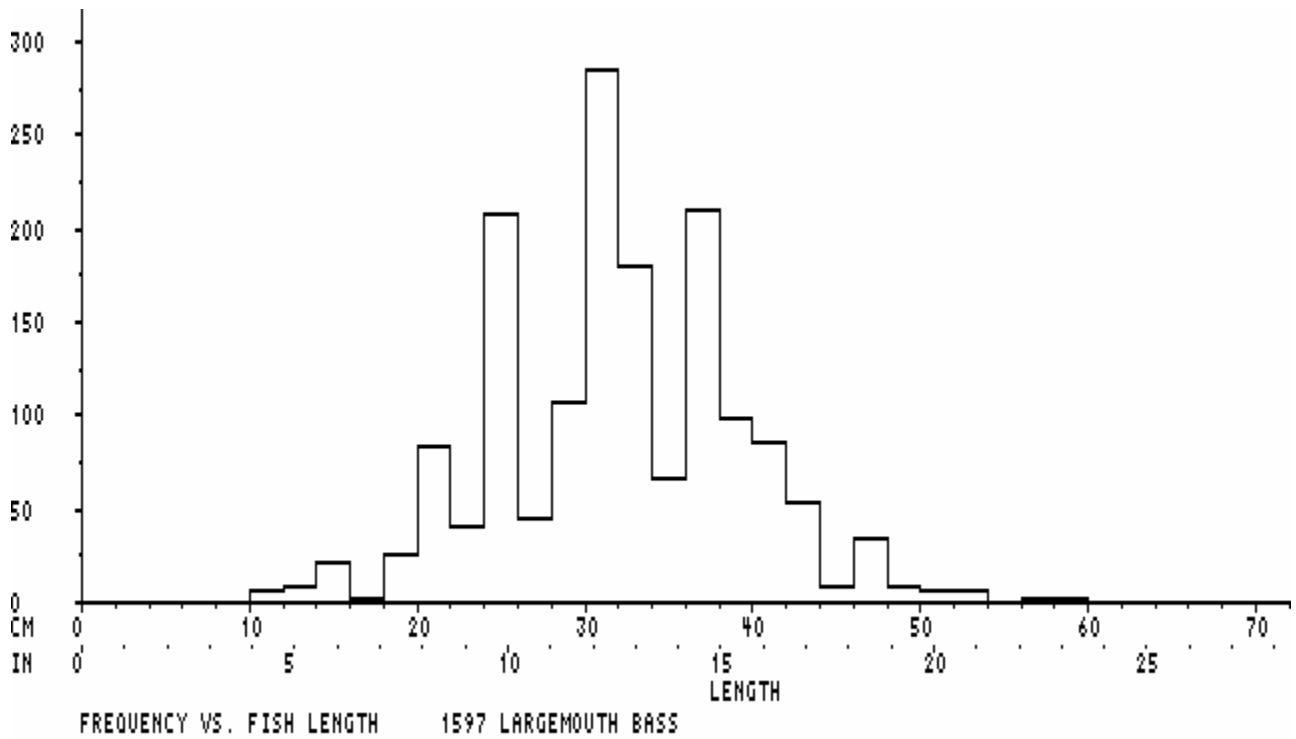


Figure 8. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of largemouth bass released by all anglers. Note the difference in scale from Figure 7.

