

ILLINOIS NATURAL HISTORY SURVEY  
 CENTER FOR AQUATIC ECOLOGY  
 2003 CREEL SURVEY RESULTS

2003 RED HILLS LAKE  
 40 ACRES  
 REGION 5, DISTRICT 19

STRATIFICATION SUMMARY:

Day creel only.  
 Results cover 03/15/2003 through 10/31/2003  
 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: 293/693 = 42.3%

NUMBER OF INTERVIEWS: 836

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	1801	1392-2210 ( 23%)	45	35-55 ( 23%)	17%
	HOLIDAY	1805	1490-2120 ( 17%)	45	37-53 ( 17%)	39%
	TOTAL	3606	3089-4122 ( 14%)	90	77-103 ( 14%)	28%
SHORE	WEEKDAY	3643	2952-4335 ( 19%)	91	74-108 ( 19%)	16%
	HOLIDAY	3473	2966-3979 ( 15%)	87	74-99 ( 15%)	33%
	TOTAL	7116	6283-7949 ( 12%)	178	157-199 ( 12%)	24%
BOAT & SHORE	WEEKDAY	5444	4667-6222 ( 14%)	136	117-156 ( 14%)	17%
	HOLIDAY	5277	4681-5874 ( 11%)	132	117-147 ( 11%)	35%
	TOTAL	10722	9742-11702 ( 9%)	268	244-293 ( 9%)	26%

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

# HARVESTED	95% CI		#/HOUR	95% CI	#/HA	#/ACRE	SPECIES
3607	2706-4509	( 25%)	.228	.158-.298 ( 31%)	222.85	90.19	All species
1748	1116-2379	( 36%)	.125	.072-.178 ( 42%)	107.95	43.69	Black crappie
636	397-874	( 38%)	.031	.017-.045 ( 45%)	39.26	15.89	Bluegill
			****	NOT RECORDED	****		Bowfin
35	0-109	(209%)	.001	.000-.002 (210%)	2.17	0.88	Carp
182	89-274	( 51%)	.009	.004-.013 ( 54%)	11.23	4.54	Channel catfish
			****	NOT RECORDED	****		Green sunfish
55	15-95	( 73%)	.004	.000-.008 (106%)	3.39	1.37	Largemouth bass
198	122-274	( 38%)	.010	.005-.015 ( 46%)	12.21	4.94	Redear sunfish
			****	NOT RECORDED	****		Smallmouth bass
			****	NOT RECORDED	****		Threadfin shad
120	21-219	( 82%)	.004	.001-.006 ( 69%)	7.40	3.00	Warmouth
			****	NOT RECORDED	****		White catfish
635	371-899	( 42%)	.045	.025-.065 ( 45%)	39.23	15.87	White crappie
			****	NOT RECORDED	****		Yellow bullhead

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

KG HARVESTED	95% CI		KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
712	537-886	( 25%)	.045	.031-.058 ( 30%)	43.98	0.197	All species
327	210-444	( 36%)	.024	.013-.034 ( 43%)	20.19	0.187	Black crappie
92	57-128	( 39%)	.004	.003-.006 ( 43%)	5.69	0.145	Bluegill
			****	NOT RECORDED	****		Bowfin
1	0-3	(209%)	.000	.000-.000 (209%)	0.06	0.029	Carp
60	29-91	( 51%)	.003	.001-.004 ( 56%)	3.70	0.330	Channel catfish
			****	NOT RECORDED	****		Green sunfish
47	13-81	( 73%)	.004	.000-.009 (141%)	2.89	0.850	Largemouth bass
42	26-58	( 38%)	.002	.001-.003 ( 47%)	2.57	0.211	Redear sunfish
			****	NOT RECORDED	****		Smallmouth bass
			****	NOT RECORDED	****		Threadfin shad
38	0-88	(132%)	.001	.000-.002 (119%)	2.35	0.318	Warmouth
			****	NOT RECORDED	****		White catfish
106	61-150	( 42%)	.007	.004-.010 ( 44%)	6.52	0.166	White crappie
			****	NOT RECORDED	****		Yellow bullhead

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

LB HARVESTED	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
1569	1185-1954	( 25%)	.098	.068-.128 ( 30%)	39.24	0.435	All species
721	462-979	( 36%)	.052	.029-.074 ( 43%)	18.02	0.412	Black crappie
203	125-281	( 39%)	.010	.006-.014 ( 43%)	5.08	0.319	Bluegill
			****	NOT RECORDED	****		Bowfin
2	0-7	(209%)	.000	.000-.000 (210%)	0.06	0.064	Carp
132	64-200	( 51%)	.006	.003-.009 ( 56%)	3.30	0.727	Channel catfish
			****	NOT RECORDED	****		Green sunfish
103	28-178	( 73%)	.008	.000-.019 (141%)	2.57	1.874	Largemouth bass
92	57-127	( 38%)	.005	.002-.007 ( 47%)	2.30	0.465	Redear sunfish
			****	NOT RECORDED	****		Smallmouth bass
			****	NOT RECORDED	****		Threadfin shad
84	0-195	(132%)	.002	.000-.005 (119%)	2.10	0.700	Warmouth
			****	NOT RECORDED	****		White catfish
233	134-331	( 42%)	.016	.009-.023 ( 44%)	5.82	0.366	White crappie
			****	NOT RECORDED	****		Yellow bullhead

