

ILLINOIS NATURAL HISTORY SURVEY
 CENTER FOR AQUATIC ECOLOGY
 2000 CREEL SURVEY RESULTS

2000 RED HILLS LAKE
 40 ACRES
 REGION 5, DISTRICT 19

STRATIFICATION SUMMARY:

Day creel only.
 Results cover 03/15/2000 through 10/31/2000
 Year periods stratified.
 Fishing modes (boat vs. shore) stratified.
 Day types (weekday vs. weekend/holiday) stratified.
 Day periods (morning, midday, and afternoon) stratified.

SAMPLING RATIO: 276/693 = 39.8%

NUMBER OF INTERVIEWS: 632

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	1919	1423-2416 (26%)	48	36-60 (26%)	14%
	HOLIDAY	2064	1631-2497 (21%)	52	41-62 (21%)	24%
	TOTAL	3984	3325-4642 (17%)	100	83-116 (17%)	19%
SHORE	WEEKDAY	2625	1951-3300 (26%)	66	49-82 (26%)	10%
	HOLIDAY	3278	2793-3764 (15%)	82	70-94 (15%)	24%
	TOTAL	5904	5073-6735 (14%)	148	127-168 (14%)	18%
BOAT & SHORE	WEEKDAY	4545	3707-5382 (18%)	114	93-135 (18%)	12%
	HOLIDAY	5343	4692-5993 (12%)	134	117-150 (12%)	24%
	TOTAL	9887	8827-10948 (11%)	247	221-274 (11%)	19%

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

# HARVESTED	95% CI		#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
2153	1557-2749	(28%)	.136	.090-.181 (34%)	132.99	53.82	All species
			****	NOT RECORDED	****		Black crappie
1281	869-1693	(32%)	.078	.046-.110 (42%)	79.14	32.03	Bluegill
5	0-13	(167%)	.002	.000-.007 (235%)	0.30	0.12	Bluegill x Redear
345	193-496	(44%)	.022	.008-.036 (64%)	21.28	8.61	Channel catfish
			****	NOT RECORDED	****		Green sunfish
122	0-293	(140%)	.005	.000-.012 (144%)	7.52	3.04	Largemouth bass
			****	NOT RECORDED	****		Rock bass
366	186-546	(49%)	.027	.008-.045 (70%)	22.61	9.15	Redear sunfish
			****	NOT RECORDED	****		Smallmouth bass
12	0-25	(104%)	.000	.000-.001 (142%)	0.75	0.30	Warmouth
23	0-56	(148%)	.002	.000-.005 (127%)	1.40	0.57	White crappie

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

KG HARVESTED	95% CI		KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
608	414-802	(32%)	.035	.024-.047 (33%)	37.58	0.283	All species
			****	NOT RECORDED	****		Black crappie
239	163-315	(32%)	.014	.008-.019 (40%)	14.77	0.187	Bluegill
2	0-4	(156%)	.001	.000-.003 (238%)	0.10	0.353	Bluegill x Redear
156	80-233	(49%)	.008	.003-.013 (57%)	9.66	0.454	Channel catfish
			****	NOT RECORDED	****		Green sunfish
92	0-213	(131%)	.004	.000-.010 (129%)	5.69	0.757	Largemouth bass
			****	NOT RECORDED	****		Rock bass
110	51-169	(53%)	.007	.002-.012 (66%)	6.80	0.301	Redear sunfish
			****	NOT RECORDED	****		Smallmouth bass
2	0-5	(109%)	.000	.000-.000 (158%)	0.14	0.182	Warmouth
7	0-16	(134%)	.001	.000-.002 (146%)	0.42	0.302	White crappie

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

LB HARVESTED	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
1341	914-1768	(32%)	.078	.052-.103 (33%)	33.53	0.623	All species
			****	NOT RECORDED	****		Black crappie
527	359-695	(32%)	.031	.018-.043 (40%)	13.17	0.411	Bluegill
4	0-10	(156%)	.002	.000-.006 (238%)	0.09	0.777	Bluegill x Redear
345	175-514	(49%)	.018	.008-.028 (57%)	8.61	1.000	Channel catfish
			****	NOT RECORDED	****		Green sunfish
203	0-469	(131%)	.009	.000-.021 (129%)	5.08	1.669	Largemouth bass
			****	NOT RECORDED	****		Rock bass
243	113-372	(53%)	.016	.005-.027 (66%)	6.07	0.663	Redear sunfish
			****	NOT RECORDED	****		Smallmouth bass
5	0-10	(109%)	.000	.000-.000 (158%)	0.12	0.401	Warmouth
15	0-35	(134%)	.002	.000-.004 (146%)	0.38	0.666	White crappie

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
7993	6261-9725	(22%)	.563	.416-.710 (26%)	493.76	199.82	All species
37	0-96	(158%)	.005	.000-.017 (220%)	2.31	0.93	Black crappie
4065	2697-5433	(34%)	.284	.167-.400 (41%)	251.11	101.62	Bluegill
5	0-13	(167%)	.002	.000-.007 (235%)	0.30	0.12	Bluegill x Redear
520	324-715	(38%)	.035	.016-.054 (53%)	32.11	12.99	Channel catfish
5	0-12	(157%)	.001	.000-.003 (229%)	0.28	0.11	Green sunfish
2770	1998-3541	(28%)	.194	.137-.251 (29%)	171.11	69.25	Largemouth bass
14	0-31	(129%)	.001	.000-.003 (141%)	0.85	0.34	Rock bass
438	248-629	(43%)	.030	.011-.049 (62%)	27.09	10.96	Redear sunfish
52	0-181	(248%)	.002	.000-.007 (223%)	3.22	1.30	Smallmouth bass
65	26-104	(60%)	.006	.000-.014 (115%)	3.99	1.62	Warmouth
23	0-56	(148%)	.002	.000-.005 (127%)	1.40	0.57	White crappie