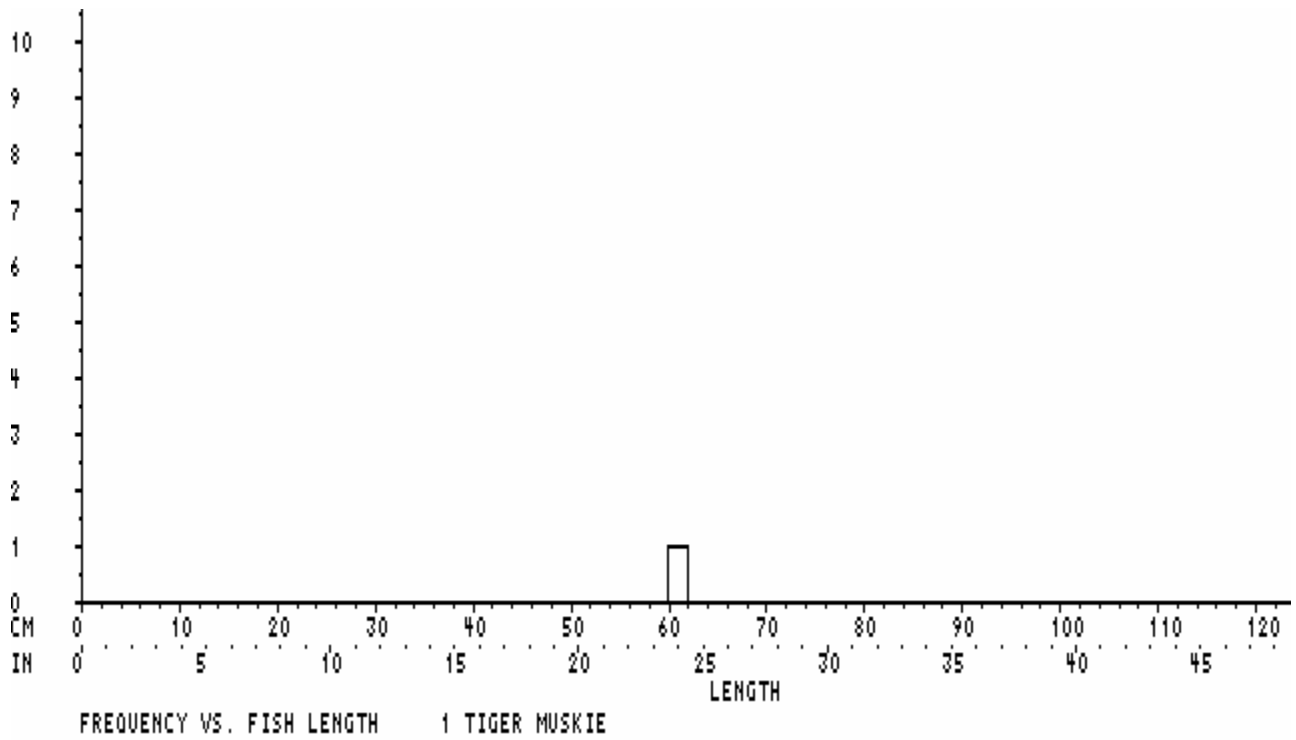


Figure 9. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of tiger muskie harvested by all anglers.

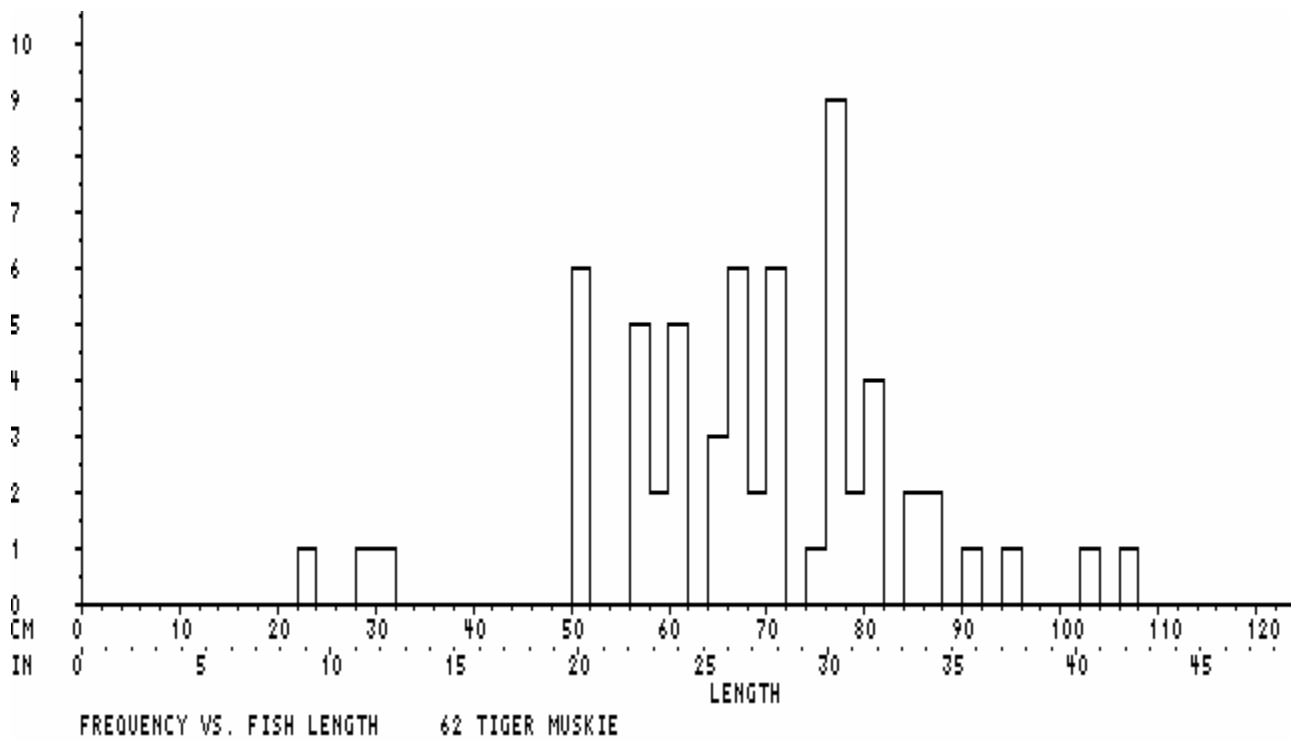


Figure 10. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of tiger muskie released by all anglers.