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
14274	10981-17567 ( 23%)	.922	.710-1.134 ( 23%)	881.78	356.85	All species
2006	1297-2716 ( 35%)	.157	.099-.214 ( 37%)	123.95	50.16	Black crappie
7899	5536-10261 ( 30%)	.479	.323-.635 ( 33%)	487.93	197.46	Bluegill
2	0-7 (278%)	.000	.000-.000 (278%)	0.11	0.04	Bowfin
41	0-115 (180%)	.001	.000-.003 (161%)	2.55	1.03	Carp
297	189-406 ( 36%)	.015	.009-.021 ( 40%)	18.38	7.44	Channel catfish
3	0-14 (318%)	.000	.000-.000 (318%)	0.21	0.09	Green sunfish
2159	1186-3131 ( 45%)	.143	.105-.182 ( 27%)	133.35	53.97	Largemouth bass
665	390-940 ( 41%)	.050	.018-.082 ( 63%)	41.07	16.62	Redear sunfish
8	0-25 (220%)	.002	.000-.005 (220%)	0.49	0.20	Smallmouth bass
32	0-85 (164%)	.001	.000-.003 (146%)	1.98	0.80	Threadfin shad
357	201-514 ( 44%)	.019	.006-.032 ( 68%)	22.08	8.93	Warmouth
10	0-32 (231%)	.001	.000-.002 (231%)	0.60	0.24	White catfish
784	496-1072 ( 37%)	.053	.032-.075 ( 40%)	48.42	19.60	White crappie
11	0-24 (125%)	.001	.000-.002 (140%)	0.66	0.27	Yellow bullhead

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

KG CAUGHT	95% CI	KG/HOUR	95% CI	KG/HA	AVE KG	SPECIES
2178	1738-2618 ( 20%)	.142	.113-.171 ( 20%)	134.56	0.153	All species
356	234-479 ( 34%)	.027	.016-.038 ( 39%)	22.01	0.178	Black crappie
620	437-802 ( 29%)	.037	.023-.051 ( 37%)	38.27	0.078	Bluegill
0	0-2 (318%)	.000	.000-.000 (318%)	0.03	0.261	Bowfin
2	0-4 (144%)	.000	.000-.000 (171%)	0.10	0.041	Carp
83	50-116 ( 39%)	.004	.003-.006 ( 42%)	5.14	0.279	Channel catfish
0	0-1 (318%)	.000	.000-.000 (318%)	0.02	0.100	Green sunfish
831	556-1107 ( 33%)	.056	.039-.072 ( 30%)	51.36	0.385	Largemouth bass
96	65-126 ( 32%)	.007	.004-.009 ( 44%)	5.92	0.144	Redear sunfish
0	0-1 (220%)	.000	.000-.000 (220%)	0.02	0.051	Smallmouth bass
		****	NOT RECORDED ****			Threadfin shad
67	14-120 ( 79%)	.003	.001-.005 ( 68%)	4.12	0.187	Warmouth
		****	NOT RECORDED ****			White catfish
119	73-166 ( 39%)	.008	.005-.011 ( 41%)	7.37	0.152	White crappie
3	0-7 (132%)	.000	.000-.001 (140%)	0.19	0.286	Yellow bullhead

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

LB CAUGHT	95% CI		LB/HOUR	95% CI	LB/ACRE	AVE LB	SPECIES
4802	3832-5772	( 20%)	.313	.249-.376 ( 20%)	120.05	0.336	All species
786	516-1055	( 34%)	.060	.036-.083 ( 39%)	19.64	0.392	Black crappie
1366	963-1769	( 29%)	.081	.051-.112 ( 37%)	34.15	0.173	Bluegill
1	0-4	(278%)	.000	.000-.000 (318%)	0.03	0.575	Bowfin
4	0-9	(144%)	.000	.000-.000 (171%)	0.09	0.090	Carp
183	111-256	( 39%)	.010	.006-.014 ( 42%)	4.58	0.616	Channel catfish
1	0-3	(318%)	.000	.000-.000 (278%)	0.02	0.220	Green sunfish
1833	1225-2440	( 33%)	.123	.086-.160 ( 30%)	45.82	0.849	Largemouth bass
211	144-279	( 32%)	.014	.008-.021 ( 44%)	5.28	0.318	Redear sunfish
1	0-3	(223%)	.000	.000-.001 (220%)	0.02	0.113	Smallmouth bass
			****	NOT RECORDED ****			Threadfin shad
147	30-264	( 79%)	.007	.002-.011 ( 68%)	3.68	0.412	Warmouth
			****	NOT RECORDED ****			White catfish
263	160-365	( 39%)	.017	.010-.025 ( 41%)	6.57	0.335	White crappie
7	0-16	(132%)	.000	.000-.001 (140%)	0.17	0.630	Yellow bullhead

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

	MEAN	95% CI		MIN	MAX	#SAMPLES
HOURS PER COMPLETED TRIP*						
BOAT	3.4	3.1-3.8	( 10%)	0.5	8.9	110
SHORE	2.2	1.7-2.7	( 21%)	0.2	10.2	67
BOAT & SHORE	3.0	2.7-3.3	( 10%)	0.2	10.2	177
MILES TRAVELED	27.1	21.7-32.4	( 20%)	1	1003	653
SUCCESS RATING (1-10)	4.0	3.8-4.3	( 5%)	1	10	647

\*75 samples were from split interviews of completed trips.  
23.4% of all 758 interviews were completed trips.

ILLEGAL HARVEST: Clerk noted 29 out of 758 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	51	94	29	9						
SHORE INTERVIEWS	205	205	82	50	14	10	4	4		1

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

379 ( 50.0%)	ANY	All species
3 ( 0.4%)	BLC	Black crappie
112 ( 14.8%)	BLG	Bluegill
27 ( 3.6%)	CCF	Channel catfish
98 ( 12.9%)	CRP	Crappie spp.
139 ( 18.3%)	LMB	Largemouth bass

