

# KANSAS BLACK BASS TOURNAMENT MONITORING

## 2008 ANNUAL REPORT

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## INTRODUCTION

This report summarizes catches of black bass (*Micropterus* spp.) species from angling tournaments conducted in 2008 on Kansas waters by those bass clubs that cooperated in our tournament-monitoring program, from catch data compiled from on-site event requirements by other authorities and the reporting requirements by those clubs that participated in our Bass Pass 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

Replication of events at individual impoundments is key to the reliability of any reported catch statistic. Therefore, recognize the catch statistics provided in this report may be skewed based on minimal efforts reported for particular impoundments.

In 2008, 10 Kansas bass clubs (Table 1) reported the catches of black bass from 41 tournaments. All data used in this report, 40 of the reported tournaments were held on federal reservoirs; one from a power utility impoundment (Table 3). No data was reported for small lakes in 2008.

### Reservoir Statistics

The number of tournament events reported in 2008 was 17% higher than the previous year and 53 % less than the 12-year mean (Table 2). The reported numbers of angler days and angler

hours fished during black bass tournaments in 2008 were 74 % lower than the 12-year means and 39 % lower than in 2007. The numbers and total weight of bass  $\geq 12$  inches caught were 39 and 37 % lower than in 2007, and were 73 % lower than the 12-year means. The 2008 hourly catch rate of bass  $\geq 12$  in was 21% higher than the previous year and similar (+5 %) to the 12-year mean.

The 2008 catch of 38 bass  $\geq 20$  in was 25 % lower than the 2007 catch, and 73 % lower than the 12-year mean. The mean number of hours (103) necessary in 2008 to catch a bass  $\geq 20$  in was 18 % higher than the previous year, but similar (+2 %) to the 12-year mean. The largest bass reported in tournament fishing in 2008 was 7.2 pounds.

An accepted standard of quality largemouth bass fishing is a catch rate of 0.2 bass  $\geq 12$  in per hour. In 2008, three of the five reservoirs had catch rates that exceeded the standard, but only Big Hill and Hillsdale had more than two events reported (Table 3). The highest catch of bass  $\geq 12$  in per hour with a minimum of five events occurred at Big Hill (0.37).

Heaviest mean weight for bass  $\geq 12$  in taken from reservoirs with a minimum of five events was 2.7 pounds (Hillsdale). Big Hill had the highest reported catch (26) of bass  $\geq 20$  inches, and required 99 angler hours per fish  $\geq 20$  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.

Table 1. Bass clubs contributing black bass catch data from tournament events in Kansas, 2008.

Bass Club
American Bass Anglers
Big Hill Bass Masters
Cherryvale Bassmasters
Dick's Wednesday Night Bass Anglers
Fishers of Men
Fishin' with Friends
Hot Bass Club
Kansas Bassmasters
Shawnee Mission Bassmasters
Thursday Night Jackpot

Table 2. Annual tournament statistics on black bass in Kansas reservoirs, as reported by Kansas bass clubs, 1997-2008.

Statistic	2008												% deviation from 2007		
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008		12-year mean	% deviation from mean
Tournaments reported	170	160	174	149	88	65	53	32	38	39	35	41	87	-53	17
Total Angler days	3,240	3,488	3,442	3,238	2,129	1,609	1,557	572	782	776	797	488	1,843	-74	-39
Total Angler hours	25,920	27,902	27,532	25,902	17,029	12,874	12,456	4,572	6,252	6,206	6,377	3,901	14,744	-74	-39
Bass over 12 inches	6,684	7,291	9,106	9,141	7,832	5,202	4,667	1,649	2,240	3,104	2,192	1,337	5,037	-73	-39
Pounds of bass over 12 inches	14,091	15,768	19,111	18,976	15,545	10,247	9,308	3,340	4,509	5,788	4,379	2,746	10,317	-73	-37
Mean pounds per bass over 12 inches	2.1	2.2	2.1	2.2	2.1	2.3	2.1	2.1	2.0	1.79	1.9	2.15	2.1	3	13
Bass over 12 inches per hour	0.31	0.28	0.31	0.34	0.36	0.31	0.26	0.26	0.34	0.48	0.28	0.34	0.32	5	21
Pounds of bass > 12 inches per hour	0.54	0.57	0.69	0.73	0.91	1.25	1.33	0.73	0.72	0.93	0.69	0.7	0.82	-14	1
Bass over 20 inches	222	210	279	292	170	137	142	61	65	53	51	38	143	-73	-25
Hours per bass over 20 inches	117	133	99	89	100	94	88	68	96	96	125	103	101	2	-18
Largest bass (lbs)	8.1	7.7	8.2	8.8	8.8	7.3	7.7	8.2	6.3	6.9	6.9	7.2	8	-6	4

Table 3. Summary of length frequencies, stock indices, and catches of black bass in tournaments on Kansas Reservoirs in 2008.