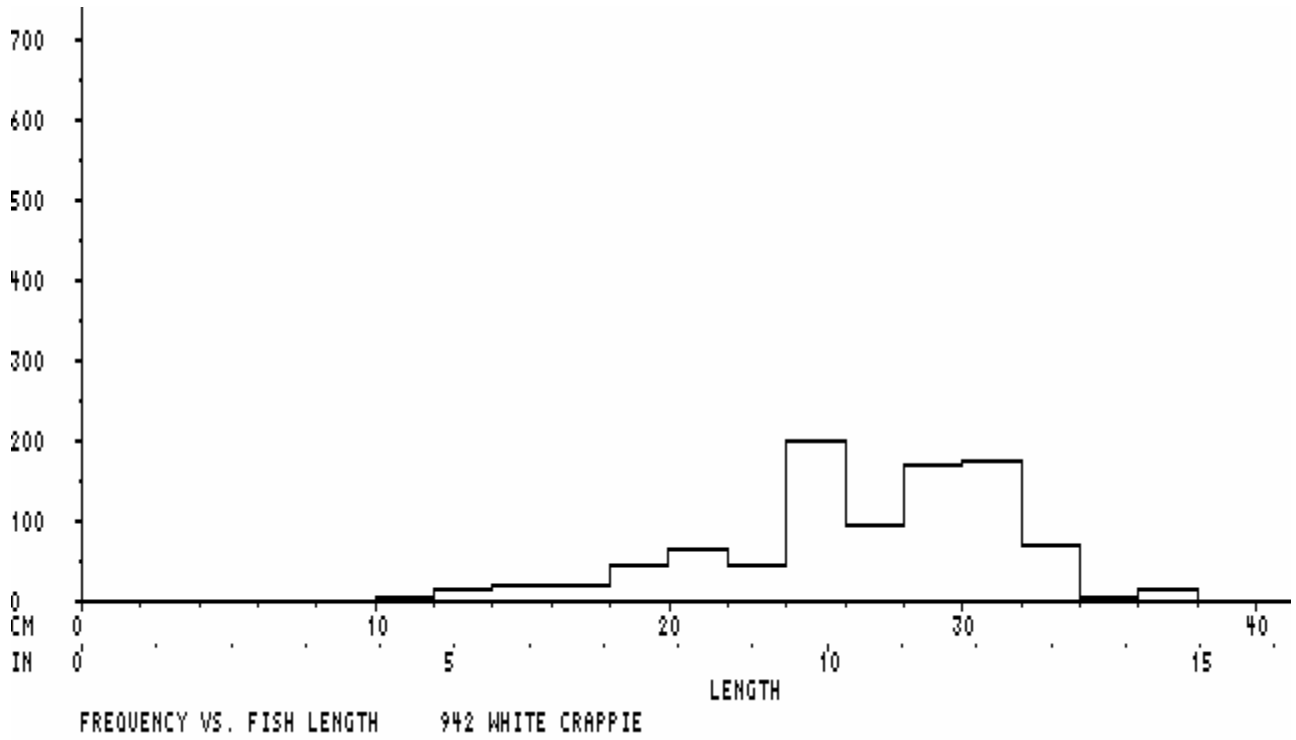


Figure 11. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of white crappie harvested by all anglers.

