

KANSAS BLACK BASS TOURNAMENT MONITORING

2003 ANNUAL REPORT

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INTRODUCTION

This report summarizes catches of black bass (*Micropterus* spp.) species from angling tournaments conducted in 2003 on Kansas waters by bass clubs that cooperated in our tournament-monitoring program. Tournament catches of black bass have been recorded in Kansas since 1977 and have proven valuable for indexing largemouth bass (*Micropterus salmoides*) relative abundance and length frequencies in reservoirs. These catch statistics supplement the Department of Wildlife and Park's sampling data and both are used to evaluate management activities. However, caution is expressed on the reliability of estimates of length frequency, structural indices or catch rates based on catch data at individual reservoirs or lakes where the number of events reported were few.

RESULTS AND DISCUSSION

Voluntary participation in our monitoring program continued to decline in 2003. This trend of decline, and likely cause, was documented in previous annual reports. In spite of providing a variety of tournament reporting options, the trend continues.

Replication of events at individual impoundments is key to the reliability of any catch statistic reported. The number of events reported for some impoundments was considerably fewer than in recent years. It was not because fewer events were conducted on those impoundments, just not reported.

Therefore, recognize the catch statistics provided in this report are skewed based on the efforts reported at a few impoundments.

In 2003, 18 Kansas bass clubs reported the catches of black bass from 68 tournaments (Table 1). Of the data used in this report, fifty-three of the reported tournaments were held on federal reservoirs; the other 15 were held on state, county or city lakes.

Reservoir Statistics

The number of tournament events reported in 2003 was 18% lower than the previous year (Table 2). The reported numbers of angler days and angler hours fished in black bass tournaments in 2003 were 51 % lower than the 12-year mean and 3 % lower than in 2002. The numbers and total weight of bass ≥ 12 inches caught were 10 and 9 % lower than in 2002, and were 25 and 30 % lower than the 12-year mean. The 2003 hourly catch rate of bass ≥ 12 in was 16 % lower than in 2002 and 8 % lower than the 12-year mean.

The 2003 catch of 142 bass ≥ 20 in was 4 % higher than the 2002 catch, and 32 % lower than the 12-year mean. The mean number of hours (88) necessary in 2003 to catch a bass ≥ 20 in was 7 % less than the 12-year mean. The largest bass reported in tournament fishing in 2003 was 7.7 pounds.

An accepted standard of quality largemouth bass fishing is a catch rate of 0.2 bass ≥ 12 in per hour. In 2003, of four reservoirs with at least five tournaments reported, all had catch rates that either exceeded the standard (Table 3). The highest catch of bass ≥ 12 in per hour occurred at Norton (0.72). Big Hill and Webster had bass-per-hour rates of 0.36 and 0.32, respectively.

Heaviest mean weight for bass ≥ 12 in taken from reservoirs where a minimum of five events was reported was 2.9 pounds (Webster)(Table 3). Cedar Bluff had the highest reported catch of bass ≥ 20 inches (52) followed by Big Hill (47) and Webster (26). These three reservoirs required 86, 61 and 35 angler hours, respectively, per fish ≥ 20 in.

A cursory estimate of the current condition of a given reservoir's largemouth bass fishery can be made by comparing the number of bass caught per hour in the present year to the historic mean catch rate for that reservoir (Table 4). The percent deviation indicates whether catches are above or below (+ or -) for each impoundment and describes the magnitude. Above average percentages may suggest the presence of strong year classes. Those deviations plus or minus 10% of the mean could indicate steady-state populations; reservoirs that produce catch rates of -25%, or lower, than their historical average may signal a decline in reproduction or recruitment.