Length (inches)	Percent of Catch					Mean	Total
	Big Hill	Hillsdale	Melvorn	Perry	LaCygne		
8	2	0	1	0	0	1	
9	2	0	2	9	10	5	
10	8	6	3	9	25	10	
11	9	2	1	4	15	6	
12	16	4	7	17	20	13	
13	14	4	11	13	3	9	
14	16	14	37	9	13	18	
15	12	17	11	17	3	12	
16	8	12	13	4	0	7	
17	5	10	6	9	5	7	
18	3	16	1	0	0	4	
19	2	10	3	4	5	5	
20	1	4	3	4	3	3	
21	1	1	1	0	0	0	
22	0	0	0	0	0	0	
23	0	0	0	0	0	0	
24	0	0	0	0	0	0	
25	0	0	0	0	0	0	
<b>Total Bass (all sizes)</b>	<b>1282</b>	<b>166</b>	<b>149</b>	<b>23</b>	<b>40</b>	<b>332</b>	<b>1660</b>
<b>Total Anglers</b>	<b>355</b>	<b>241</b>	<b>37</b>	<b>18</b>	<b>20</b>	<b>134</b>	<b>671</b>
<b>Angler Hours</b>	<b>2584</b>	<b>701</b>	<b>312</b>	<b>144</b>	<b>160</b>	<b>780</b>	<b>3901</b>
<b>Number of Tournaments</b>	<b>27</b>	<b>10</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>41</b>
<b>Percent of Catch</b>							
Bass 8-12 inches	21	8	7	22	50	22	
Bass 12-15 inches	46	22	56	39	35	40	
Bass 15-20 inches	31	66	34	35	13	36	
Bass 20-25 inches	2	4	3	4	3	3	
<b>Catch By Size Category *</b>							
Bass 8-12 inches/hour	0.13	0.03	0.03	0.03	0.13	0.07	
Bass 12-15 inches/hour	0.22	0.06	0.27	0.06	0.09	0.14	
Bass 15-20 inches/hour	0.15	0.16	0.16	0.06	0.03	0.11	
Bass 20-25 inches/hour	0.01	0.01	0.02	0.01	0.01	0.01	
Bass > 8 inches / hour	0.52	0.25	0.48	0.16	0.25	0.33	
Bass > 12 inches / hour	0.37	0.22	0.45	0.13	0.13	0.26	
<b>Wt. of bass &gt;12 in. (lbs.)</b>	<b>1971</b>	<b>416</b>	<b>283</b>	<b>37</b>	<b>39</b>	<b>549.14</b>	<b>2746</b>
<b>Mean wt. of bass &gt;12 inches</b>	<b>1.96</b>	<b>2.72</b>	<b>2.03</b>	<b>2.1</b>	<b>2.0</b>	<b>2.15</b>	
<b>Number of bass &gt; 12 inches</b>	<b>1007</b>	<b>153</b>	<b>139</b>	<b>18</b>	<b>20</b>	<b>267.40</b>	<b>1337</b>
<b>Number of bass &gt; 20 inches</b>	<b>26</b>	<b>5</b>	<b>5</b>	<b>1</b>	<b>1</b>		<b>38</b>
<b>Hours per bass &gt; 20 inches</b>	<b>99</b>	<b>100</b>	<b>62</b>	<b>144</b>	<b>160</b>	<b>96</b>	
<b>Wt. of largest bass (lbs.)</b>	<b>7.2</b>	<b>6.7</b>	<b>5.5</b>	<b>5.0</b>	<b>5.5</b>	<b>6.0</b>	

