
STATISTICS
OF THE
FISHERIES OF THE MISSISSIPPI RIVER AND TRIBUTARIES.

**PREPARED IN THE DIVISION OF STATISTICS AND METHODS OF THE
FISHERIES, UNITED STATES FISH COMMISSION.**

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INTRODUCTORY NOTE.

The accompanying report of the fisheries of the Mississippi River and tributaries for the year 1899 is the result of a canvass made by the statistical agents of this Commission. These fisheries were previously canvassed in 1895, in connection with an investigation of the interior waters of the United States, exclusive of the Great Lakes and coastal rivers, for the year 1894.

The present inquiries were conducted during the summer of 1900 as follows: Mr. John N. Cobb investigated the fisheries of the Ohio River and the Mississippi and tributaries from Alton, Ill., to New Orleans, being assisted in Arkansas and Louisiana by Mr. G. H. H. Moore. Mr. W. A. Roberts canvassed the Mississippi above Dubuque, Iowa; Mr. C. H. Stevenson, the Mississippi from Dubuque to Keokuk, Iowa, and the Missouri and its tributaries; Mr. E. S. King, the Illinois River and tributaries and the Mississippi between Keokuk, Iowa, and Alton, Ill. Inquiries respecting the Tennessee River were made by Mr. John B. Wilson.

Upon the completion of the field inquiries the general results were made public in Statistical Bulletin No. 107, which was distributed throughout the Mississippi Valley.

In the report of the Commissioner for the year ending June 30, 1901, the results were given in less condensed form. In the present report the information collected is presented in detail. This report has been prepared under the direction of Mr. C. H. Townsend, assistant in charge of the Division of Fisheries. The field agents have assisted in the compilation of the data in the office, and most of them have contributed brief notes on the fisheries.

The assistant in charge has had the constant aid of Mr. Ansley Hall and other persons in the office, especially commending the painstaking assistance of Mr. Hall.

GEO. M. BOWERS, *Commissioner.*

STATISTICS OF THE FISHERIES OF THE MISSISSIPPI RIVER AND TRIBUTARIES.

GENERAL NOTES AND STATISTICS.

The Mississippi River and tributaries constitute the most extensive river system in the United States and embrace many large rivers which are of great value as navigable waterways and also on account of their fisheries. Among the more important of these, aside from the Mississippi itself, are the Missouri, Illinois, Ohio, Wabash, Cumberland, Tennessee, St. Francis, Yazoo, Red, and White rivers. There are also numerous other rivers, some of which are navigable, and small lakes tributary to the Mississippi and its affluents which have considerable value for fishing purposes. The fisheries of this river system are prosecuted in 17 States, the area of which aggregates 928,665 square miles and the population 34,792,662. The number of persons employed in these fisheries in 1899 was 11,155. Of this number, 8,566 were fishermen and 2,589 were shosmen in the various branches of industry related to the fisheries.

The States having the largest number of persons, including shosmen, engaged in the fisheries of these waters, were: Iowa, 2,637; Illinois, 2,389; Missouri, 1,531, and Kentucky, 589. In the remainder of the States the number varied from 68 in Alabama to 567 in Wisconsin.

The fisheries of greatest prominence were the seine fishery, employing 2,782 fishermen; the fyke-net fishery, 3,310; the set-line fishery, 3,368, and the mussel fishery, with crowfoot lines, rakes, etc., 1,442. In many instances, however, the same persons were employed in more than one fishery.

The amount of capital invested in the fisheries, including the value of boats, apparatus of capture, shore and accessory property, and the cash or working capital employed in the various fishery industries, was \$1,782,825. Boats, the number of which was 7,863, represented \$167,018; fishing apparatus, \$303,262; shore and accessory property, \$719,095, and cash capital, \$593,450.

The forms of apparatus having the widest distribution are seines, fyke nets, and lines. The number of seines used was 1,007, the length of which was 179,194 yards and the value \$71,641. The largest number in any single State was 303, valued at \$27,780, in Illinois. In Missouri, also, there were 154 valued at \$8,010, and in Iowa 145 valued at \$8,130; but in each of the other States they were employed less

extensively. Fyke nets are more numerous and valuable than any other apparatus, the number used being 35,036, valued at \$180,514. They were employed extensively in nearly all the States, but those in which the largest numbers occurred were Illinois, 13,614, valued at \$65,164; Iowa, 4,056, valued at \$16,647; Missouri, 4,027, valued at \$16,850; Arkansas, 2,576, valued at \$13,813; Kentucky, 2,462, valued at \$14,334; Tennessee, 2,336, valued at \$18,955, and Mississippi, 2,065, valued at \$11,715. More fyke nets are employed in this region than in all other sections of the country combined.

Lines were also important as a means of capture. The number of set lines used was 13,642, valued at \$13,666, and of hand and other lines 4,045, valued at \$2,014. The set lines are similar in construction to the trawl lines in the fisheries of the New England States, but are much less expensive. They are employed in the fisheries of all the States in this region. Next in importance in the capture of fish proper were trammel nets, the number fished being 567, with a length of 51,155 yards and a value of \$13,079. While these nets are found in all the States except Alabama, Indiana, Ohio, and West Virginia, they are more numerous in Arkansas, Illinois, Iowa, and Missouri. Pound nets and gill nets are used to a limited extent, but apparently are not well adapted to river fisheries.

Of various other forms of apparatus the crowfoot lines, or dredges, and rakes used in the mussel fishery are the most valuable and productive. The "crowfoot" dredge, so called probably on account of the shape of the hooks used, generally consists of a round iron bar or a hollow iron pipe one-half to three-fourths of an inch in diameter and varying in length from 6 to 12 or 15 feet, with lines attached to it at intervals of about 6 inches, each of which contains from 4 to 6 four-pronged hooks. The hooks, which are about 4 inches long, are made of two pieces of wire so fastened together that the prongs are at right angles to each other. The method of arranging the hooks is to place them at even distances apart from within a few inches of the bar to the end of the line. At or near each end of the bar is attached a rope, the two parts of which come together, forming a bridle. To this is fastened another rope, by which the apparatus is drawn along the bottom of the river in a manner similar to that of operating an ordinary oyster dredge. The number of hooks to each bar depends upon the length of the bar, the number of lines, and the number of hooks on each line. This device, which first came into use in 1897, has in recent years become the principal apparatus employed in the capture of mussels. Its effectiveness depends on the fact that the position of the mussel when feeding is with its shell opened against the current. As the boat operating crowfoot lines drifts downstream the prongs of the hooks enter the open shell of the mussels. The valves then close and the mussels remain on the hooks until they are detached. after the

dredge is drawn into the boat. The rakes above referred to are of several varieties, but the kind most commonly used is the shoulder rake. The apparatus of various forms employed in this fishery was valued at \$10,393.