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

KG CAUGHT	95% CI		KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
2102	1593-2611	(24%)	.135	.106-.164 (21%)	129.86	0.263	All species
14	0-44	(214%)	.003	.000-.009 (233%)	0.86	0.371	Black crappie
426	300-552	(30%)	.028	.019-.037 (32%)	26.33	0.105	Bluegill
2	0-4	(156%)	.001	.000-.003 (238%)	0.10	0.353	Bluegill x Redear
185	105-266	(44%)	.010	.005-.015 (50%)	11.46	0.357	Channel catfish
1	0-2	(181%)	.000	.000-.001 (233%)	0.05	0.193	Green sunfish
1332	889-1774	(33%)	.084	.060-.107 (28%)	82.25	0.481	Largemouth bass
2	0-4	(125%)	.000	.000-.000 (132%)	0.10	0.114	Rock bass
120	61-180	(49%)	.008	.003-.013 (62%)	7.44	0.275	Redear sunfish
6	0-22	(256%)	.000	.000-.001 (250%)	0.37	0.116	Smallmouth bass
8	3-12	(64%)	.001	.000-.002 (152%)	0.47	0.118	Warmouth
7	0-16	(134%)	.001	.000-.002 (146%)	0.42	0.302	White crappie

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

LB CAUGHT	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
4635	3512-5757	(24%)	.298	.235-.361 (21%)	115.86	0.580	All species
31	0-96	(214%)	.006	.000-.019 (233%)	0.77	0.819	Black crappie
940	662-1218	(30%)	.062	.042-.082 (32%)	23.49	0.231	Bluegill
4	0-10	(156%)	.002	.000-.006 (238%)	0.09	0.777	Bluegill x Redear
409	231-587	(44%)	.022	.011-.033 (50%)	10.22	0.787	Channel catfish
2	0-5	(181%)	.001	.000-.002 (233%)	0.05	0.425	Green sunfish
2935	1961-3910	(33%)	.184	.132-.237 (28%)	73.39	1.060	Largemouth bass
3	0-8	(125%)	.000	.000-.001 (132%)	0.09	0.252	Rock bass
265	135-396	(49%)	.017	.007-.028 (62%)	6.64	0.605	Redear sunfish
13	0-48	(256%)	.000	.000-.002 (250%)	0.33	0.256	Smallmouth bass
17	6-28	(64%)	.002	.000-.004 (152%)	0.42	0.259	Warmouth
15	0-35	(134%)	.002	.000-.004 (146%)	0.38	0.666	White crappie

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

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	2.7	2.1-3.3	(23%)	0.5	8.6	42
SHORE	1.5	1.2-1.9	(25%)	0.2	7.0	30
BOAT & SHORE	2.2	1.8-2.6	(19%)	0.2	8.6	72
MILES TRAVELED	33.9	26.5-41.3	(22%)	1	925	523
SUCCESS RATING (1-10)	3.5	3.3-3.8	(6%)	1	10	515

*23 samples were from split interviews of completed trips.
 11.8% of all 608 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 8 out of 608 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	82	114	21	15						
SHORE INTERVIEWS	133	135	47	43	9	6	1		1	1

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

288 (47.4%)	ANY	All species
99 (16.3%)	BLG	Bluegill
39 (6.4%)	CCF	Channel catfish
8 (1.3%)	CRP	Crappie spp.
168 (27.6%)	LMB	Largemouth bass
5 (0.8%)	RSF	Redear sunfish
1 (0.2%)	SUN	Sunfish spp. excluding Crappie and Black Bass

Table 11. Number of anglers with a given harvest & release for completed trips

# OF FISH:	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Bluegill																
HARVEST	118	1	-	2	2	-	1	-	-	-	-	-	-	-	-	-
RELEASE	99	13	4	-	3	-	-	-	-	-	2	-	-	2	-	1
Channel catfish																
HARVEST	121	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	117	3	4	-	-	-	-	-	-	-	-	-	-	-	-	-
Green sunfish																
HARVEST	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	123	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Largemouth bass																
HARVEST	122	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	79	25	13	2	3	-	1	-	-	-	1	-	-	-	-	-
Redear sunfish																
HARVEST	113	6	3	-	2	-	-	-	-	-	-	-	-	-	-	-
RELEASE	122	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Smallmouth bass																
HARVEST	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	121	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Warmouth																
HARVEST	124	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RELEASE	123	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

