SECTION G, CONSERVATION

Commercial Fisheries Catch in Oklahoma, 1957¹

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The history of commercial fishing in Oklahoma waters has been one of continuous controversy between sports fishing interests and the commercial fisherman. Sports fishing interests have been singularly shortsighted in realizing that the rough fish populations of our lakes and streams are a renewable resource and should be utilized as such. Because these rough species, with the exception of the flathead catfish and the white bass, are rarely caught or harvestable by ordinary hook and line methods, it falls the lot of the commercial fisherman to harvest and utilize these species. Much of the controversy in the past has been caused by the misconception that commercial fishermen were depleting the game fish populations while fishing with commercial gear. The purpose of this paper is to report the 1957 commercial fish catch in Oklahoma waters; thereby attempting to dispel some of these prevalent misconceptions about the commercial fishing program.

In 1955 the Oklahoma State Legislature passed the present commercial fishing law, (House Bill 701, Section 222). This iaw states, in part, that it shall be unlawful for any person to take fish for commercial purposes, on Saturday or Sunday, or any legal holiday and further; that it is unlawful to have any part of a commercial fishing device within one hundred yards of the shore line, and within four feet of the surface of the water.

The above statements are, I believe, the provisions of the present law which are most in need of modification or change.

The first provision was obviously enacted to lessen the conflict between the commercial fishermen and the weekend fishermen. However, it is extremely difficult to either earn a living or to manage a fisheries resource on a four-day-per-week basis. It is also obvious that, if the commercial fisherman cannot afford to operate in the State of Oklahoma, it will become necessary for the State to devise some other method for the utilization and control of our rough fish populations.

The second provision in the present law effectively and completely eliminates commercial fishing in the streams and rivers of Oklahoma and prevents the commercial utilization of these rough fish populations. It also restricts, to a very marked degree, the harvest, in our reservoirs, of those species that move into the shallow upper reaches of lakes during the spawning season.

Method of Obtaining Data

This analysis was compiled entirely from data contained in reports that commercial fishermen are required to file with the Oklahoma Depart-

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ment of Wildlife Conservation. The commercial fishing report is a daily record of species, numbers, and weights of fishes taken in commercial operations.

Discussion

The total harvest of fish, for commercial use, in Oklahoma waters was for 1957, 126,908 individuals weighing 646,041 pounds. These figures appear substantial. However, they represent the aggregate catch of only fifty fishermen who fished thirteen individual bodies of water and took an average of approximately 62 pounds of fish per man per day.

Total numbers, total weights, and average weights for each species from each body of water are found in Table I. Total numbers, total weights, and pounds of fish per acre for the three main commercial species, buffalofish, carp, and flathead catfish, from Grand Lake, Ft. Gibson Lake, and Tenkiller Lake, are recorded in Table II.

Grand Lake, Ft. Gibson Lake, and Tenkiller Lake were chosen for individual discussion and comparison, because they were open to fishing throughout 1957 and reports from these lakes were the most complete. These lakes contributed 60.95 percent of the total harvest.

Grand Lake

Grand Lake, the first of the major reservoirs in Oklahoma, supports the oldest continuous commercial fishery in the state.

In 1957 the commercial catch from Grand Lake totaled 248,211 pounds of fish, or 36.38 percent of the total statewide harvest. The average weight of commercial fish from Grand Lake was 4.09 pounds. The most important commercial species were buffalofish, carp, and flathead catfish, which contributed 104,389 pounds, 109,596 pounds, and 21,776 pounds respectively to the total catch. The harvest of these three species was approximately 5.24 pounds per acre.

Ft. Gibson Lake

The harvest of commercial fishes from Ft. Gibson Lake totaled 92,610 pounds, or 13.57 percent of the total poundage harvested in the state. Of this total, buffalofish, carp, and flathead catfish represent 31,457 pounds, 33,200 pounds, and 22,591 pounds respectively, and a harvest rate of 2.41 pounds per acre.

Tenkiller Lake

Tenkiller Lake, the newest and smallest of the three reservoirs, produced 11.0 percent of the state's commercial fish. These fish weighed a total of 75,075 pounds. The catches (in pounds) of buffalofish (35,831), carp (19,523), and flathead catfish (13,848) comprised the major portion of the commercial harvest from Tenkiller Lake. These species were harvested at the rate of 5.5 pounds per acre.