The investment in shore and accessory property and cash capital, utilized chiefly in the pearl-button industry and wholesale trade in fishery products, was distributed in a number of States. Those in which it was largest were Missouri, \$593,804; Iowa, \$291,492; Nebraska, \$119,550; Illinois, \$67,480; Minnesota, \$79,420; Tennessee, \$62,257; Kentucky, \$57,702, and Wisconsin, \$23,275.

The products of the fisheries of the Mississippi and its tributaries in 1899 had a total weight of 96,797,437 pounds and a value of \$1,781,029. Of this quantity, fish, including caviar, represented 47,719,798 pounds, \$1,473,040; shrimp, 200,058 pounds, \$16,095; turtles and terrapin, 782,015 pounds, \$17,148; frogs, 440,996 pounds, \$53,054; alligator hides, 990, \$1,238; otter skins, 810, \$4,050, and mussel shells, 23,824 tons, \$216,404.

The species taken in greatest quantity were buffalo-fish, 14,215,975 pounds, \$349,913; German carp, 11,868,840 pounds, \$289,258; cat-fish, 7,648,179 pounds, \$339,800; fresh-water drum, 3,149,232 pounds, \$108,786; paddle-fish or spoonbill cat, 2,473,250 pounds, \$55,514; suckers, 2,243,934 pounds, \$76,993; crappie, 1,318,832 pounds, \$61,400. The greater part of the German carp, or 9,896,499 pounds, valued at \$244,322, was the product of the fisheries of Illinois; buffalo-fish were also more abundant in that State than in any other, the catch being 4,050,941 pounds, valued at \$111,707.

Paddle-fish were taken in twelve States and in practically all of the principal rivers of this region. The catch, over half of which was obtained in Arkansas and Mississippi, is more than twice as large as in 1894, the year for which these fisheries were last canvassed. Formerly only the flesh of this fish was marketed, but in about 1896 the fishermen along the lower part of the Mississippi River began to use the roe in the preparation of caviar. In 1899 caviar from the roe of paddle-fish was prepared in three States. Arkansas produced 34,175 pounds, \$11,488; Louisiana, 3,750 pounds, \$1,000, and Mississippi 32,775 pounds, \$14,391, the total yield being 70,700 pounds, \$26,879. It is said to be less desirable in flavor than the caviar made from the roe of sturgeon, and is marketable chiefly because sturgeon caviar has become scarce and expensive. The product is shipped for market to New York and Chicago.

Other species taken in considerable quantities were black bass, 948,184 pounds, \$56,652; sun-fish, 910,963 pounds, \$21,318; shovel-nose sturgeon, 711,693 pounds, \$19,142; white and rock bass, 278,457 pounds, \$11,494; lake sturgeon (*Acipenser rubicundus*), 234,145 pounds, \$8,064; pike and pickerel, 216,952 pounds, \$8,045; and pike perch (wall-eyed), 210,112 pounds, \$12,156.

A newly described species of fish, which has recently been identified as Ohio shad (*Alosa ohioensis*), is reported in the present statistics of this region. The catch was taken in the Ohio River in West Virginia, Indiana, and Kentucky, and aggregated 6,955 pounds, valued at \$355. The greater part of this quantity was obtained with seines in the vicinity of Louisville, Ky. A few were also secured in fyke nets and gill nets. It is probable that this species has been taken to some extent in these waters for a number of years.

In the yield of the fisheries of this region the leading States are Illinois and Iowa, the former being credited with 28,479,807 pounds of products, valued at \$579,168, and the latter with 23,901,922 pounds, valued at \$207,801. Wisconsin ranks next in the quantity of products, having 17,236,735 pounds, valued at \$88,139. The fishery products of Missouri amounted to 7,551,442 pounds, worth \$211,301, and those of Arkansas to 4,896,591 pounds, worth \$168,071, the value of the products in each of these two States being about twice that of Wisconsin. In Illinois, Iowa, Missouri, and Wisconsin, the States leading in the quantity of products, the yield consists largely of mussel shells, which are utilized in the pearl-button industry. Other States yielding over 1,000,000 pounds of products were Tennessee, 2,774,560 pounds, valued at \$87,537; Mississippi, 3,920,942 pounds, valued at \$97,711; Minnesota, 1,322,171 pounds, valued at \$40,258; Louisiana, 1,942,185 pounds, valued at \$57,072, and Kentucky, 1,753,278 pounds, valued at \$78,899. In each of the other States participating in the fisheries of the Mississippi and its tributaries the quantity of products was considerably less than a million pounds.

The principal items in the fisheries of Illinois were German carp, 9,896,499 pounds, worth \$244,322; buffalo-fish, 4,050,941 pounds, worth \$111,707; mussel shells, 8,910,000 pounds, worth \$43,468, and cat-fish, 1,569,615 pounds, worth \$68,535. In Iowa the yield of mussel shells, the most important item in the fisheries, amounted to 20,354,000 pounds, valued at \$97,449, and of German carp, which was next in importance, 1,039,375 pounds, valued at \$22,518. In Mississippi more than half of the catch, or 2,023,230 pounds, valued at \$33,747, consisted of buffalo-fish, and in Arkansas nearly half the catch, or 2,388,890 pounds, worth \$52,521, was comprised of that species. In Missouri the catch of buffalo-fish was 1,862,226 pounds, valued at \$44,743, and of mussel shells, 2,084,000 pounds, worth \$9,217. In Wisconsin the yield of mussel shells was 16,260,000 pounds, worth \$66,110. In the remaining States of this region the yield of any one species was less than a million pounds. Cat-fish constituted a considerable part of the catch in certain States, as follows: Arkansas, 838,514 pounds, worth \$42,044; Iowa, 750,678 pounds, worth \$37,845; Missouri, 875,050 pounds, worth \$40,755; Tennessee, 708,260 pounds, worth \$24,289; and Louisiana, 682,347 pounds, worth \$22,373. In Missouri the yield of German carp was 453,250 pounds, worth \$9,447. Turtles and terrapin were im-

portant products in the fisheries of Illinois, the quantity taken being 681,679 pounds, worth \$14,520. The yield of paddle-fish, or spoonbill cat, in Mississippi was 948,305 pounds, worth \$16,739, and in Arkansas, 551,405 pounds, worth \$11,967. The caviar prepared from the roe of this species in the former State amounted to 32,775 pounds, worth \$14,391, and in the latter 34,175 pounds, worth \$11,488.

The following tables exhibit by States the number of persons employed, the number and value of boats and apparatus of capture, the value of shore and accessory property and the amount of cash capital, and the quantity and value of the products of the fisheries of the Mississippi River and tributaries in 1899:

Table showing, by States, the number of persons employed in the fisheries of the Mississippi River and tributaries in 1899.