State, County and City Lake Statistics

The catch data reported from tournaments held at small lakes are seldom adequate to make reliable estimates of length frequency, structural indices or catch rates because of the low number of events conducted per lake. Nonetheless, fifteen bass tournaments were reported on 7 lakes in 2003 and catch data from these impoundments are summarized in Table 5. Catch rates of 0.2 black bass > 12 in per hour or greater were achieved at 7 of the small impoundments. The highest catch rates per hour for bass \geq 12 in were produced at Marion County Lake (0.50), Pottawatomie County SFL (0.49), and Council Grove City Lake (0.45). Largemouth bass \geq 20 in were reported by tournament anglers at three of the Kansas small lakes, the largest weighed 9.1 lbs. and was taken from Clark County SFL.

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The U.S. Fish and Wildlife Service
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4040 North Fairfax Drive, Suite 130
Arlington, VA 22203

Table 1. List of bass clubs contributing black bass catch data from tournament events in 2003 to the Kansas Department of Wildlife and Parks.

Bass Club
American Bass Anglers
Blue Valley Bass Club
Boothill Bass Club
Cherryvale Bassmasters
Chisholm Trail
Fishin' with Friends
Fort Leavenworth Bass Club
Jayhawk Bassmasters
Kansas Bass Anglers Association
Kansas Bass Chapter Federation
Kansas Small Water Bass Anglers
Liberal Bassmasters
Mile Hi Bass Pioneers
Safari Bassmasters
Sarpy Co. Bassmasters
Southwinds Bass Club
Twin Rivers Bass Club
Walnut Valley Bass Club

Table 2. Annual tournament statistics on black bass in Kansas reservoirs, as reported by Kansas bass clubs, 1992-2003.

Statistic	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	12-year mean	2002 deviation from mean (%)
Tournaments reported	173	155	143	153	148	170	160	174	149	88	65	53	136	-61
Total Angler days	4,578	3,815	3,815	3,750	3,139	3,240	3,488	3,442	3,238	2,129	1,609	1,557	3,150	-51
Total Angler hours	36,623	30,523	30,517	29,998	25,115	25,920	27,902	27,532	25,902	17,029	12,874	12,456	25,199	-51
Bass over 12 inches	5,284	3,887	4,298	6,145	5,467	6,684	7,291	9,106	9,141	7,832	5,202	4,667	6,250	-25
Pounds of bass over 12 inches	12,334	9,496	9,936	12,308	11,350	14,091	15,768	19,111	18,976	15,545	10,247	9,308	13,206	-30
Mean pounds per bass over 12 inches	2.2	2.2	2.0	1.9	2.0	2.1	2.2	2.1	2.2	2.1	2.3	2.1	2.1	-1
Bass over 12 inches per hour	0.14	0.13	0.21	0.45	0.28	0.31	0.28	0.31	0.34	0.36	0.31	0.26	0.28	-8
Pounds of bass > 12 inches per hour	0.34	0.31	0.33	0.41	0.45	0.54	0.57	0.69	0.73	0.91	1.25	1.33	0.66	103
Bass over 20 inches	247	256	203	171	159	222	210	279	292	170	137	142	207	-32
Hours per bass over 20 inches	148	119	150	175	158	117	133	99	89	100	94	88	122	-28
Largest bass (lbs)	8.4	8.7	8.8	9.5	7.4	8.1	7.7	8.2	8.8	8.8	7.3	7.7	8.3	-7

Table 3. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Reservoirs in 2003.