\* 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, 1997-2008

Reservoir	Length Group (inches)	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Geo-metric mean	% deviation from mean	2008 % deviation from 2007
Big Hill	>8	0.38	0.33	0.41	0.46	0.55	0.50	0.39	0.44	0.48	0.55	0.47	0.52	0.45	15.1	10.6
	>12	0.29	0.25	0.33	0.35	0.53	0.52	0.36	0.37	0.39	0.46	0.38	0.37	0.34	8.1	-2.6
Cedar Bluff	>8	0.46	0.47	0.51	0.58	0.74	0.37	0.33	0.70	0.33	0.56	0.36		0.53		
	>12	0.42	0.35	0.44	0.59	0.74	0.37	0.30	0.66	0.30	0.51	0.33		0.47		
Clinton	>8	0.17	0.29	0.26	0.24	0.09	0.12	0.26				0.14		0.19		
	>12	0.14	0.25	0.21	0.20	0.06	0.06	0.25				0.14		0.15		
Council Grove	>8	0.17	0.67											0.22		
	>12	0.13	0.52											0.17		
El Dorado	>8	0.36	0.54	0.14	0.14			0.08	0.54			0.24		0.20		
	>12	0.28	0.34	0.11	0.10			0.08	0.33			0.14		0.16		
Fall River	>8	0.06												0.06		
	>12	0.04												0.04		
Glen Elder	>8		0.11									0.36		0.32		
	>12		0.08									0.27		0.28		
Hillsdale	>8	0.11	0.15	0.16	0.14	0.22	0.12		0.08			0.27	0.25	0.13	94.4	-7.4
	>12	0.10	0.15	0.17	0.14	0.19	0.10		0.05			0.23	0.22	0.12	91.2	-4.3
Kanopolis	>8		0.10											0.10		
	>12		0.04											0.04		
Kirwin	>8	0.79	0.43	0.43	0.62	0.59	0.15	0.23						0.49		
	>12	0.70	0.39	0.39	0.60	0.58	0.14	0.23						0.45		
La Cygne ***	>8	0.37	0.22	0.34	0.35	0.38	0.11	0.13				0.29	0.25	0.23	6.9	-13.8
	>12	0.30	0.18	0.26	0.26	0.22	0.10	0.13				0.27	0.13	0.19	-31.5	-51.9
Marion	>8															
	>12															
Melvern ***	>8	0.22	0.31	0.25	0.24	0.26	0.67	0.37			0.37	0.63	0.48	0.18	172.8	-23.8
	>12	0.22	0.19	0.17	0.20	0.23	0.42	0.24			0.24	0.53	0.45	0.13	241.4	-15.1
Milford	>8	0.19	0.40	0.41	0.28	0.55	0.38	0.35						0.27		
	>12	0.18	0.26	0.27	0.18	0.32	0.23	0.24			0.63			0.20		
Norton	>8	1.09	0.89	1.03	1.07	0.97	0.64	0.77						1.00		
	>12	0.93	0.73	0.84	1.01	0.88	0.61	0.72						0.72		
Perry ***	>8	0.25	0.25	0.37	0.28	0.40	0.25					0.43	0.16	0.23	-30.5	-62.8
	>12	0.20	0.21	0.33	0.21	0.33	0.22					0.43	0.13	0.19	-31.5	-69.8
Pomona	>8			0.48		0.13						0.27		0.11		
	>12			0.31		0.13						0.27		0.09		
Toronto	>8															
	>12															
Tuttle Creek	>8	0.36	0.19											0.18		
	>12	0.36	0.18											0.16		
Webster	>8	0.50	0.48	0.34	0.38	0.21	0.40	0.33						0.45		
	>12	0.47	0.44	0.30	0.34	0.14	0.39	0.32						0.37		
Wilson	>8	0.26	0.21	0.25	0.35	0.36	0.84	0.48	0.30	0.77	1.08	0.18		0.38		
	>12	0.23	0.17	0.19	0.29	0.33	0.58	0.42	0.24	0.57	0.88	0.18		0.31		

\*\*\* 2008 catch rates based on two tournaments or less.