States.	Fisheries.										Shoresmen.	Total, exclusive of duplication.	
	Seine.	Trammel net.	Gill net.	Fyke net.	Pound net.	Cast net.	Dip net.	Set line.	Hand and drift line.	Crowfoot line or grapple.			All others.
Alabama				60				62			6		68
Arkansas	181	80		264	24			229	39		210	32	463
Illinois	922	250	24	939	8			638	46	322	243	354	2,389
Indiana	159			190				327			8		409
Iowa	348	146		258	9				4	674		1,476	2,637
Kansas	18	11		65				74					118
Kentucky	151	14		301		4	8	363	31				589
Louisiana	51	4		122		25		203			96		326
Minnesota	83	10	2	39	23		8	35	179	5	183	48	506
Mississippi	136	12		182	3			185	22		147	51	540
Missouri	382	116		406	8			476	148	121	551	406	1,531
Nebraska	85	12		41				87				54	196
Ohio	70		2	90				143			12		182
South Dakota	24	5		24				46					72
Tennessee	33	59		240				340			115	52	476
West Virginia	50		1	43				61					86
Wisconsin	89	6		46				99		320	276	76	567
Total	2,782	725	29	3,310	75	29	16	3,368	469	1,442	1,846	2,589	11,155

Table showing, by States, the boats, apparatus, and capital used in the fisheries of the Mississippi River and tributaries in 1899.

States.	Boats.		Seines.		Trammel nets.			
	No.	Value.	No.	Length (yards).	Value.	No.	Length (yards).	Value.
Alabama	109	\$1,074						
Arkansas	437	10,357	48	13,105	\$6,262	102	6,730	\$1,897
Illinois	1,717	54,808	303	78,826	27,780	153	17,520	3,795
Indiana	422	6,752	71	7,417	3,150			
Iowa	1,188	17,066	145	21,524	8,130	82	7,757	1,914
Kansas	118	1,287	8	785	278	6	490	160
Kentucky	572	10,460	72	7,050	2,965	7	700	160
Louisiana	347	9,684	13	2,880	1,540	2	240	60
Minnesota	263	3,005	26	5,360	1,090	9	610	156
Mississippi	412	14,120	31	9,875	4,945	6	600	170
Missouri	1,001	18,253	154	18,845	8,010	150	12,363	3,508
Nebraska	145	1,429	41	2,315	948	10	555	193
Ohio	160	2,755	30	1,255	1,200			
South Dakota	73	649	10	860	333	4	190	54
Tennessee	398	7,068	8	2,845	1,560	31	3,100	927
West Virginia	64	1,228	18	672	680			
Wisconsin	437	7,023	29	5,580	2,170	5	300	86
Total	7,863	167,018	1,007	179,194	71,641	567	51,155	13,079

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Table showing, by States, the boats, apparatus, and capital used in the fisheries of the Mississippi River and tributaries in 1899—Continued.

States.	Gill nets.			Hand and other lines.		Fyke nets.		Pound nets.	
	No.	Length (yards).	Value.	No.	Value.	No.	Value.	No.	Value.
Alabama						526	\$2,233		
Arkansas				196	\$61	2,576	13,813	16	\$775
Illinois	12	2,400	\$240	742	96	13,614	65,164	6	290
Indiana						1,458	7,887		
Iowa					7	4,066	16,647	40	655
Kansas						282	1,389		
Kentucky				1,620	1,267	2,462	14,334		
Louisiana						740	3,669		
Minnesota	4	165	30		317	77	1,290	14	1,630
Mississippi				640	32	2,065	11,715	1	50
Missouri				802	197	4,027	16,850	10	1,000
Nebraska						130	532		
Ohio	1	55	10			281	2,270		
South Dakota						86	323		
Tennessee				45	48	2,336	18,955		
West Virginia	1	30	5			138	1,382		
Wisconsin						182	2,061		
Total	18	2,650	285	4,045	2,014	35,036	180,514	87	4,400

States.	Set lines.		Spears.		Small traps.		Other apparatus.	Shore and accessory property.	Cash capital.	Total investment.
	No.	Value.	No.	Value.	No.	Value.				
Alabama	540	\$451			47	\$705				\$4,468
Arkansas	1,252	1,153	90	\$65	2,197	651	\$570	\$3,601		39,105
Illinois	2,837	2,471			829	809	2,332	46,430	\$21,050	225,324
Indiana	1,324	1,104	8	10				828		19,731
Iowa	972	999					4,759	189,242	102,250	341,669
Kansas	101	205						517		3,836
Kentucky	453	331						27	35,500	87,286
Louisiana	933	1,082			2,012	615	390	22,202		18,745
Minnesota	38	78					41	42,420	37,000	87,796
Mississippi	1,218	1,531	93	139	2,840	554		6,054	4,200	43,371
Missouri	1,552	1,902	274	438	2,628	657	1,652	325,354	268,450	646,071
Nebraska	145	232						49,050	70,500	122,884
Ohio	846	489						190		6,854
South Dakota	79	77						345		1,781
Tennessee	1,590	1,791	32	112	600	160	15	20,257	42,000	92,883
West Virginia	157	201						95		3,591
Wisconsin	105	169	45	167			2,975	10,775	12,500	37,825
Total	13,642	13,666	542	831	11,153	4,101	12,731	719,095	593,450	1,782,825

Table showing, by States, the yield of the fisheries of the Mississippi River and tributaries in 1899.

States.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alabama	10,240	\$512	73,380	\$3,669			233,580	\$11,691
Arkansas	185,345	9,994	2,388,890	52,521	25,428	\$615	838,514	42,044
Illinois	126,180	10,842	4,050,941	111,707	9,896,499	244,322	1,569,615	68,635
Indiana	7,451	705	141,516	7,077	31,401	2,268	287,817	17,572
Iowa	24,457	1,746	937,076	26,559	1,039,375	22,518	760,678	37,846
Kentucky	600		51,995	2,225			94,960	6,137
Louisiana	14,864	1,026	471,643	17,900	78,031	3,096	415,934	20,806
Louisiana	22,735	1,428	799,320	15,655	2,645	245	682,347	22,373
Minnesota			177,400	3,991	59,100	896	254,395	6,833
Mississippi	12,875	700	2,023,230	33,747	10,825	194	397,300	14,802
Missouri	894,338	20,362	1,862,226	44,743	453,250	9,447	875,050	40,755
Nebraska	650	65	138,162	4,862			84,970	6,068
Ohio	1,466	166	4,517	386	9,332	606	110,396	5,547
South Dakota			47,290	1,812			64,368	4,184
Tennessee	142,352	8,671	862,390	18,723	86,954	1,875	708,260	24,289
West Virginia	855	112	2,160	196	6,410	53,600	53,600	3,120
Wisconsin	8,715	209	183,810	3,540	169,590	2,686	221,395	7,699
Total	948,184	56,652	14,215,975	349,913	11,868,840	289,258	7,648,179	339,800

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Table showing, by States, the yield of the fisheries of the Mississippi River and tributaries in 1899—Continued.