Monthly Catch Fluctuations

Grand, Ft. Gibson, and Tenkiller Lakes supported most (60 percent) of the commercial fishing in 1957. For this reason, data pertaining to buffalofish, carp, and flathead catfish were combined to indicate the periods of peak activity and harvest, and the pounds-per-acre yield (Table II).

All three species of fishes exhibited two periods during the year when they were most active (Figure I). Buffalofish and carp both exhibited definite increases in activity during March. This increased activity was

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probably associated with spawning and was followed by a sharp drop in harvest during April and May. The buffalofish attained its peak period of activity during the months of June, July, and August. This seems somewhat paradoxical as it is generally assumed that fish activity is relatively low during the hot summer months. The catch of carp reached its peak in June and declined throughout the remainder of the year. Flathead catfish also exhibited yearly activity peaks which generally coincided with the periods of reduced activity of buffalofish and carp. The primary peak of flathead activity occurred in May and a secondary peak occurred in October.

Pounds per acre harvested was determined for each species for each month.

lodies of	Buffe	Buffalofish	Carp	a	Flathead	P .	Drum	E	Podd	Paddlefish	. River	
Water					Cattish	£					Carpsucker	cker
	No.	Pounds	°N No	Pounds	°N N	Pounds	Š	Pounds	Š	Pounds	° Ž	Pounds
Arkansas					1		!		(÷	•	
River	1,380	11,175	224	1,515	12	124	43	132	00	9 9	16	82
Av. Wt.		8.10		6.76		10.33		3.07		7.50		5.13
Carl												
Blackwell			110	503	620	6,738	53	156			323	1,600
Av. Wt.				4.57		10.87		2.94				4.95
Cache Creek	956	2,726	35	115	14	8 8					125	269
Av. Wt.		2.85		3.29		6.36						2.15
Canton	910	7.061	31	115	18	121	100	391			477	1,126
Av. Wt.		7.76		6.03		6.37		5.59				3.83
Ft. Gibson	6.376	31.457	7.006	33.200	3.397	22,591	2,505	4,015	42	1,100	45	121
		4.93		4.86		6.64		6.90		26.19		2.69
Grand	27.894	104.389	24,937	109,596	3,256	21,776	3,119	8,571	86	2,607	125	172
Av. Wt.		3.74		4.39		6.66		2.78		30.31		1.38
Greenleaf	366	7,857	234	2,631	36	228						
Av. Wt.		21.47		11.23		6.33						
Heyburn			20	126	10	55						
Av. Wt.				6.30		5.5						
Hulah	8,776	57,015	1,122	7,941	57	484	163	858			12	47
Av. Wt.		6.50		7.08		8.49		5.26		i		3.92
Tenkiller	5,693	35,831	4,720	19,523	1,481	13,848	454	1,737	œ	72	966	3,334
Av. Wt.		6.27		4.35		8.95		3.76		3.60		3.35
Texoma	3,492	21,129	1,125	6,187	343	4,775	11	179				
Av. Wt.		6.27		5.57		14.74		16.27				
Washita River	490	3,698	15	66	100	1,022						
Av. Wt.		7.55		6.60		10.22						
Wister	3,241	16,308	1,261	6,169	0	119	77	475				
Av. Wt.		5.03		4.89		13.22		6.17				
Totals	59,574	298,646	40,840	187,720	9,353	71,970	6,525	16,514 253	144	3,839 26 66	2,119	6,751 3,19

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Bodies of Water	0	Gar	White Bass	Bass	Channel Cattish	Cattish	White	White Crappie	rari	Largemouth Bass	510	
	°N.	Pounds	No.	Pounds	Ŷ	Pounds	No.	Pounds	°,	Pounds	No.	Pounds
Arkansas												
River	1,375	13,750									40	282 282
Av. Wt.		10.00										9.03
Carl						1	,	•	6	l 1		
Blackwell			4	14	13	136	۲	4	10	57		
Av. Wt.				3.5		10.46		4.0		5.70		
Cache Creek	121	726										
Av. Wt		6.0	ġ	1								
Canton			33	2.2								
Av. Wt.				70.1	ŝ	001						
Ft. Gibson	1,190	11,351			30	071						
Av. Wt.	i	9.04 . 001	010 1	0010	001	07.4	00	100	ĸ	20		
rand	742	4,905	1,016	2,100	791	DAO .	8	0000	2			
Av. Wt.		6.61		2.04		4.47		2.39		6.		
Greenleaf												
Av. Wt.												
Heyburn												
AV. WL.		01000										
ulah	2,669	20.313										
Av. Wt.		1.61			į	•	ŝ		,	ć		
Tenkiller	562	3,600	43	113	91	444	58	143	PT .	200		
Av. Wt.		6.41		2.67		4.88		2.49		3.00		
Texoma	105	1,188										
Av. Wt.		11.31										
Washita River												
Av. Wt.												
Wister												
Av. Wt.												
Totals	6,764	55,833	1,096	2,343	316	1,596	139	337	25	107	40	385
Av. Wt.				2.14		5.05		2.42		4.28		9.36