REPLICATE TOURNAMENTS

LENGTH CLASS (Inches)	REPLICATE TOURNAMENTS										SUM	N	MEAN	STD	CV	Total Wt	
	1	2	3	4	5	6	7	8	9	10							
8	0											0	1	0.00	#DIV/0!	#DIV/0!	0.00
9	4											4	1	4.00	#DIV/0!	#DIV/0!	1.71
10	10											10	1	10.00	#DIV/0!	#DIV/0!	3.57
11	6											6	1	6.00	#DIV/0!	#DIV/0!	4.71
12	3											3	1	3.00	#DIV/0!	#DIV/0!	3.20
13	8											8	1	1.00	#DIV/0!	#DIV/0!	1.51
14	1											1	1	3.00	#DIV/0!	#DIV/0!	3.22
15	5											5	1	1.00	#DIV/0!	#DIV/0!	2.04
16	1											1	1	0.00	#DIV/0!	#DIV/0!	0.00
17	0											0	1	2.00	#DIV/0!	#DIV/0!	6.00
18	2											2	1	8.00	#DIV/0!	#DIV/0!	8.47
19	2											2	1	2.00	#DIV/0!	#DIV/0!	4.57
20	1											1	1	1.00	#DIV/0!	#DIV/0!	0.00
21	0											0	1	0.00	#DIV/0!	#DIV/0!	0.00
22	0											0	1	0.00	#DIV/0!	#DIV/0!	0.00
23	0											0	1	0.00	#DIV/0!	#DIV/0!	0.00
24	0											0	1	0.00	#DIV/0!	#DIV/0!	0.00
25	0											0	1	0.00	#DIV/0!	#DIV/0!	0.00
Trophy												0	1	0.00	#DIV/0!	#DIV/0!	0.00
Total Bass (all sizes)	40											40	1	40.00	#DIV/0!	#DIV/0!	
Total Anglers	20											20	1	20.00	#DIV/0!	#DIV/0!	
Angler Hours	160											160	1	160.00	#DIV/0!	#DIV/0!	
Month	3											3	1	2.50	#DIV/0!	#DIV/0!	

Structural Indices

RSD S-Q	50
RSD Q-P	35
RSD P-M	13
RSD M-T	3

Catch By Size Category

S-Q basses/lr	0.13
Q-P basses/lr	0.09
P-M basses/lr	0.03
M-T basses/lr	0.01
Bass >= 8 in/hr	0.25
Bass >=12 in/hr	0.13

Bass >=20 in	1	no. >12"	20
Hours per bass >=20 in	160.00	Mean	1.00
Wt. of largest bass (lbs.)	5.5	Mean wt	39.2

Log (Catch)

S-Q basses/lr	0.05
Q-P basses/lr	0.04
P-M basses/lr	0.01
M-T basses/lr	0.00
Bass >= 8 in/hr	0.10
Bass >= 12 in/hr	0.05







REPLICATE TOURNAMENTS

LENGTH CLASS (inches)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	SUM	N	MEAN	STD	CV	Total Wt
Stock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	#DIV/0!	#DIV/0!	0.00
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	#DIV/0!	#DIV/0!	0.00
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	#DIV/0!	#DIV/0!	0.00
10	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1.00	3.16	316.23	5.87
Quality	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3.00	0.50	150.00	2.36	
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6.00	0.97	181.02	6.15	
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7.00	1.06	151.34	9.17	
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	2.40	2.46	102.44	39.48	
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	2.00	2.21	110.55	49.89	
Preferred	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	2.90	2.73	94.01	59.82	
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	1.60	1.56	122.19	47.96	
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	2.70	1.24	49.54	96.64	
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	1.70	1.16	68.21	71.98	
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0.60	0.70	116.53	29.80	
Memorable	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1.00	0.10	0.32	316.23	5.78
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00	
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00	
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00	
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00	
Trophy	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	#DIV/0!	0.00
Total Bass (all sizes)	2	26	27	24	12	12	8	11	9	35	166	10	16.60	10.59	63.77	10	24.10	7.43	30.83	10	24.10	7.43	30.83	20.93	34.51	
Total Anglers	26	70	84	84	66	55	70	72	90	40	241	10	24.10	14.87	20.93	10	70.10	14.87	1.83	10	70.10	14.87	1.83	34.51		
Angler Hours	4	5	5	5	4	4	4	6	6	10	53	10	5.30	5.30	5.30	10	14.87	1.83	1.83	10	14.87	1.83	1.83	34.51		

Structural Indices	RSD S-Q	RSD Q-P	RSD P-M	RSD M-T	Pooled Index	Mean Index	STD	CV
S-Q	0	4	0	0	10	4.94	2.24	45.2
Q-P	0	19	15	17	10	26.24	11.26	42.9
P-M	100	77	81	50	22	70.21	17.78	25.3
M-T	0	0	4	8	66	70.21	17.78	25.3
Total					4	4.91	5.78	125