States.	Crapple.		Drum, fresh-water.		Eels.		Mooneye.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alabama.....			224,060	\$11,153	8,040	\$403		
Arkansas.....	282,204	\$12,590	804,105	7,848	3,702	106		
Illinois.....	856,320	14,419	610,205	17,729	29,263	1,604	2,600	\$89
Indiana.....	4,124	276	192,743	10,631	5,078	424	4,215	172
Iowa.....	37,110	1,476	315,635	7,642	10,943	847		
Kansas.....	100	8	7,945	318	1,070	94		
Kentucky.....	6,867	495	390,909	18,715	3,900	170	6,396	307
Louisiana.....	42,900	2,826	150,795	3,602	1,670	53		
Minnesota.....	65,735	2,632	56,410	766	900	62		
Mississippi.....	41,965	2,290	198,290	3,130	3,930	68		
Missouri.....	358,913	18,310	197,365	6,141	7,811	269	4,195	135
Nebraska.....	400	28	15,080	440	300	25		
Ohio.....	15	1	60,077	5,334	618	63	60	8
South Dakota.....			300	12				
Tennessee.....	163,479	5,766	310,890	11,356	14,180	448		
West Virginia.....	100	12	28,148	2,833	755	83		
Wisconsin.....	8,600	281	86,275	1,136	1,745	84		
Total.....	1,318,832	61,400	3,149,232	108,786	93,905	4,803	17,366	706

States.	Paddle-fish.		Pike and pickerel.		Pike perch (wall-eyed).		Pike perch (sauger).	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alabama.....					7,800	\$391		
Arkansas.....	551,405	\$11,967	8,619	\$293	4,468	347		
Illinois.....	195,174	6,210	22,586	1,337	28,880	1,774		
Indiana.....	34,125	1,308			8,930	837	200	\$10
Iowa.....	36,390	1,128	30,322	1,370	24,137	1,291	7,850	310
Kansas.....	7,850	255	325	26				
Kentucky.....	147,260	4,919			5,988	532	2,130	113
Louisiana.....	132,200	1,960	300	18	60	3		
Minnesota.....			113,760	3,225	87,485	4,032	19,810	718
Mississippi.....	948,805	16,739	350	25	1,216	77		
Missouri.....	190,931	5,865	19,300	701	17,833	1,087		
Nebraska.....	16,375	444	3,000	218	800	48		
Ohio.....					3,674	392	2,498	260
South Dakota.....	2,050	62	4,825	380				
Tennessee.....	211,186	4,657			9,517	746	463	41
West Virginia.....			30	6	2,654	294	1,412	178
Wisconsin.....			13,535	447	6,780	305	4,960	174
Total.....	2,473,250	55,514	216,952	8,045	210,112	12,156	39,323	1,799

States.	Shad.		Sturgeon, lake.		Sturgeon, shovelnose.		Suckers.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alabama.....			4,480	\$224	7,600	\$380	124,800	\$6,241
Arkansas.....					15,305	453	83,076	1,299
Illinois.....			34,809	1,279	124,843	2,625	259,204	7,845
Indiana.....	280	\$19	3,705	131	39,489	1,938	155,859	8,768
Iowa.....			36,768	1,184	7,010	188	188,691	3,836
Kansas.....			1,800	78			111,215	4,341
Kentucky.....	6,550	330	4,519	244	35,616	1,391	131,093	7,081
Louisiana.....							28,650	456
Louisiana.....							86,185	1,490
Minnesota.....			83,035	2,152	146,415	2,639	105,760	1,637
Mississippi.....					8,600	100	495,307	14,181
Missouri.....			9,219	369	150,530	4,511	88,630	2,967
Nebraska.....			16,650	694			74,416	5,452
Ohio.....			835	86	2,739	275	16,240	520
South Dakota.....			420	15	400	16	147,689	5,266
Tennessee.....			10,580	704	32,398	1,466	55,160	4,227
West Virginia.....	125	6	2,070	217	1,968	201	92,170	1,337
Wisconsin.....			25,265	747	138,780	2,959		
Total.....	6,955	355	234,145	8,064	711,693	19,142	2,243,934	76,993

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Table showing, by States, the yield of the fisheries of the Mississippi River and tributaries in 1899—Continued.

States.	Sun-fish.		White and rock bass.		Yellow perch.		Other fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alabama.....							158,480	\$7,924
Arkansas.....	102,430	\$3,025	21,776	\$1,210				
Illinois.....	543,387	12,067	166,591	5,601	19,939	\$556	820,160	8,829
Indiana.....	8,593	747	5,453	488	14,202	780	250	18
Iowa.....	55,275	1,283	11,685	434	9,965	253	6,930	56
Kentucky.....	2,735	142	3,960	299	13,800	925	250	20
Louisiana.....			14,065	899				
Minnesota.....	18,465	499	14,347	423	4,375	67	2,100	64
Mississippi.....			14,770	728				
Missouri.....	131,520	2,128	17,025	911			450	7
Nebraska.....			1,300	66	300	12		
Ohio.....	390	27	455	46				
Tennessee.....	36,668	1,117	2,075	173	705	44	6,575	358
West Virginia.....	165	54	585	70				
Wisconsin.....	11,335	229	4,470	146	1,720	29	2,600	21
Total.....	910,963	21,318	278,457	11,494	65,006	2,666	997,795	17,297

States.	Shrimp.		Turtles and terrapin.		Frogs.		Caviar.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Arkansas.....	7,200	\$600	9,690	\$259	79,760	\$10,162	34,175	\$11,488
Illinois.....			681,679	14,520	31,032	3,760		
Indiana.....			5,354	242				
Iowa.....			17,825	386				
Kentucky.....			10,833	388				
Louisiana.....	52,980	4,395	2,580	52			3,750	1,000
Minnesota.....					92,254	9,609		
Mississippi.....	119,838	9,430	900	18			32,775	14,391
Missouri.....			43,819	1,004	237,600	29,313		
Ohio.....			375	83	350	210		
Tennessee.....	20,040	1,670	8,160	177				
West Virginia.....			200	19				
Total.....	200,058	16,095	782,015	17,148	440,996	53,054	70,700	26,879

States.	Alligator hides.		Otter skins.		Mussel shells.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Alabama.....							852,460	\$42,588
Arkansas.....			500	\$1,250			4,896,591	168,071
Illinois.....					8,910,000	\$43,468	28,479,807	579,168
Indiana.....							950,784	55,011
Iowa.....					20,354,000	97,449	23,901,922	207,801
Kansas.....							277,920	13,546
Kentucky.....							1,763,278	78,899
Louisiana.....	4,950	\$1,238	348	870			1,942,185	67,072
Minnesota.....					40,000	160	1,322,171	40,258
Mississippi.....			10	25			3,920,942	97,711
Missouri.....			762	1,905	2,084,000	9,217	7,551,442	211,301
Nebraska.....							366,617	15,937
Ohio.....							272,843	18,937
South Dakota.....							135,893	6,941
Tennessee.....							2,774,600	87,537
West Virginia.....							161,287	12,112
Wisconsin.....					16,260,000	66,110	17,236,735	88,189
Total.....	4,950	1,238	1,620	4,050	47,648,000	216,404	96,797,437	1,781,029

Products by apparatus.—The most important forms of apparatus employed in the fisheries of the Mississippi River and tributaries, as determined by the quantity and value of the products secured, are seines, fyke nets, lines, and the various appliances used in the capture of mussels. The yield of seines, including all species, aggregated 19,593,614 pounds, \$548,054; fyke nets, 17,030,138 pounds, \$514,690; lines of all kinds, 6,736,087 pounds, \$278,400; apparatus in the mussel fishery, 47,648,000 pounds, or 23,824 tons, \$216,404. Trammel nets were also used extensively, their catch amounting to 3,029,903 pounds, valued at \$82,698.