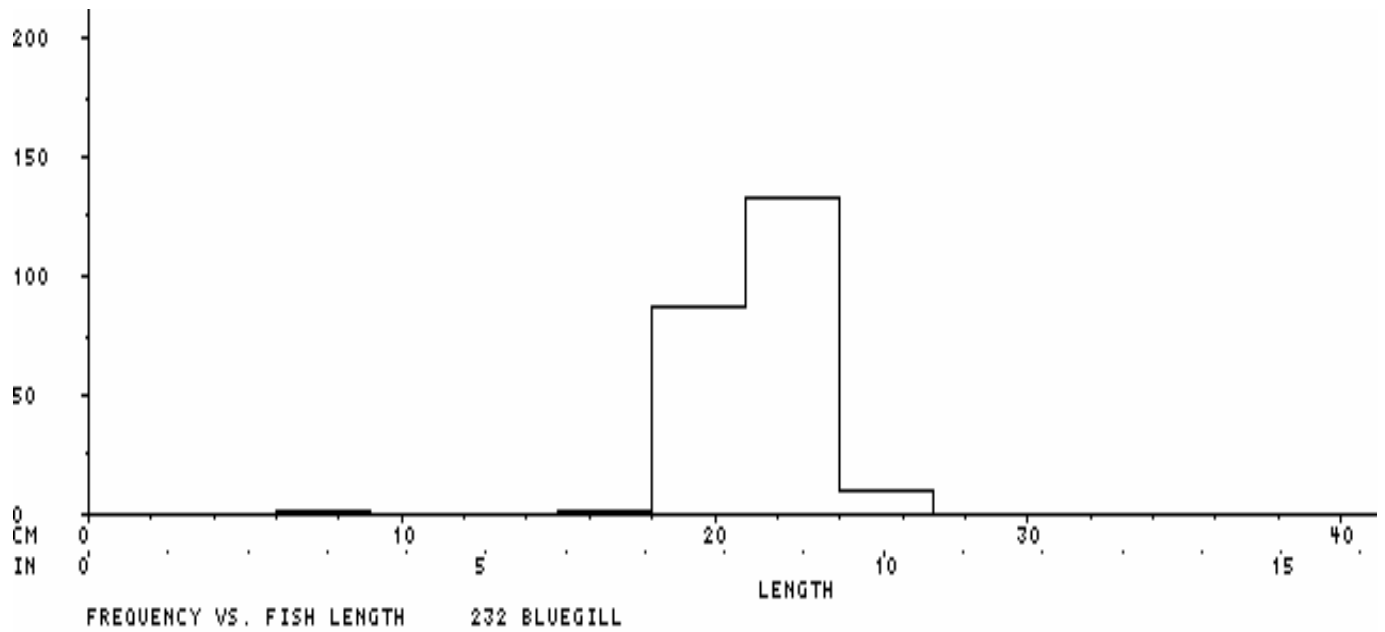


Figure 1. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of bluegill harvested by all anglers.

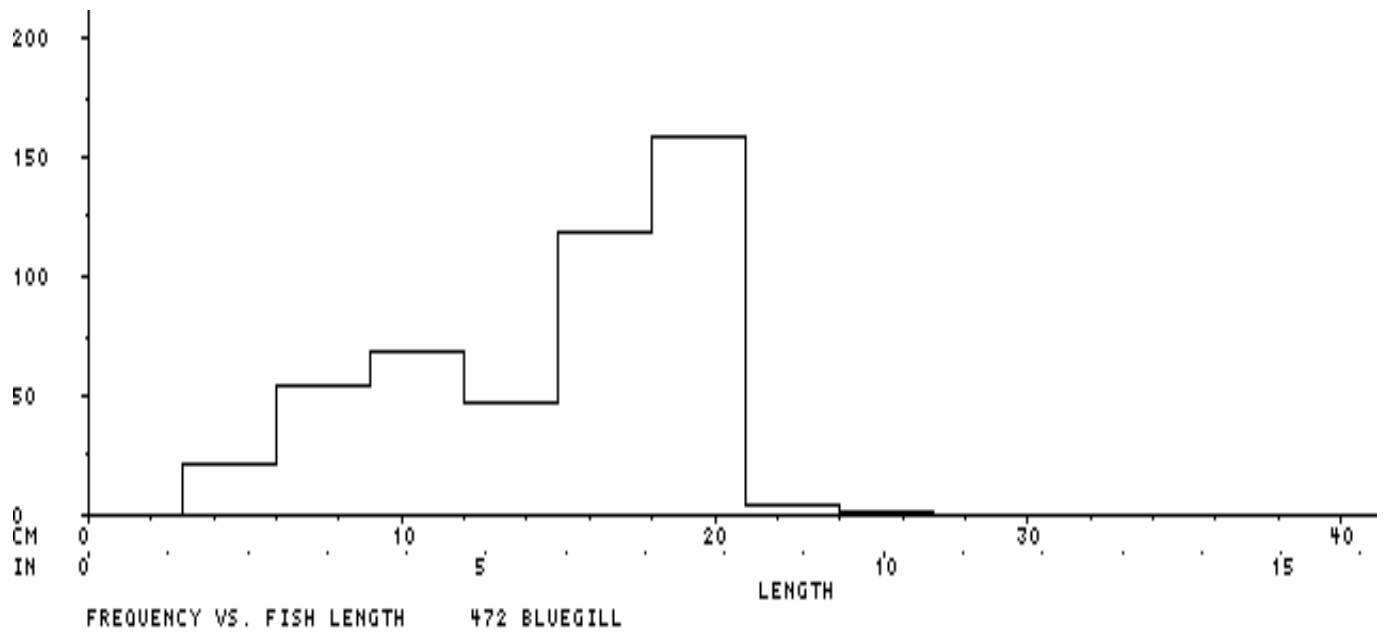


Figure 2. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of bluegill released by all anglers.