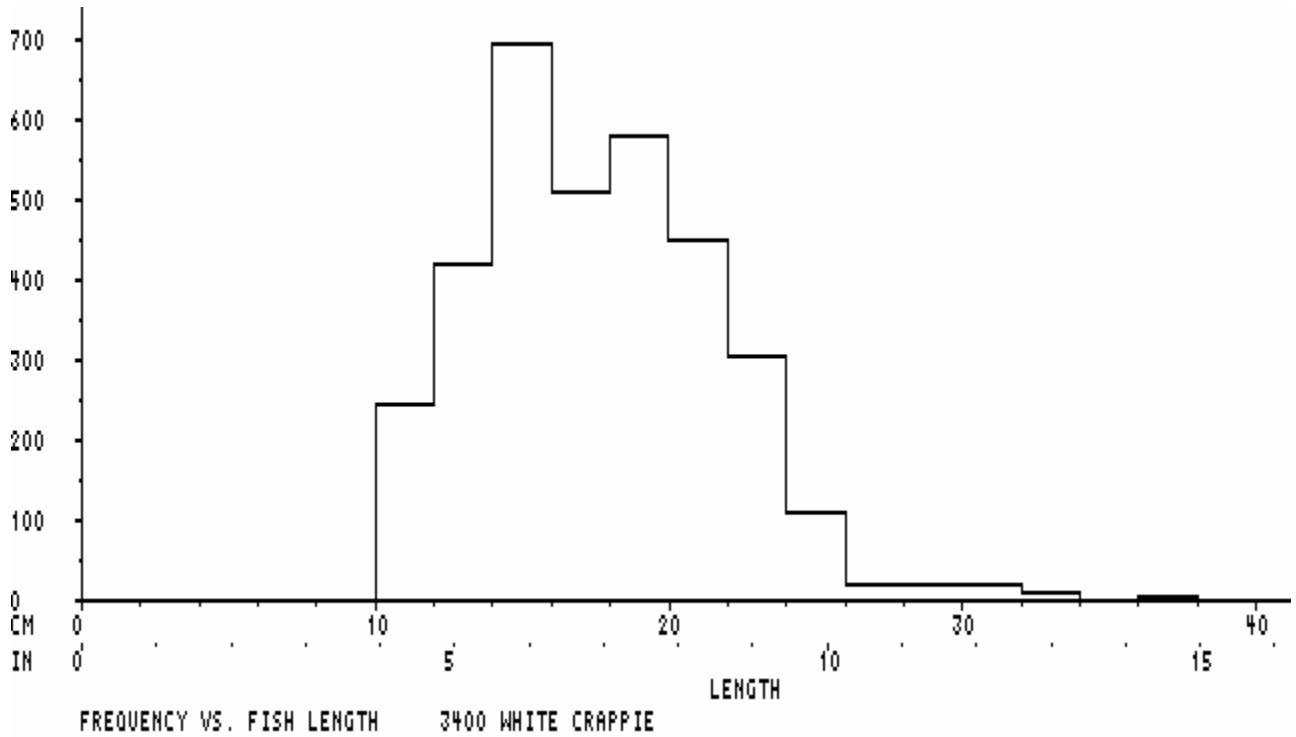


Figure 12. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of white crappie released by all anglers.