Table showing, by apparatus of capture, the yield of the fisheries of the Mississippi River and tributaries in 1899.

Species.	Seines.		Trammel nets.		Gill nets.		Fyke nets.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass	215, 153	\$14, 189	124, 418	\$6, 960	9	\$1	231, 119	\$14, 725
Buffalo-fish	5, 254, 144	123, 444	1, 201, 403	27, 894	20, 000	400	5, 846, 586	147, 525
Carp, German	6, 953, 689	167, 224	674, 278	14, 506	40, 000	800	3, 999, 986	101, 470
Cat-fish	1, 102, 660	49, 812	235, 299	9, 064			2, 281, 883	107, 742
Crappie	466, 966	21, 387	169, 590	8, 390	1, 015	41	507, 495	22, 589
Drum, fresh-water	935, 888	28, 269	109, 697	2, 676			1, 229, 051	40, 621
Eels	1, 450	85					8, 817	497
Mooneye	13, 980	555			60	3	2, 825	121
Paddle-fish	1, 843, 101	44, 446	26, 920	866			593, 999	9, 882
Pike and pickerel	64, 104	2, 897	31, 985	1, 325	500	25	20, 123	936
Pike perch (wall-eyed)	39, 495	2, 538	8, 899	499	50	6	51, 200	3, 408
Pike perch (sauger)	13, 628	544	2, 465	90	500	25	13, 032	713
Shud	6, 640	333			125	6	190	16
Sturgeon, lake	90, 301	2, 790	16, 644	575			40, 530	1, 740
Sturgeon, shovel-nose	216, 019	5, 861	98, 200	1, 715			99, 891	2, 575
Suckers	882, 191	28, 792	220, 773	5, 419	175	13	948, 910	34, 714
Sun-fish	408, 464	9, 246	82, 270	1, 888	2, 500	50	356, 899	8, 639
White bass and rock bass	138, 991	5, 231	13, 702	610			102, 222	4, 425
Yellow perch	20, 515	544	1, 810	68			26, 595	1, 328
Other fish	485, 390	5, 817	10, 650	145			362, 202	3, 859
Turtles and terrapin	370, 457	7, 311	900	18			307, 282	7, 024
Caviar	70, 300	26, 739					400	140
Total.....	19, 593, 614	548, 054	3, 029, 903	82, 698	64, 934	1, 370	17, 030, 138	514, 690

Species.	Pound nets.		Set lines.		Hand and other lines.		Spears.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass	29, 750	\$1, 501	25, 505	\$1, 820	320, 950	\$17, 328		
Buffalo-fish	470, 185	7, 832	1, 126, 817	85, 365	8, 200	846	201, 900	\$3, 703
Carp, German	22, 230	438	153, 662	4, 301			1, 106	110
Cat-fish	48, 786	2, 259	3, 388, 506	147, 849	224, 205	7, 434	200	20
Crappie	49, 085	2, 447	29, 395	2, 274	93, 486	4, 092		
Drum, fresh-water	21, 290	389	677, 541	28, 160	625	10	180	18
Eels	800	16	82, 668	4, 195				
Mooneye			200	12				
Paddle-fish	5, 400	144	4, 730	176				
Pike and pickerel	6, 700	238	3, 920	261	67, 935	1, 948	21, 500	410
Pike perch (wall-eyed)	1, 245	71	30, 687	2, 057	78, 446	3, 567	60	6
Pike perch (sauger)	1, 275	70	5, 025	193	3, 400	164		
Sturgeon, lake	13, 050	402	36, 620	1, 467			37, 000	1, 100
Sturgeon, shovel-nose	14, 500	258	196, 183	6, 948			86, 700	1, 775
Suckers	47, 395	883	81, 215	4, 166			1, 000	100
Sun-fish	26, 615	463	6, 590	550	17, 450	489		
White bass and rock bass	1, 610	77	9, 555	772	12, 377	379		
Yellow perch	175	8	12, 136	686	3, 875	42		
Other fish	1, 250	34	16, 603	858	100	4		
Turtles and terrapin			17, 480	497				
Frogs							122, 604	15, 304
Total.....	761, 341	17, 520	5, 905, 038	242, 597	831, 049	35, 803	472, 244	22, 546

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Table showing, by apparatus of capture, the yield of the fisheries of the Mississippi River and tributaries in 1899—Continued.

Species.	Small traps.		Other apparatus.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass	1,000	\$100	280	\$28	948,184	\$56,652
Buffalo-fish	74,340	3,043	12,400	360	14,215,975	349,913
Carp, German	770	39	23,125	370	11,868,640	289,258
Cat-fish	244,415	11,577	122,225	4,043	7,648,179	339,500
Crappie	1,000	100	800	80	1,318,432	61,400
Drum, fresh-water	169,460	8,473	5,500	170	8,149,232	103,786
Eels	170	10			93,905	4,803
Mooneye			300	15	17,366	706
Paddle-fish					2,473,250	55,614
Pike and pickeral			185	5	216,952	8,045
Pike perch (wall-eyed)			30	4	210,112	12,156
Pike perch (sauger)					89,323	1,799
Shad					6,955	355
Sturgeon, lake					234,145	8,064
Sturgeon, shovel-nose			200	10	711,693	19,142
Suckers	56,400	2,820	5,875	86	2,243,934	76,993
Sun-fish			185	3	910,963	21,318
White bass and rock bass					278,457	11,494
Yellow perch					65,006	2,666
Other fish	131,600	6,580			997,795	17,297
Shrimp	200,058	16,095			200,058	16,095
Turtles and terrapin			85,896	2,298	782,015	17,148
Frogs			318,392	37,750	440,996	53,054
Caviar					70,700	26,879
Alligator hides			† 4,950	1,238	4,950	1,238
Otter skins	* 1,260	3,150	† 360	900	1,620	4,050
Mussel shells			47,648,000	216,404	47,648,000	216,404
Total	880,473	51,987	48,228,703	263,764	96,797,437	1,781,029

* 630 in number.

† 990 in number.

‡ 180 in number.

THE PEARL-BUTTON INDUSTRY.

The manufacture of pearl buttons from the shells of mussels taken in the fisheries of the Mississippi River was begun at Muscatine, Iowa, in 1891, and has now become an important industry. In 1899 there were 41 button factories in Iowa, 11 in Illinois, 6 in Missouri, and 2 in Wisconsin; a total of 60, valued at \$224,010. Of these 14 were complete plants where finished buttons are made, 12 of which were in Iowa, 1 in Illinois, and 1 in Missouri. The other factories were engaged in sawing button blanks, which are shipped to New York and other Eastern cities, where they are made into buttons. The persons employed in the factories numbered 1,917, and the cash capital utilized amounted to \$150,450. The products consisted of 1,073,553 gross of buttons, valued at \$336,504, and 3,146,413 gross of button blanks, valued at \$479,931, the total value of the output being \$816,435.