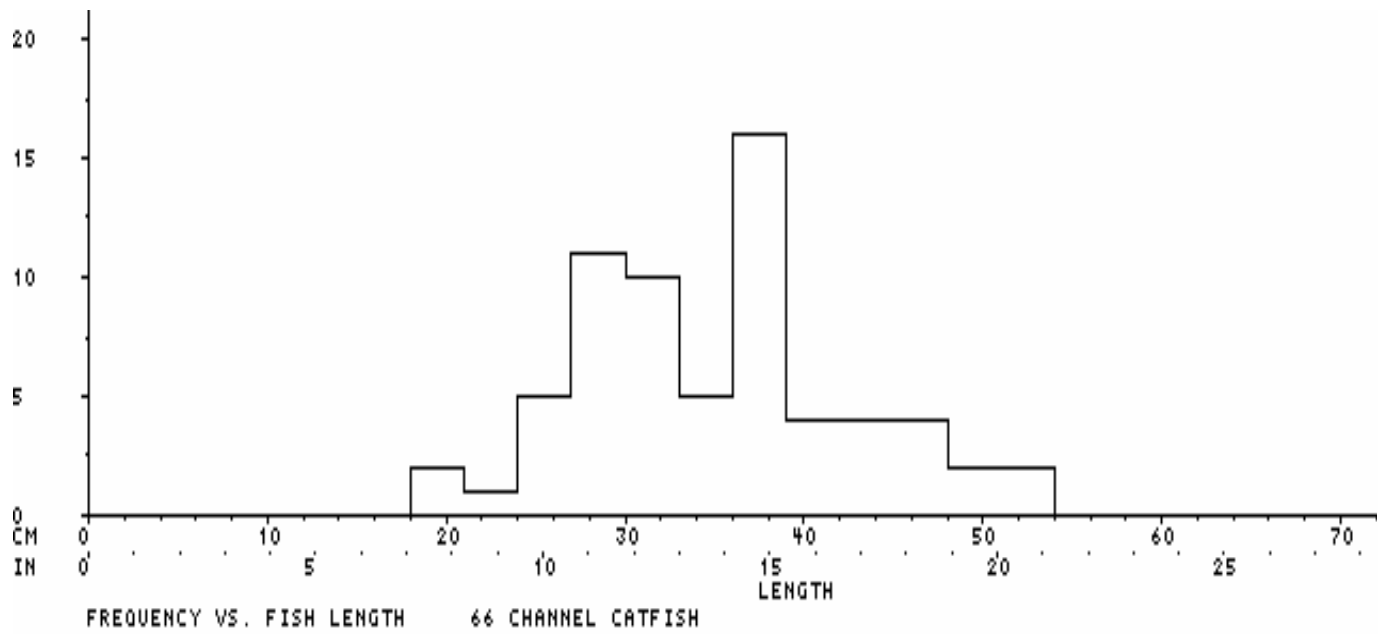


Figure 3. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of channel catfish harvested by all anglers.

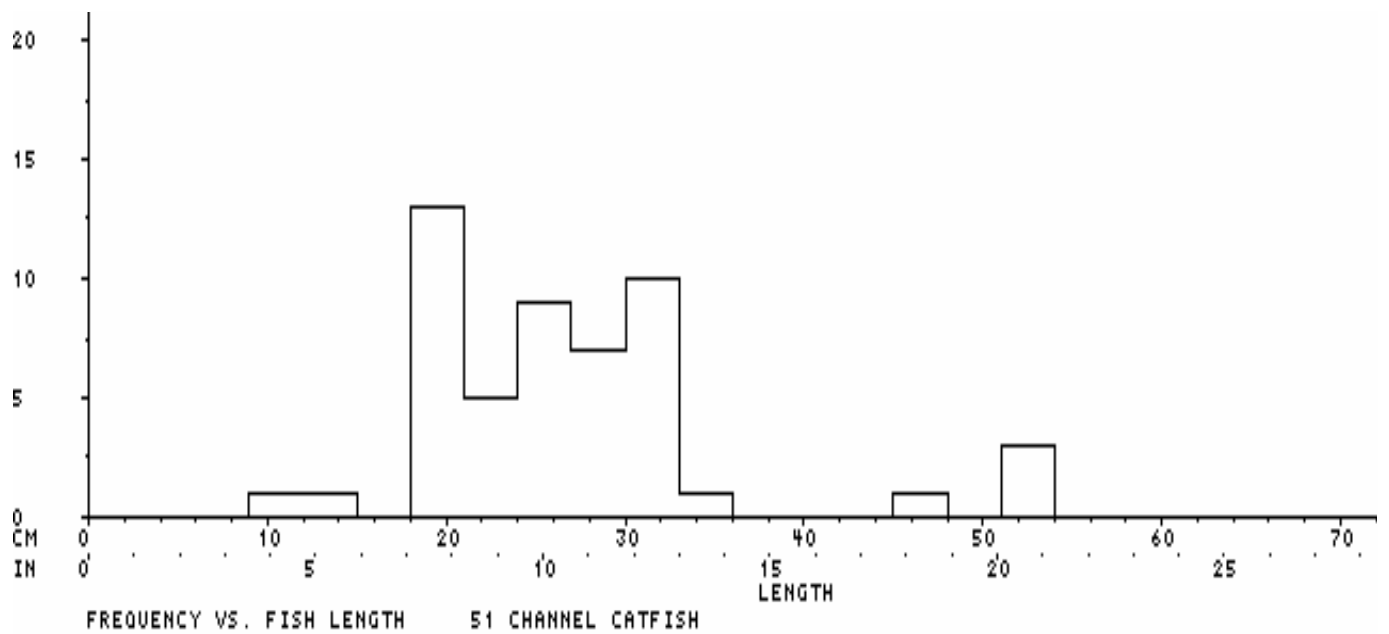


Figure 4. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of channel catfish released by all anglers.