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	Table	Ħ	Monthl	y Catc	h Reco	rd Tots	uls for	Grand,	Fort G	ibson a	Table II. Monthly Catch Record Totals for Grand, Fort Gibson and Tenkiller Lakes in 1957.	ller Lal	kes in 19	57.	
Lake		Jan No.	January Pounds	Febr No.	February D. Pounds	No. Mc	arch Pounds	No. Po	pril Pounds	¥ V ^o N	May Pounds	ź	June Pounds	Ŝ	July Pounds
Grand Buffalofish Carp		1187 546	4124 2715	1465 815	4846 3350	2811 2201	9429 9601	251 4 2690	8434 11,737	2839 3375	10,562 13,013	3802 4500	16,818 19,145	4386 3059	18,294 15,147
Flathead Catfish		39	226	51	334	247	1671	526	4045	803	5984	333	2660	176	928
Founds per Acre			.16		.19		.46		.54		99.		88.		.76
Ft. Gibson Buffalofish Carp		165 165	713 870	235 882	1116 4318	198 742	889 3606	253 541	1648 2485	183 388	913 2088	506 643	3449 3122	1282 1317	6544 6344
Flathead Catfish		65	505	61	480	116	625	298	2166	328	2162	275	2216	533	3608
Pounds per Acre			90.		.16		.14		.17		.14		.24		.45
Tenkiller Buffalofish Carp		198 255	1395 1073	1395 1187	8455 3300	917 789	6051 3554	424 371	3175 1866	128 331	915 1677	589 440	3392 1837		
Flathead Catfish		18	163	82	583	211	1715	151	1547	219	2213	60	584		
Pounds per Acre			.21		66.		.91		.53		.38		.46		

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	٩	August	Septe	September	ť	October	∧₀N	November	Ŭ Ĉ	December	Totals	
Lake	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	° N	Pounds		Pounds
Grand Buffalofish		13 118	2189	7538	1534	5861	1116	3868	378	1497	27,894	104,389
Carp	2731	12,131	1659	7329	1111	7804	1194	5455	456	2169	24,937	109,596
Flatneau Catfish	282	1410	302	1624	351	1979	122	752	24	163	3,256	21,776
Pounds per Acre		.59		.37		.35		.22		80.		5.24
Ft. Gibson	0001	1000	649	1078	305	1839	181	933	140	1075	6.376	31.457
Carp	121 121	3118	657	3146	317	1534	306	1810	297	1759	2,006	33,200
Flathead Catfish	645	3601	561	3553	311	2224	84	613	102	838	3,397	22,591
Pounds per Acre		.43		.28		.15		60'		.10		2.41
Tenkiller Buffalofish Carp	423 146	2400 605	258 125	1863 831	623 614	3825 3003	565 390	3290 1839	173 81	1059 538	5,693 4,720	35,831 19,523
Flathead Catfish	62	405	90	804	249	1943	305	2633	34	258	1,481	13,848
Pounds per Acre		.27		3 8		.70		.62		.15		5.5

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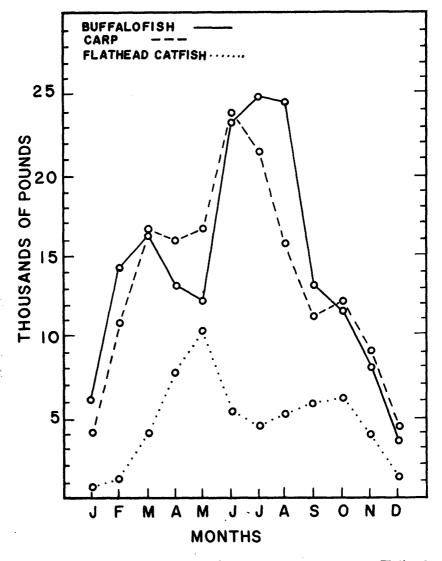


Figure 1. Monthly Aggregate Weights of Buffalofish, Carp, and Flathead Catfish; from Grand, Ft. Gibson, and Tenkiller Lakes 1957.