The following shows the extent of the pearl-button industry in 1899:

Items.	Illinois.		Missouri.		Iowa.		Wisconsin.		Total.	
	No.	Value.	No.	Value.	No.	Value.	No.	Val.	No.	Value.
Factories	11	\$27,200	6	\$14,800	41	\$175,650	2	\$6,360	60	\$224,010
Cash capital		21,050		14,650		102,250		12,500		150,450
Persons employed	293		121		1,446		58			1,917
Mussel shells used, tons	2,226	27,782	620	6,930	8,434	101,219	520	4,224	11,800	139,155
Products prepared:										
Buttons..... gross	96,820	29,850	50,000	12,500	926,733	294,154			1,073,553	336,504
Button blanks..... do	760,998	120,714	164,400	20,070	2,147,972	330,262	73,043	8,895	3,146,413	479,931

WEST VIRGINIA.

The fisheries of West Virginia are prosecuted in the Ohio River. In 1899 the number of persons employed in them was 86, the investment was \$3,591, and the products amounted to 161,287 pounds, valued at \$12,112.

The apparatus of capture consisted principally of 138 fyke nets, valued at \$1,382; 18 seines, valued at \$680, and 157 set lines, valued at \$201. The species of fish taken in greatest quantity were cat-fish, 58,600 pounds, \$3,120; fresh-water drum, 28,148 pounds, \$2,833, and suckers, 55,150 pounds, \$4,227. Nearly half of the total yield was obtained with fyke nets.

Table showing the number of persons employed in the fisheries of West Virginia in 1899.

Fisheries in which employed.	No.
Seine	50
Gill net.....	1
Fyke net.....	43
Set line.....	61
Total (exclusive of duplication)	86

Table showing the boats, apparatus, and property employed in the fisheries of West Virginia in 1899.

Items.	No.	Value.
Fishing boats	58	\$983
House boats.....	6	245
Set lines (15,725 yards).....	157	201
Fyke nets.....	138	1,382
Seines (672 yards).....	18	680
Gill nets (30 yards).....	1	5
Shore and accessory property.....		95
Total investment		3,591

Table showing, by apparatus of capture, the yield of the fisheries of West Virginia in 1899.

Species.	Set lines.		Fyke nets.		Seines.		Gill nets.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass	350	\$51	150	\$15	355	\$46			855	\$112
Buffalo-fish	500	50	1,060	94	600	62			2,160	196
Carp, German.....	1,000	80			5,410	410			6,410	490
Cat-fish	18,665	1,027	35,900	1,815	4,035	278			58,600	3,120
Crappie	100	12							100	12
Drum, fresh-water	7,040	764	8,072	803	13,036	1,266			28,148	2,833
Eels.....	495	57	260	26					755	83
Pike					30	5			30	5
Pike perch (sauger).....	50	8	1,067	128	295	37			1,412	173
Pike perch (wall-eyed).....	100	15	1,659	170	795	109			2,554	294
Rock bass.....	200	30			385	40			585	70
Shad.....							125	\$6	125	6
Sturgeon, lake.....	1,670	177			400	40			2,070	217
Sturgeon, shovel-nose.....	1,968	201							1,968	201
Suckers	2,475	195	24,455	1,947	28,120	2,077	100	8	55,150	4,227
Sun-fish.....	140	50			25	4			165	54
Turtles.....			200	19					200	19
Total.....	34,753	2,717	72,823	5,017	53,486	4,364	225	14	161,287	12,112

OHIO.

The fisheries of Ohio conducted in the Ohio River, the only tributary of the Mississippi in which this State has fisheries, gave employment in 1899 to 182 persons. The amount of capital invested was \$6,864, and the products aggregated 272,843 pounds, valued at \$18,937. The principal species taken were cat-fish, 110,396 pounds, worth \$5,547; fresh-water drum, 60,077 pounds, worth \$5,334, and suckers, 74,416 pounds, worth \$5,452. Fyke nets and seines were the most important forms of apparatus employed.

Table showing the number of persons employed in the fisheries of Ohio in 1899.

Fisheries in which employed.	No.
Seine	70
Fyke net	90
Gill net	2
Set line	143
Without apparatus	12
Total (exclusive of duplication)	182

Table showing the boats, apparatus of capture, and shore property employed in the fisheries of Ohio in 1899.

Items.	No.	Value.
Fishing boats	150	\$2,050
House boats	10	705
Seines (1,255 yards)	30	1,200
Fyke nets	281	2,270
Gill nets (55 yards)	1	10
Set lines	346	439
Shore and accessory property		190
Total investment		6,864

Table showing, by apparatus of capture, the yield of the fisheries of Ohio in 1899.

Species.	Seines.		Fyke nets.		Gill nets.		Set lines.		Without apparatus.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Black bass	800	\$96	357	\$37	9	\$1	300	\$32			1,466	\$166
Buffalo-fish	1,172	95	2,951	252			424	39			4,547	386
Carp, German	7,805	466	1,302	117			225	23			9,332	606
Cat-fish	7,864	406	62,780	3,108			39,752	2,033			110,396	5,547
Crappie					15	1					15	1
Drum, fresh-water	27,955	2,375	18,717	1,727			13,405	1,232			60,077	5,334
Eels			265	27			353	36			618	63
Moon-eye or tooth herring					60	3					60	3
Pike perch (wall-eyed)												
Pike perch (sauger)	834	94	2,678	281	50	6	112	11			3,674	392
Rock bass	146	15	2,352	245							2,498	260
Sturgeon, lake	455	46									455	46
Sturgeon, shovel-nose							855	86			855	86
Suckers	280	11					2,459	264			2,739	275
Sun-fish	39,478	2,518	29,793	2,420	75	5	5,070	509			74,416	5,452
Turtles	390	27									390	27
Frogs			975	83							975	83
Total	87,179	6,149	122,170	8,297	209	16	62,935	4,265	350	210	272,843	18,937

INDIANA.

The fisheries of Indiana, in waters tributary to the Mississippi River, are not extensive. The number of persons engaged in them in 1899 was 409; the investment was \$19,731, and the products amounted to 950,784 pounds, valued at \$55,011. The apparatus of capture consisted principally of seines, fyke nets, and set nets. The principal species of fish obtained were cat-fish, 287,817 pounds, worth \$17,572; buffalo-fish, 141,515 pounds, worth \$7,677; fresh-water drum, 192,743 pounds, worth \$10,613; and suckers, 155,859 pounds, worth \$8,768. The yield was mostly derived from the Ohio and Wabash rivers.

Table showing the number of persons employed in the fisheries of Indiana in 1899.