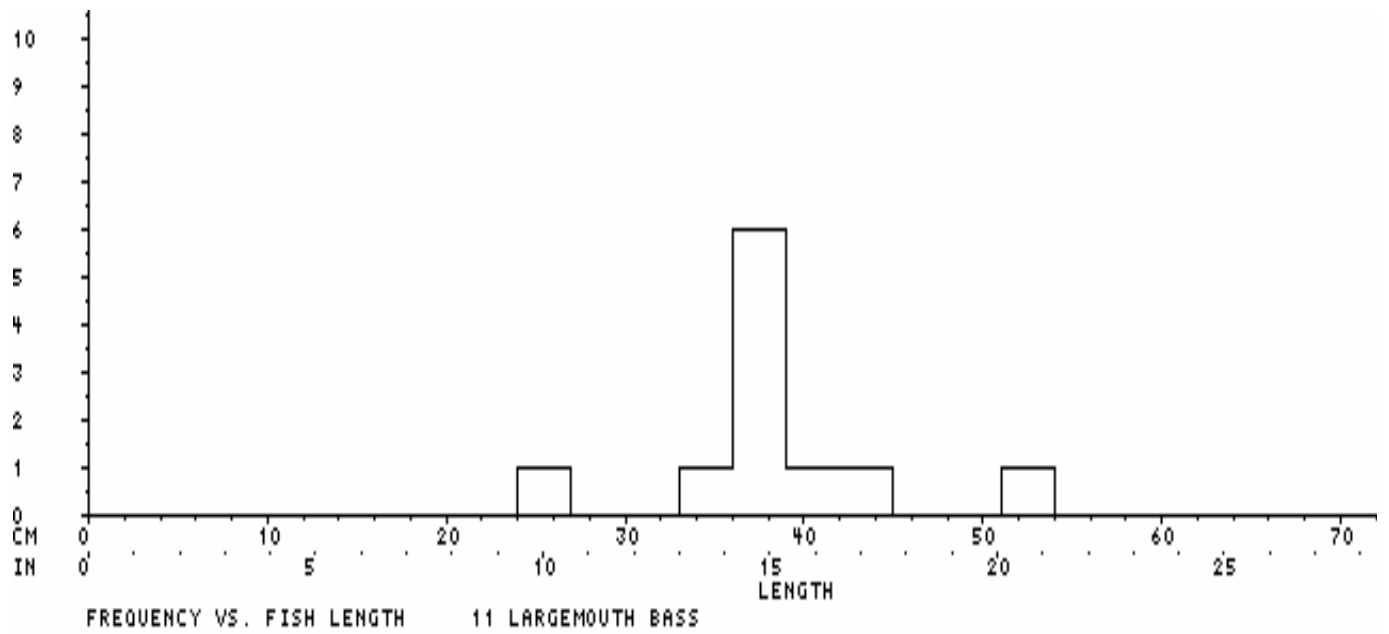


Figure 5. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of largemouth bass harvested by all anglers.

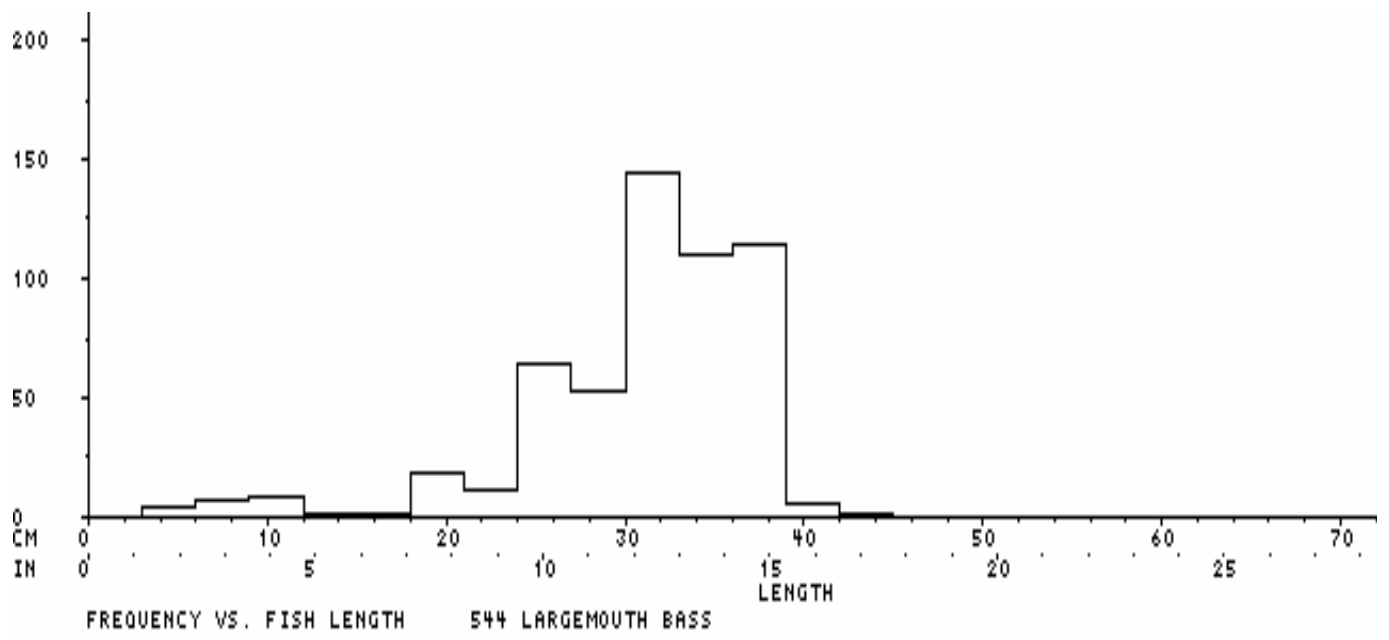


Figure 6. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of largemouth bass released by all anglers. Note the difference in scale from Figure 5.