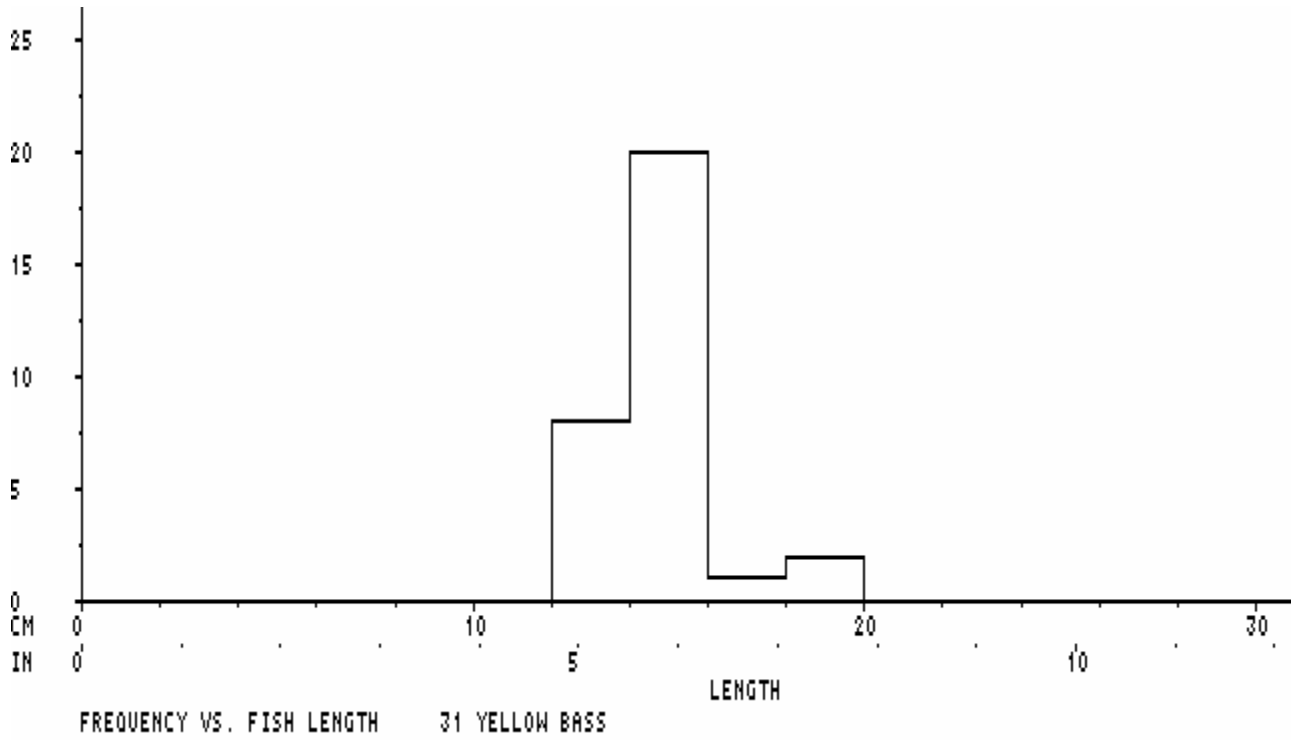


Figure 13. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of yellow bass harvested by all anglers.

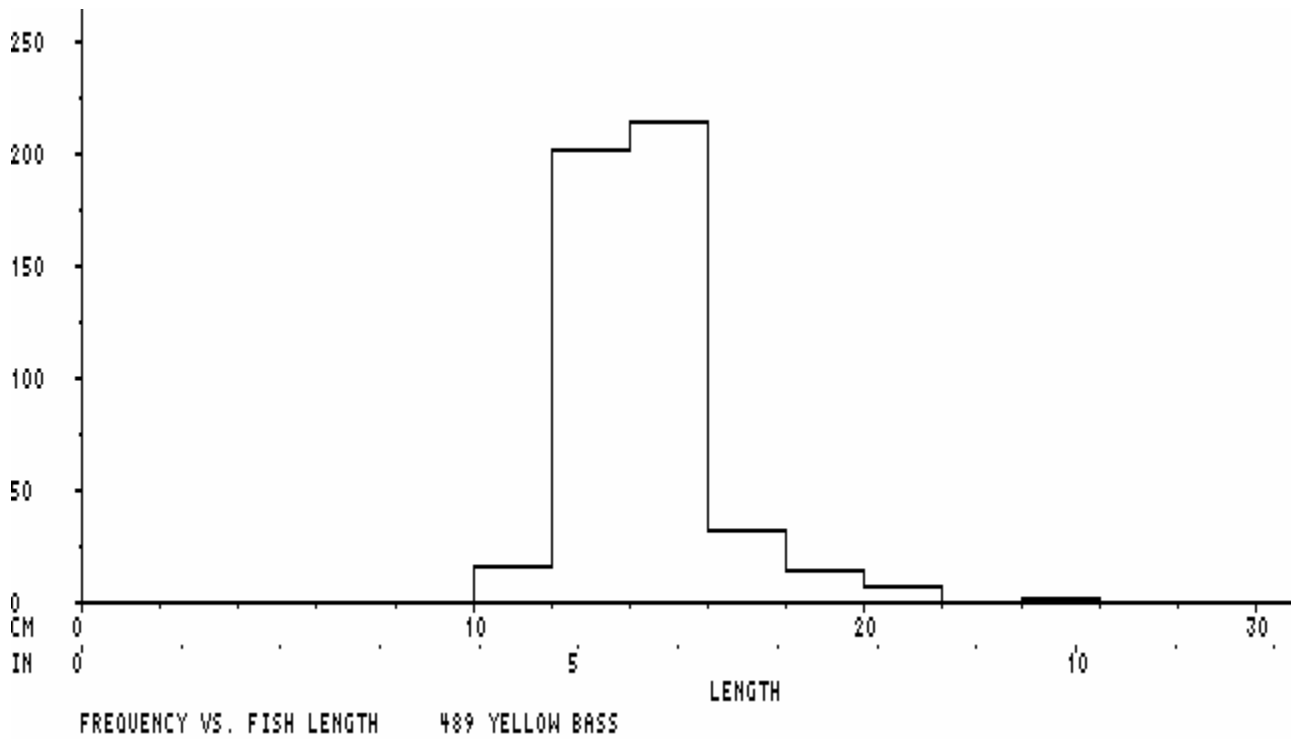


Figure 14. Pana Lake 1999 day creel 3/15 through 10/31. Length-frequency histogram of yellow bass released by all anglers. Note the difference in scale from Figure 13.