Waters.	Fisheries in which employed.				Total, exclusive of duplication.
	Seine.	Fyke net.	Set line.	Spears.	
Ohio River	111	128	185		224
Wabash River	41	46	108	8	143
White River		6	14		14
West Fork of White River		7	15		18
Tippecanoe River	7	3	5		10
Total	159	190	327	8	409

Table showing, by waters, the boats, apparatus, and property employed in the fisheries of Indiana in 1899.

Waters and apparatus.	No.	Length.	Value.
Ohio River:		Yards.	
Gasoline launch	1		\$700
Rowboats	190		1,234
House boats	52		2,740
Haul seines	53	5,765	2,450
Fyke nets	930		5,247
Set lines	769	77,610	837
Shore and accessory property			477
Wabash River:			
Steamboat	1		500
Rowboats	117		596
House boats	19		710
Haul seines	15	1,352	585
Fyke nets	434		2,170
Set lines	414	20,340	214
Spears	8		10
Shore and accessory property			245
White River:			
Rowboats	14		70
House boats	2		50
Fyke nets	32		160
Set lines	56	2,600	26
Shore and accessory property			26
West Fork of White River:			
Rowboats	18		89
House boat	1		30
Fyke nets	27		135
Set lines	62	1,560	16
Shore and accessory property			77
Tippecanoe River:			
Rowboats	7		33
Haul seines	3	800	115
Fyke nets	35		175
Set lines	23	1,100	11
Shore and accessory property			3
Total investment			19,731

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Table showing, by waters and apparatus of capture, the yield of the fisheries of Indiana in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Cat-fish.		Crappie.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Selnes:								
Ohio River.....	748	\$51	30,090	\$1,151	24,645	\$1,065	352	\$21
Wabash River.....	1,344	135	5,750	531	3,125	313	65	7
Tiptecanoe River.....	662	66	200	20	508	51	.....	.....
Total.....	2,754	252	36,040	1,702	28,278	1,429	417	28
Fyke nets:								
Ohio River.....	704	57	51,611	2,569	99,176	4,862	2,815	166
Wabash River.....	1,822	179	6,913	572	34,866	3,074	389	35
White River.....	60	6	1,463	104	4,300	444	.....	.....
West Fork of White River.....	80	8	2,910	225	3,890	311	.....	.....
Tiptecanoe River.....	143	14	.....	.....	562	56	.....	.....
Total.....	2,809	264	62,897	3,470	142,794	8,747	3,204	201
Lines:								
Ohio River.....	333	33	26,390	1,214	62,860	2,976	.....	.....
Wabash River.....	1,305	131	11,933	937	42,713	3,495	503	47
White River.....	.....	.....	1,210	87	5,200	416	.....	.....
West Fork of White River.....	250	25	2,220	184	4,972	409	.....	.....
Tiptecanoe River.....	.....	.....	125	13	800	80	.....	.....
Total.....	1,888	180	41,878	2,435	116,545	7,376	503	47
Spears:								
Wabash River.....	.....	.....	700	70	200	20	.....	.....
Total by waters:								
Ohio River.....	1,785	141	108,091	4,934	186,681	8,903	3,167	187
Wabash River.....	4,471	445	25,296	2,110	80,904	6,902	957	89
White River.....	60	6	2,673	191	9,500	860	.....	.....
West Fork of White River.....	330	33	5,130	409	8,862	720	.....	.....
Tiptecanoe River.....	805	80	325	33	1,870	187	.....	.....
Grand total.....	7,451	705	141,515	7,677	287,817	17,572	4,124	276

Apparatus and waters.	Drum, fresh-water.		Eels.		Carp, German.		Mooneye.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Selnes:								
Ohio River.....	60,120	\$2,833	.....	.....	11,213	\$682	3,660	\$187
Wabash River.....	4,539	426	.....	.....	6,850	649	.....	.....
Tiptecanoe River.....	844	84	.....	.....	1,160	116	.....	.....
Total.....	65,503	3,343	.....	.....	19,223	1,447	3,660	137
Fyke nets:								
Ohio River.....	62,148	3,138	87	\$7	3,883	154	365	23
Wabash River.....	7,291	693	.....	.....	1,535	120	.....	.....
White River.....	737	59	.....	.....	540	32	.....	.....
West Fork of White River.....	1,300	98	.....	.....	600	42	.....	.....
Tiptecanoe River.....	400	40	.....	.....	105	11	.....	.....
Total.....	71,876	3,928	87	7	6,663	359	855	28
Lines:								
Ohio River.....	37,007	1,934	519	19	525	18	.....	.....
Wabash River.....	12,842	967	3,560	312	3,100	277	200	12
White River.....	2,340	187	350	28	420	25	.....	.....
West Fork of White River.....	2,605	215	430	45	250	20	.....	.....
Tiptecanoe River.....	390	39	132	13	120	12	.....	.....
Total.....	55,184	3,342	4,991	417	4,415	352	200	12
Spears:								
Wabash River.....	180	18	.....	.....	1,100	110	.....	.....
Total by waters:								
Ohio River.....	159,275	7,905	606	26	15,621	854	4,015	160
Wabash River.....	24,852	2,004	3,560	312	12,585	1,156	200	12
White River.....	3,077	246	350	28	960	57	.....	.....
West Fork of White River.....	3,905	313	430	45	850	62	.....	.....
Tiptecanoe River.....	1,634	163	132	13	1,385	139	.....	.....
Grand total.....	192,743	10,631	5,078	424	31,401	2,268	4,215	172

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 675

Table showing the yield of the fisheries of Indiana in 1899—Continued.

Apparatus and waters.	Paddle-fish.		Pike perch (wall-eyed).		Pike perch (sauger).		Rock bass.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Ohio River.....	30,456	\$1,138	481	\$25			88	\$4
Wabash River.....			2,074	208			163	17
Tipppecanoe River.....			619	52			310	31
Total.....	30,466	1,138	3,074	285			561	52
Fyke nets:								
Ohio River.....	1,330	69	1,441	124	200	\$10	1,003	59
Wabash River.....	920	50	1,469	138			1,488	137
West Fork of White River.....							100	10
Tipppecanoe River.....			148	15			82	8
Total.....	2,250	109	3,058	277	200	10	2,673	214
Lines:								
Ohio River.....	1,420	61	280	28				
Wabash River.....			2,163	211			640	64
White River.....			20	2				
West Fork of White River.....			50	5				
Tipppecanoe River.....			225	23			197	20
Total.....	1,420	61	2,738	269			837	84
Spears:								
Wabash River.....			60	6				
Total by waters:								
Ohio River.....	33,205	1,258	2,202	177	200	10	1,091	63
Wabash River.....	920	50	5,766	503			2,291	218
White River.....			20	2				
West Fork of White River.....			50	5			100	10
Tipppecanoe River.....			892	90			589	59
Grand total.....	34,125	1,808	8,930	837	200	10	4,071	350