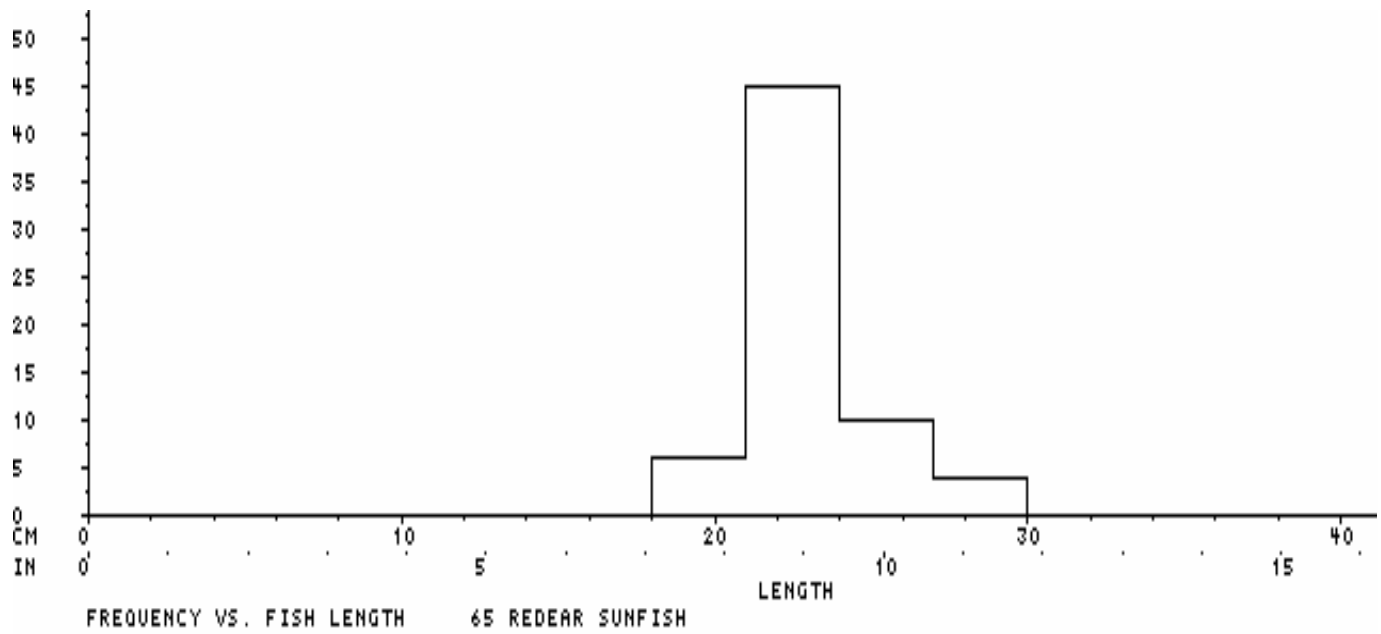


Figure 7. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of reardear sunfish harvested by all anglers.

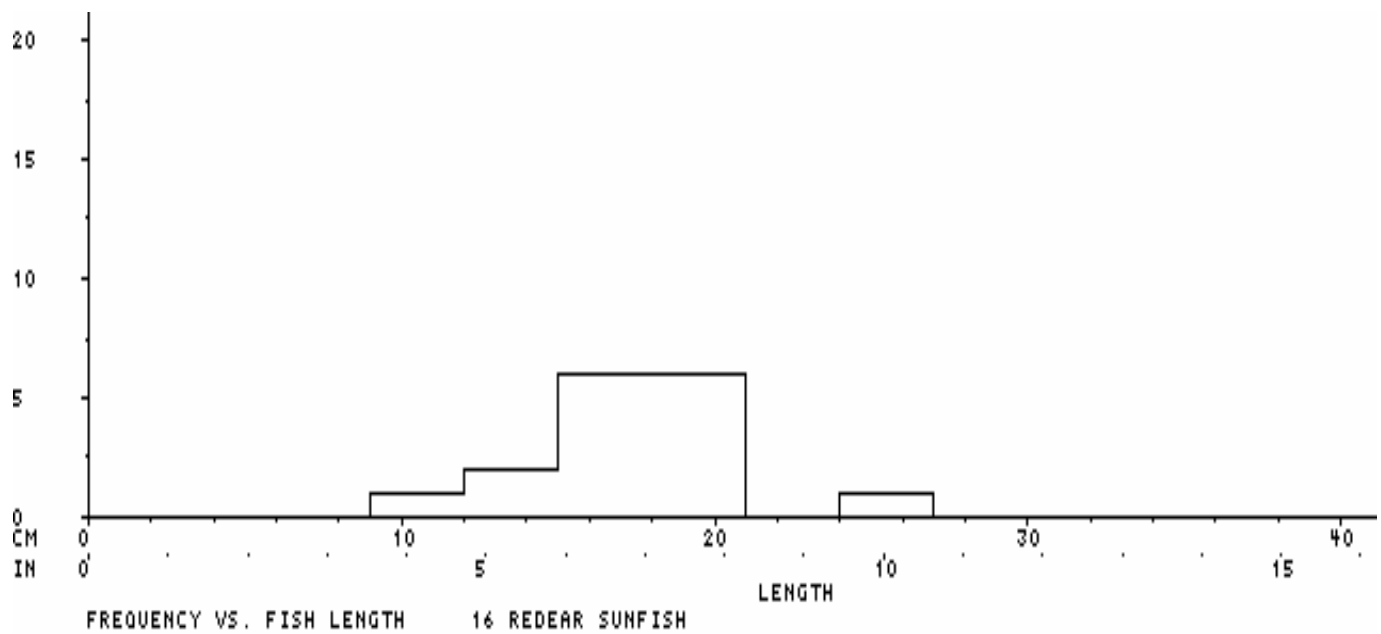


Figure 8. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of reardear sunfish released by all anglers. Note the difference in scale from Figure 7.