Length (inches)	Percent of Catch											Mean	Total
	Cedar		El		La		Melvorn	Milford	Norton	Webster	Wilson		
	Big Hill	Bluff	Clinton	Dorado	Kirwin	Cygne							
8	3	1	2	0	0	0	0	5	1	0	2	1	
9	4	1	0	0	0	0	10	7	0	1	0	2	
10	6	3	4	0	2	0	10	8	1	2	3	4	
11	4	3	0	0	0	0	10	12	4	1	7	4	
12	15	12	25	45	9	23	9	18	9	1	15	17	
13	16	15	6	0	9	13	12	18	24	6	13	12	
14	15	24	10	27	13	13	4	15	36	11	45	19	
15	11	15	13	9	9	17	13	7	16	11	10	12	
16	8	9	21	9	17	7	6	3	5	17	2	10	
17	7	6	13	9	23	10	10	2	1	17	2	9	
18	4	4	4	0	13	3	10	1	1	15	1	5	
19	4	4	2	0	6	7	1	2	0	9	0	3	
20	3	2	0	0	0	0	0	2	0	4	0	1	
21	1	1	0	0	0	3	3	0	0	3	0	1	
22	0	0	0	0	0	0	0	0	0	1	0	0	
23	0	0	0	0	0	0	0	0	0	0	0	0	
24	0	0	0	0	0	0	0	0	0	0	0	0	
25	0	0											
Total Bass (all sizes)	1129	1640	52	11	47	30	68	252	1085	301	518	467	5133
Total Anglers	315	484	58	14	30	25	23	91	133	75	142	126	1390
Angler Hours	2882	4493	200	140	203	225	184	728	1409	912	1080	1132	12456
Number of Tournaments	15	12	1	1	2	1	1	3	7	6	4		53
Percent of Catch													
Bass 8-12 inches	9	7	6	0	2	0	31	31	7	4	12	10	
Bass 12-15 inches	50	51	40	73	30	50	25	52	69	18	73	48	
Bass 15-20 inches	37	38	54	27	68	40	41	15	23	69	15	39	
Bass 20-25 inches	4	3	0	0	0	10	3	2	1	9	0	3	
Catch By Size Category *													
Bass 8-12 inches/hour	0.04	0.03	0.02	0.00	0.00	0.00	0.11	0.04	0.05	0.01	0.06	0.03	
Bass 12-15 inches/hour	0.19	0.17	0.11	0.06	0.07	0.07	0.09	0.18	0.54	0.06	0.35	0.17	
Bass 15-20 inches/hour	0.15	0.13	0.14	0.02	0.16	0.05	0.15	0.05	0.18	0.23	0.07	0.12	
Bass 20-25 inches/hour	0.02	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.03	0.00	0.01	
Bass > 8 inches / hour	0.39	0.33	0.26	0.08	0.23	0.13	0.37	0.35	0.77	0.33	0.48	0.34	
Bass > 12 inches / hour	0.36	0.30	0.25	0.08	0.23	0.13	0.24	0.24	0.72	0.32	0.42	0.30	
Wt. of bass >12 in. (lbs.)	2153.9	3158.6	99.4	17.6	114.4	68.0	111.6	300.9	1705.0	850.3	727.9		9308
Mean wt. of bass >12 inches	2.10	2.08	2.03	1.60	2.49	2.25	2.38	1.74	1.67	2.94	1.60	2.08	
Number of bass > 12 inches	1026	1520	49	11	46	30	47	173	1020	289	456		4667
Number of bass > 20 inches	47	52	0	0	0	3	2	6	6	26	0		142
Hours per bass > 20 inches	61	86				75	92	121	235	35			
Wt. of largest bass (lbs.)	6.8	7.7	4.4	3.1	4.5	6.6	6.0	7.4	5.2	7.6	4.5		

* Geometric mean catches were weighted according to the number of tournaments at each reservoir. Hourly catches of bass > 8 or > 12 inches may not equal the sum of catches of included length groups because each catch statistic was calculated independently as a mean of replicate tournaments on each reservoir.

Table 4. Trends in catch per hour for two length groups of black bass from Kansas reservoir black bass angling tournaments, 1992-2003.