Catch By Size Category	S-Q	Q-P	P-M	M-T	Bass > 8 in/hr	Bass > 12 in/hr	Bass > 20 in	Hour per bass > 20 in	Wt. of largest bass (lbs.)	Pooled catch	Geo mean	STD	CV
S-Q	0.00	0.01	0.00	0.00	0.00	0.00	1	84.00	4.02	153	1.40	0.47	33.6
Q-P	0.00	0.07	0.05	0.05	0.06	0.04	2	42.00	4.08	7	1.40	0.22	15.9
P-M	0.00	0.29	0.26	0.21	0.09	0.16	5	5.84	4.62	5	1.40	0.22	15.9
M-T	0.00	0.00	0.01	0.02	0.03	0.02	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 8 in/hr	0.03	0.37	0.32	0.29	0.18	0.11	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 12 in/hr	0.03	0.36	0.32	0.29	0.17	0.11	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Hour per bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Wt. of largest bass (lbs.)							2	5.84	5.84	5	1.40	0.22	15.9

Log (Catch)	S-Q	Q-P	P-M	M-T	Bass > 8 in/hr	Bass > 12 in/hr	Bass > 20 in	Hour per bass > 20 in	Wt. of largest bass (lbs.)	Pooled catch	Geo mean	STD	CV
S-Q	0.00	0.01	0.00	0.00	0.00	0.00	1	84.00	4.02	153	1.40	0.47	33.6
Q-P	0.00	0.03	0.02	0.03	0.02	0.02	2	42.00	4.08	7	1.40	0.22	15.9
P-M	0.01	0.11	0.10	0.08	0.04	0.07	5	5.84	4.62	5	1.40	0.22	15.9
M-T	0.00	0.00	0.01	0.01	0.01	0.01	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 8 in/hr	0.01	0.14	0.12	0.11	0.07	0.07	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 12 in/hr	0.01	0.13	0.12	0.11	0.07	0.09	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Hour per bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Wt. of largest bass (lbs.)							2	5.84	5.84	5	1.40	0.22	15.9

Log (Catch)	S-Q	Q-P	P-M	M-T	Bass > 8 in/hr	Bass > 12 in/hr	Bass > 20 in	Hour per bass > 20 in	Wt. of largest bass (lbs.)	Pooled catch	Geo mean	STD	CV
S-Q	0.00	0.01	0.00	0.00	0.00	0.00	1	84.00	4.02	153	1.40	0.47	33.6
Q-P	0.00	0.03	0.02	0.03	0.02	0.02	2	42.00	4.08	7	1.40	0.22	15.9
P-M	0.01	0.11	0.10	0.08	0.04	0.07	5	5.84	4.62	5	1.40	0.22	15.9
M-T	0.00	0.00	0.01	0.01	0.01	0.01	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 8 in/hr	0.01	0.14	0.12	0.11	0.07	0.07	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 12 in/hr	0.01	0.13	0.12	0.11	0.07	0.09	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Hour per bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Wt. of largest bass (lbs.)							2	5.84	5.84	5	1.40	0.22	15.9

Log (Catch)	S-Q	Q-P	P-M	M-T	Bass > 8 in/hr	Bass > 12 in/hr	Bass > 20 in	Hour per bass > 20 in	Wt. of largest bass (lbs.)	Pooled catch	Geo mean	STD	CV
S-Q	0.00	0.01	0.00	0.00	0.00	0.00	1	84.00	4.02	153	1.40	0.47	33.6
Q-P	0.00	0.03	0.02	0.03	0.02	0.02	2	42.00	4.08	7	1.40	0.22	15.9
P-M	0.01	0.11	0.10	0.08	0.04	0.07	5	5.84	4.62	5	1.40	0.22	15.9
M-T	0.00	0.00	0.01	0.01	0.01	0.01	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 8 in/hr	0.01	0.14	0.12	0.11	0.07	0.07	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 12 in/hr	0.01	0.13	0.12	0.11	0.07	0.09	2	5.84	5.84	5	1.40	0.22	15.9
Bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Hour per bass > 20 in							2	5.84	5.84	5	1.40	0.22	15.9
Wt. of largest bass (lbs.)							2	5.84	5.84	5	1.40	0.22	15.9