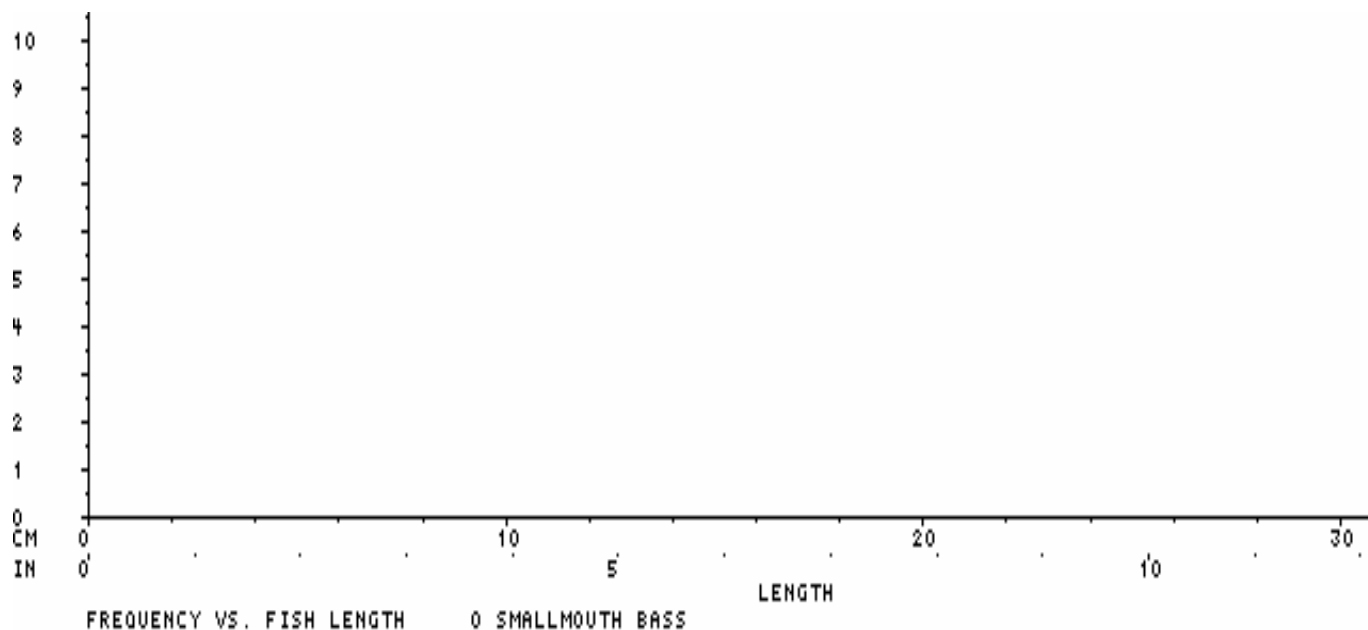


Figure 9. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of smallmouth bass harvested by all anglers.

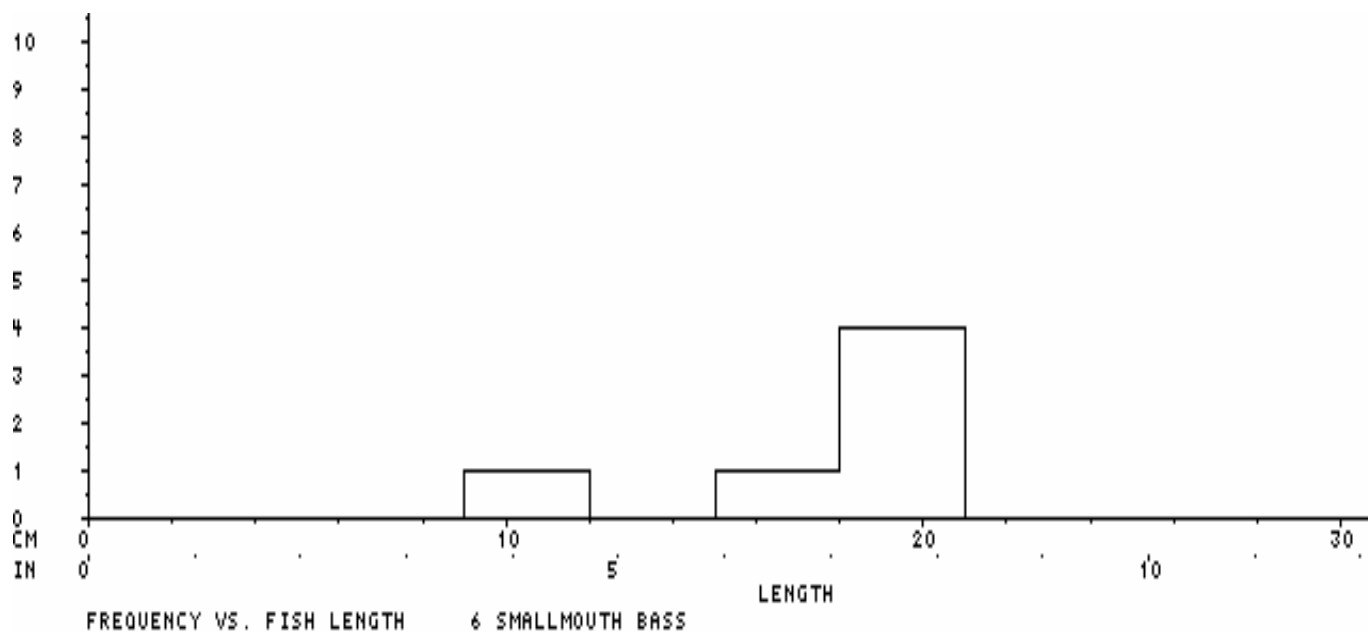


Figure 10. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of smallmouth bass released by all anglers.