Reservoir	Length Group (inches)	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	Geo-metric mean	2003 % deviation from mean	2003 % deviation from 2002
Big Hill	>8	0.35	0.31	0.31	0.39	0.47	0.38	0.33	0.41	0.46	0.55	0.50	0.39	0.40	-1.9	-22.0
	>12	0.26	0.26	0.25	0.26	0.33	0.29	0.25	0.33	0.35	0.53	0.52	0.36	0.32	12.1	-30.8
Cedar Bluff	>8				1.08	0.66	0.46	0.47	0.51	0.58	0.74	0.37	0.33	0.54	-39.3	-10.8
	>12				0.75	0.49	0.42	0.35	0.44	0.59	0.74	0.37	0.30	0.47	-36.4	-18.9
Clinton ***	>8	0.21	0.08	0.19	0.22	0.16	0.17	0.29	0.26	0.24	0.09	0.12	0.26	0.18	46.6	116.7
	>12	0.19	0.07	0.17	0.19	0.13	0.14	0.25	0.21	0.2	0.06	0.06	0.25	0.14	74.7	316.7
Council Grove	>8	0.07	0.05	0.15	0.09	0.31	0.17	0.67						0.15		
	>12	0.06	0.04	0.14	0.07	0.22	0.13	0.52						0.12		
El Dorado ***	>8	0.15	0.11	0.16	0.12	0.16	0.36	0.54	0.14	0.14			0.08	0.17	-51.7	
	>12	0.13	0.09	0.13	0.11	0.14	0.28	0.34	0.11	0.10			0.08	0.13	-40.6	
Fall River	>8						0.06							0.06		
	>12						0.04							0.04		
Glen Elder	>8	0.11	0.03	0.59	0.52	0.31		0.11						0.18		
	>12	0.11	0.03	0.53	0.45	0.30		0.08						0.16		
Hillsdale	>8	0.23	0.18	0.12	0.11	0.12	0.11	0.15	0.16	0.14	0.22	0.12		0.15		
	>12	0.19	0.16	0.10	0.10	0.12	0.10	0.15	0.17	0.14	0.19	0.10		0.13		
Kanopolis	>8							0.10						0.10		
	>12							0.04						0.04		
Kirwin***	>8			0.61	0.82	0.79	0.79	0.43	0.43	0.62	0.59	0.15	0.23	0.49	-52.6	53.3
	>12			0.54	0.76	0.76	0.70	0.39	0.39	0.6	0.58	0.14	0.23	0.45	-49.3	64.3
La Cygne ***	>8	0.14	0.18	0.07	0.46	0.29	0.37	0.22	0.34	0.35	0.38	0.11	0.13	0.22	-40.7	18.2
	>12	0.12	0.13	0.07	0.36	0.23	0.30	0.18	0.26	0.26	0.22	0.10	0.13	0.18	-26.5	30.0
Marion	>8		0.15											0.15		
	>12		0.14											0.14		
Melvern ***	>8	0.01	0.02	0.04	0.03	0.09	0.22	0.31	0.25	0.24	0.26	0.67	0.37	0.12	220.1	-44.8
	>12	0.00	0.01	0.03	0.02	0.08	0.22	0.19	0.17	0.2	0.23	0.42	0.24	0.10	130.2	-42.9
Milford ***	>8	0.11	0.06	0.21	0.14	0.12	0.19	0.40	0.41	0.28	0.55	0.38	0.35	0.22	57.2	-7.9
	>12	0.09	0.05	0.18	0.12	0.10	0.18	0.26	0.27	0.18	0.32	0.23	0.24	0.16	46.0	4.3
Norton	>8	0.07	0.44	1.45	1.27	1.07	1.09	0.89	1.03	1.07	0.97	0.64	0.77	0.75	2.8	20.3
	>12	0.06	0.15	0.32	0.67	0.80	0.93	0.73	0.84	1.01	0.88	0.61	0.72	0.51	40.0	18.0
Perry	>8	0.13	0.25	0.16	0.16	0.11	0.25	0.25	0.37	0.28	0.40	0.25		0.22		
	>12	0.11	0.19	0.13	0.13	0.09	0.20	0.21	0.33	0.21	0.33	0.22		0.18		
Pomona	>8	0.01	0.01	0.04	0.07	0.10			0.48		0.13			0.06		
	>12	0.01	0.01	0.02	0.07	0.08			0.31		0.13			0.05		
Toronto	>8	0.05												0.05		
	>12	0.05												0.05		
Tuttle Creek	>8		0.01	0.13	0.10	0.20	0.36	0.19						0.11		
	>12		0.01	0.13	0.09	0.15	0.36	0.18						0.10		
Webster	>8				1.67	0.49	0.50	0.48	0.34	0.38	0.21	0.40	0.33	0.45	-26.1	-17.5
	>12				0.82	0.43	0.47	0.44	0.30	0.34	0.14	0.39	0.32	0.37	-13.5	-17.9
Wilson	>8	0.05	0.13	0.59	0.37	0.27	0.26	0.21	0.25	0.35	0.36	0.84	0.48	0.28	69.5	-42.9
	>12	0.04	0.08	0.47	0.30	0.23	0.23	0.17	0.19	0.29	0.33	0.58	0.42	0.23	85.7	-27.6