415.7  
2.72 mean wt



	16	17	18	19	20	21	22	23	24	25	26	27	SUM	N	MEAN	STD	CV	Total Wt
0	2	2	2		0	2	1	2	10	1	2	0	30	13	2.31	3.38	146.29	8.98
3	1	2	8		1	2	0	3	10	4	4	0	30	14	2.14	2.25	104.82	12.80
4	2	2	7		0	0	0	4	97	2	3	2	118	18	5.39	5.34	99.04	56.97
5	2	7	7		1	0	0	3	200	0	4	0	200	20	5.90	8.34	141.37	92.84
4	0	0	8		0	0	1	8	177	7	7	7	200	27	7.41	6.00	81.02	204.88
3	0	0	4		0	0	0	3	107	10	4	10	208	27	7.70	5.35	81.64	231.79
5	0	0	4		0	0	0	8	154	5	4	7	154	27	5.70	6.58	85.41	342.15
4	2	2	4		0	1	2	5	107	3	3	7	154	27	5.70	5.18	90.82	313.40
3	2	1	3		0	0	0	2	60	3	3	4	107	27	3.96	3.91	98.60	265.83
2	1	1	0		0	0	0	2	42	1	1	4	60	27	2.22	1.60	72.06	179.85
0	0	0	0		0	0	0	0	30	2	0	2	42	27	1.56	2.28	146.30	150.32
1	0	1	0		0	0	0	0	17	1	0	0	30	27	1.11	1.65	148.38	127.01
0	0	0	2		0	0	0	0	9	0	0	0	17	27	0.53	0.88	140.33	84.43
0	0	0	1		0	0	0	0	3	0	0	0	9	27	0.33	0.62	186.05	52.03
0	0	0	0		0	0	0	0	0	0	0	0	3	27	0.11	0.42	381.29	20.03
0	0	0	0		0	0	0	0	0	0	0	0	0	27	0.00	0.00	#DIV/0!	0.00
0	0	0	0		0	0	0	0	0	0	0	0	0	27	0.00	0.00	#DIV/0!	0.00
0	0	0	0		0	0	0	0	0	0	0	0	0	27	0.00	0.00	#DIV/0!	0.00
35	18	52	84		4	8	5	47	49	30	24	51	1282	27	47.48	30.37	63.97	
8	6	8	21		6	7	10	10	22	28	6	18	355	27	13.15	7.86	59.80	
64	48	64	168		12	14	20	80	176	224	54	77	2584	27	95.70	63.44	66.29	
3	4	5	5		4	4	4	5	4	4	9	5						
37	39	40	0		25	25	20	19	0	0	29	4						
34	28	37	60		25	25	20	43	63	27	42	47						
29	33	15	36		50	38	40	36	33	67	29	49						
0	0	8	5		0	13	20	2	4	7	0	0						
0.20	0.15	0.33	0.00		0.08	0.14	0.05	0.11	0.00	0.00	0.13	0.03						
0.19	0.10	0.30	0.30		0.08	0.14	0.05	0.25	0.18	0.04	0.19	0.31						
0.16	0.13	0.13	0.18		0.17	0.21	0.10	0.21	0.09	0.13	0.32	0.32						
0.00	0.00	0.06	0.02		0.00	0.07	0.05	0.01	0.01	0.00	0.00	0.00						
0.35	0.38	0.81	0.50		0.33	0.57	0.25	0.59	0.28	0.13	0.44	0.66						
0.34	0.23	0.44	0.49		0.25	0.43	0.20	0.48	0.28	0.13	0.31	0.64						
0	0	4	4		0	1	1	1	2	2	0	0						
4.55	4.55	7.16	42.00		4.19	6.18	20.0	5.32	5.31	6.18	3.25	4.55						
0.08	0.06	0.12	0.00		0.03	0.06	0.02	0.05	0.00	0.00	0.05	0.01						
0.07	0.04	0.11	0.11		0.03	0.06	0.02	0.10	0.07	0.02	0.07	0.12						
0.05	0.05	0.05	0.07		0.07	0.09	0.04	0.08	0.04	0.04	0.05	0.12						
0.00	0.00	0.03	0.01		0.00	0.03	0.02	0.01	0.00	0.00	0.00	0.00						
0.19	0.14	0.26	0.18		0.12	0.15	0.20	0.20	0.11	0.05	0.16	0.22						
0.13	0.09	0.16	0.17		0.10	0.15	0.08	0.17	0.11	0.05	0.12	0.21						

Pooled Index Mean STD CV

Pooled catch Mean STD CV

Geo mean STD CV

1971.8 mean wt 7.16