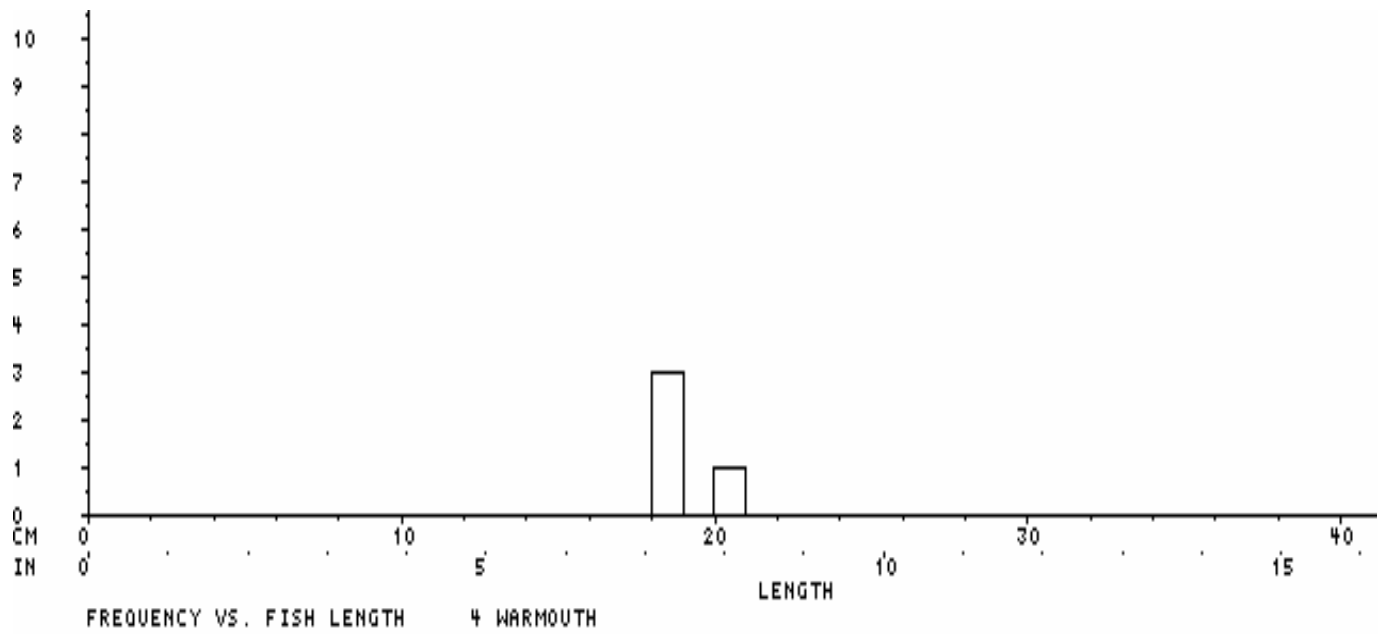


Figure 11. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of warmouth harvested by all anglers.

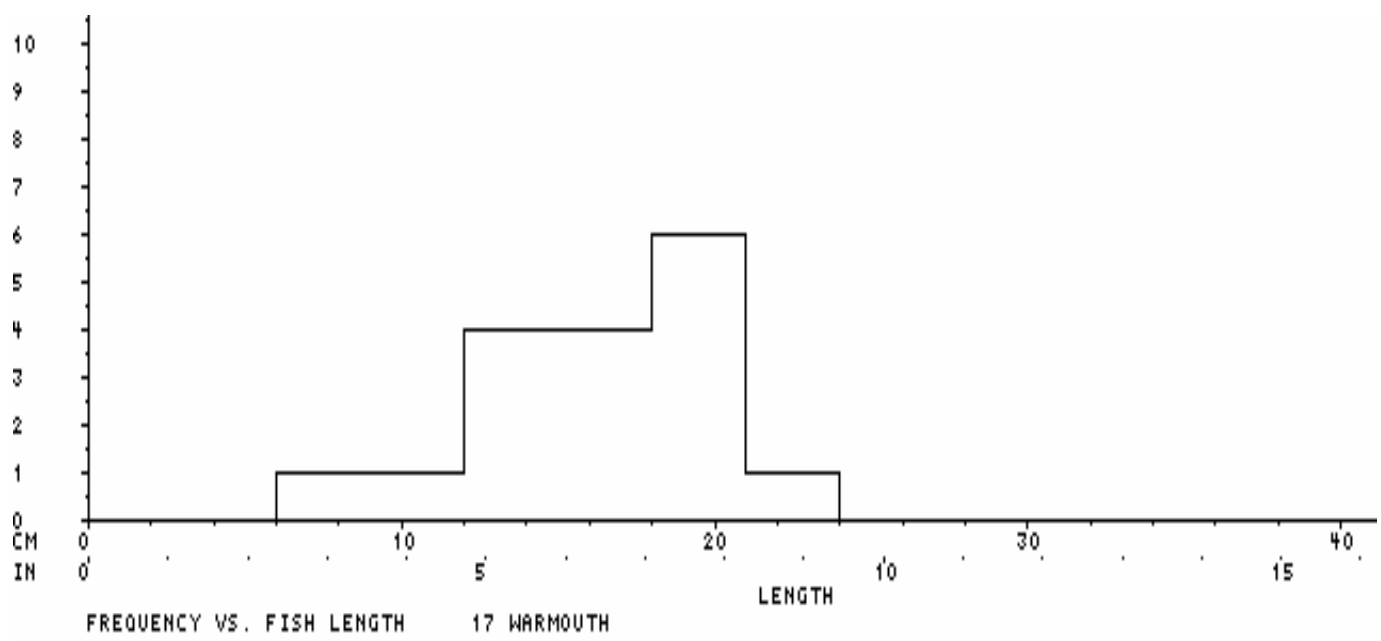


Figure 12. Red Hills Lake 2000 day creel 3/15 through 10/31. Length-frequency histogram of warmouth released by all anglers.