*** 2003 catch rates based on three tournaments or less.

Table 5. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Lakes in 2003.

Length (inches)	Percent of Catch									Mean	Total
	Council Grove City Lake	Clark Co. SFL	Herrington City (New)	Herrington City (Old)	Kingman County SFL	Marion County Lake	Ottawa County SFL	Pottawatomie County SFL #2			
8	9	6	4	4	0	5	10	7	6		
9	6	8	0	0	0	3	14	1	4		
10	15	12	0	4	0	5	20	16	9		
11	23	2	15	9	0	11	13	18	11		
12	22	8	22	0	27	15	13	15	15		
13	12	14	7	9	5	25	9	11	11		
14	6	14	15	9	0	18	7	9	10		
15	5	9	4	9	9	9	5	7	7		
16	2	9	22	9	45	5	3	9	13		
17	2	7	7	17	14	1	3	5	7		
18	0	4	4	17	0	3	1	2	4		
19	0	2	0	4	0	0	0	0	1		
20	0	2	0	9	0	0	1	0	1		
21	0	1	0	0	0	0	0	0	0		
22	0	1	0	0	0	0	0	0	0		
23	0	0	0	0	0	0	1	0	0		
24	0	0	0	0	0	0	0	0	0		
25	0	0	0	0	0	0	0	0	0		
Total Bass (all sizes)	199	378	27	23	22	110	94	82	117	935	
Total Anglers	26	86	13	14	6	21	25	12	25	203	
Angler Hours	208	772	104	112	54	168	200	96	214	1714	
Number of Tournaments	2	5	1	1	1	2	2	1	2	15	
Percent of Catch											
Bass 8-12 inches	53	29	19	17	0	24	56	43	30		
Bass 12-15 inches	39	36	44	17	32	58	29	34	36		
Bass 15-20 inches	8	32	37	57	68	18	13	23	32		
Bass 20-25 inches	0	4	0	9	0	0	2	0	2		
Catch By Size Category *											
Bass 8-12 inches/hour	0.51	0.13	0.05	0.04	0.00	0.17	0.27	0.36	0.19		
Bass 12-15 inches/hour	0.37	0.16	0.12	0.04	0.13	0.38	0.14	0.29	0.20		
Bass 15-20 inches/hour	0.08	0.15	0.10	0.12	0.28	0.12	0.06	0.20	0.14		
Bass 20-25 inches/hour	0.00	0.02	0.00	0.02	0.00	0.00	0.01	0.00	0.01		
Bass > 8 inches / hour	0.96	0.45	0.26	0.21	0.41	0.65	0.47	0.85	0.53		
Bass > 12 inches / hour	0.45	0.35	0.21	0.17	0.41	0.50	0.21	0.49	0.35		
Number of bass > 12 inches	94	270	22	19	22	84	41	62	614		
Bass > 20 in	0	15	0	2	0	0	2	2	21		
Hours per bass >=20 in		51		56			100	48			
Wt. of largest bass (lbs.)	3.0	9.1	4.0	5.3	3.2	4.0	8.4	3.6			

