

SECTION G, CONSERVATION

Commercial Fisheries Catch in Oklahoma, 1957¹

RONALD E. ELKIN, JR., Oklahoma Wildlife Conservation

Department, Tulsa

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 short-sighted 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 industry, and to provide a sound basis of fact for a future commercial fishing program.

In 1955 the Oklahoma State Legislature passed the present commercial fishing law, (House Bill 701, Section 222). This law 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-

¹ Contribution No. 70 of the Oklahoma Fishery Research Laboratory, a cooperative unit of the Oklahoma Department of Wildlife Conservation and the University of Oklahoma Biological Survey.

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

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.

Table II. Monthly Catch Record Totals for Grand, Fort Gibson and Tenkiller Lakes in 1957.

Lake	January		February		March		April		May		June		July	
	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds
Grand	1187	4124	1465	4846	2811	9429	2514	8434	2839	10,562	3802	16,818	4386	18,294
Buffalofish	546	2715	815	3350	2201	9601	2690	11,737	3375	13,013	4500	19,145	3059	15,147
Carp	39	226	51	334	247	1671	526	4045	803	5984	333	2660	176	928
Flathead Catfish														
Pounds per Acre	.16		.19		.46		.54		.66		.86		.76	
Ft. Gibson	165	713	235	1116	198	839	253	1648	183	913	506	3449	1282	6544
Buffalofish	165	870	882	4318	742	3606	541	2485	388	2088	643	3122	1317	6344
Flathead Catfish	65	505	79	480	116	625	298	2166	328	2162	275	2216	533	3608
Pounds per Acre	.06		.16		.14		.17		.14		.24		.45	
Tenkiller	198	1395	1395	8455	917	6051	424	3175	128	915	589	3392		
Buffalofish	255	1073	1187	3300	789	3554	371	1866	331	1677	440	1837		
Carp	18	163	82	583	211	1715	151	1547	219	2213	60	584		
Flathead Catfish														
Pounds per Acre	.21		.99		.91		.53		.38		.46			

Table II. (Continued)

Lake	August		September		October		November		December		Totals
	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	No.	Pounds	
Grand	3673	13,118	2189	7538	1534	5861	1116	3868	378	1497	27,894
Buffalofish	2731	12,131	1659	7329	1711	7804	1194	5455	456	2169	24,937
Flathead	282	1410	302	1624	351	1979	122	752	24	163	3,256
Catfish											
Pounds per Acre		.59		.37		.35		.22		.08	5.24
Ft. Gibson	1996	9024	842	3721	395	1832	181	933	140	1075	6,376
Buffalofish	751	3118	657	3146	317	1534	306	1810	297	1759	7,006
Flathead	645	3601	561	3553	311	2224	84	613	102	838	3,397
Catfish											
Pounds per Acre		.43		.28		.15		.09		.10	2.41
Tenkiller	423	2400	258	1863	623	3825	565	3290	173	1059	5,693
Buffalofish	146	605	125	831	614	3003	390	1839	81	538	4,720
Carp	62	405	90	804	249	1943	305	2633	34	258	1,481
Flathead											
Catfish											
Pounds per Acre		.27		.28		.70		.62		.15	5.5

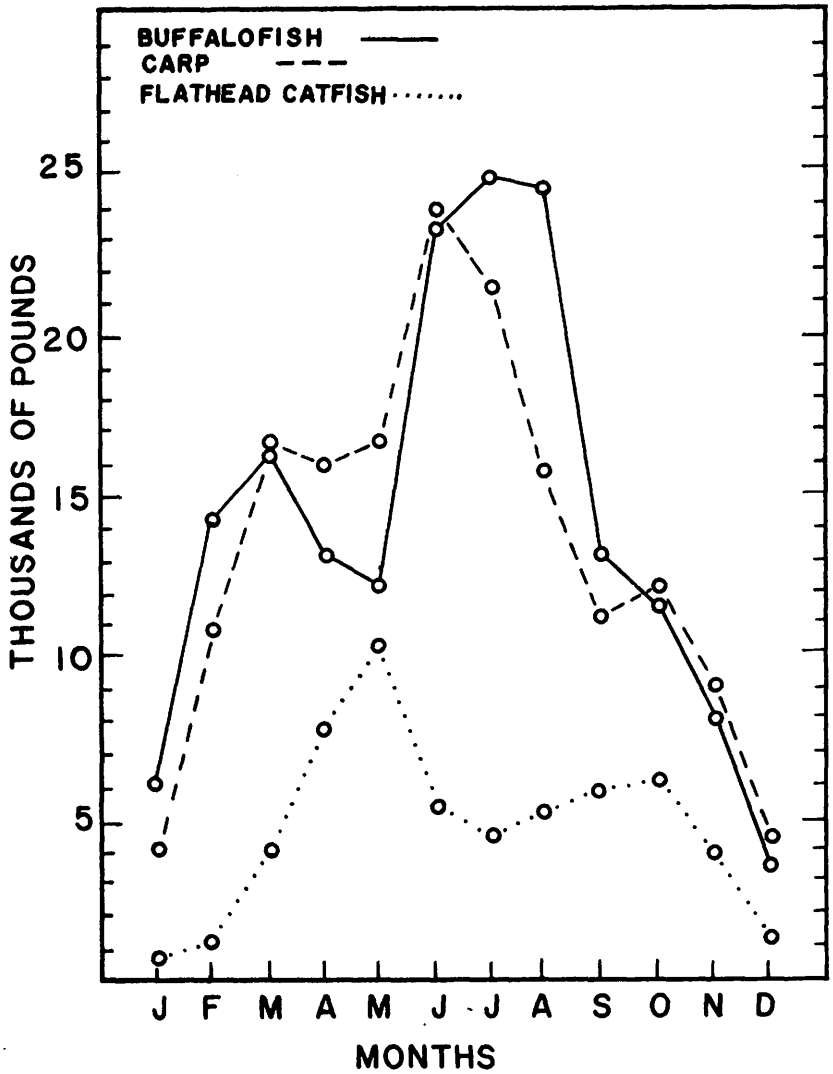


Figure 1. Monthly Aggregate Weights of Buffalo Fish, Carp, and Flathead Catfish; from Grand, Ft. Gibson, and Tenkiller Lakes 1957.