Apparatus and waters.	Shad.		Sturgeon, lake.		Sturgeon, shovel-nose.		Suckers.		Sun-fish.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Ohio River.....	140	\$8	2,760	\$98	15,828	\$572	64,290	\$2,576	900	\$27
Wabash River.....					1,590	133	20,229	1,839	3,870	387
Tipppecanoe River.....							2,140	214	775	78
Total.....	140	8	2,760	98	17,418	705	86,659	4,629	5,545	492
Fyke nets:										
Ohio River.....	140	11	195	8	8,570	210	37,347	1,712	400	20
Wabash River.....					1,386	91	18,858	1,469	2,348	205
White River.....							1,618	105		
West Fork of White River.....							3,647	262		
Tipppecanoe River.....							300	30		
Total.....	140	11	195	8	4,956	301	61,770	3,578	2,748	225
Lines:										
Ohio River.....			750	25	11,190	473				
Wabash River.....					4,330	343	5,910	423	300	30
White River.....					1,600	116	940	20		
West Fork of White River.....							180	18		
Total.....			750	25	17,120	932	6,430	461	800	80
Spears:										
Wabash River.....							1,000	100		
Total by waters:										
Ohio River.....	280	19	3,705	181	30,583	1,255	101,637	4,288	1,300	47
Wabash River.....					7,306	567	46,997	3,831	6,518	622
White River.....					1,600	116	1,958	125		
West Fork of White River.....							3,827	280		
Tipppecanoe River.....							2,440	244	775	78
Grand total.....	280	19	3,705	181	89,489	1,938	155,859	8,768	8,598	747

Table showing the yield of the fisheries of Indiana in 1899—Continued.

Apparatus and waters.	White bass.		Yellow perch.		Other fish.		Turtles.		Total.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Ohio River.....			4,180	\$186			1,560	\$53	251,505	\$10,627
Wabash River.....	545	\$55					340	17	50,484	4,717
Tippicanoe River.....	222	23							7,340	735
Total.....	767	78	4,180	186			1,900	70	309,329	16,079
Fyke nets:										
Ohio River.....			5,706	308	250	\$18	1,139	49	273,500	13,564
Wabash River.....	369	35					735	39	80,389	6,737
White River.....									8,718	750
West Fork of White River.....									12,627	956
Tippicanoe River.....	55	6							1,795	180
Total.....	424	41	5,706	308	250	18	1,874	88	376,929	22,187
Lines:										
Ohio River.....			4,316	286			800	32	146,390	7,099
Wabash River.....	191	19					780	52	90,470	7,320
White River.....									11,480	881
West Fork of White River.....									10,957	921
Tippicanoe River.....									1,989	200
Total.....	191	19	4,316	286			1,580	84	261,286	16,421
Spears:										
Wabash River.....									3,240	324
Total by waters:										
Ohio River.....			14,202	780	250	18	3,499	134	671,395	31,200
Wabash River.....	1,105	109					1,855	108	224,583	19,098
White River.....									20,198	1,631
West Fork of White River.....									23,484	1,877
Tippicanoe River.....	277	29							11,124	1,115
Total.....	1,382	188	14,202	780	250	18	5,354	242	950,784	56,011

ILLINOIS.

The fisheries of Illinois in 1889 were more extensive than those of any other State bordering the Mississippi River or any of its tributaries. The total number of persons engaged was 2,389, most of whom were employed on the Mississippi and Illinois rivers. The investment in the fisheries amounted to \$225,324. The number of boats, including house boats, used in the fisheries was 1,717, valued at \$54,808. The most productive forms of fishing apparatus were fyke nets and seines, of which 13,614 of the former, worth \$65,164, and 303 of the latter, worth \$27,780, were used. The catch secured with seines was 9,781,637 pounds, worth \$251,562, and with fyke nets 7,608,123 pounds, worth \$210,054.

The total yield of the fisheries of this State was 28,479,807 pounds, valued at \$579,168. The most important species taken were German carp, 9,896,499 pounds, valued at \$244,322; and buffalo-fish, 4,050,941 pounds, valued at \$111,707. Other species were cat-fish, 1,569,615 pounds, \$68,535; black bass, 126,180 pounds, \$10,842; fresh-water drum, 610,205 pounds, \$17,729; dog-fish, 802,750 pounds, \$8,695; sun-fish, 543,387 pounds, \$12,067; and turtles and terrapin, 681,679 pounds, \$14,520. The yield of mussel shells, utilized in the pearl-button industry, was 8,910,000 pounds, valued at \$43,468.

A little more than half of the products of the fisheries of this State,

or 14,479,915 pounds, valued at \$382,372, was derived from the Illinois River. Of the remainder, 13,371,923 pounds, worth \$164,655, were from the Mississippi River, and 627,969 pounds, valued at \$32,141, from various other waters.

The greater part of the carp taken from the Illinois River in 1899 was shipped to New York and other Eastern markets. The fish are packed alive, ice being put in the bottom and top of the box. When thus packed those in the top layer will live for two or three days in a torpid condition, those in the bottom dying sooner. Fifty-five carloads of carp (including about 5 per cent of buffalo), of 20,000 pounds each, were shipped from Havana, Ill., in 1899. Most of these fish went to New York, but Boston is also an important market for this species. The shipments were made by freight, and it took them about a week to reach their destination. The largest shipments are made in the winter. At Havana the boxes were made especially for the purpose, and contained 150 pounds of fish each. In 1894 the catch of carp for the whole Mississippi system was only 1,448,217 pounds. Since that time nearly all of the important commercial species of the Illinois River have been taken in increased quantities.

A considerable quantity of dog-fish or "grinnel cat" was utilized, all taken in this river; the total quantity was 802,750 pounds, valued at \$8,695.

Among the principal fishing localities are Henry, Chillicothe, Peoria, Pekin, Havana, Browning, Beardstown, and Meredosia, but commercial fishing of more or less importance is carried on at points all along the river from Ottawa to Grafton.

The reptilian fisheries of the Illinois River are deserving of some notice, the catch of snapping turtle and terrapin in the year 1899 being 546,616 pounds, valued at \$11,910, and of frogs 26,610 pounds, valued at \$3,224. Philadelphia is one of the principal markets for the turtles and terrapin. In some cases the frogs are dressed by removing the head, skin, and viscera, the remainder being used for food.

The yield of turtles and terrapin might have been much larger had all of those taken been marketed. Many of the fishermen do not save their catch, the prices received for terrapin being small when only a few are caught in connection with other fishing. Snappers sometimes congregate in holes, and long iron rods terminating in hooks are used to pull them from these retreats; quite a number are picked up by hand in the spring. Snappers are usually sold by the pound and terrapin by the dozen. A shipper of Pekin keeps the animals in pounds until ready for shipment, feeding the snappers on live fish and the terrapin on watermelons, which they eat readily, including the rind.

The frog fishery is a rather irregular one. Rifles are used largely in taking frogs, but they are also caught with hooks suspended from poles, and with "spears," consisting of a rod or pole with a straightened fishhook attached to the end.

At some of the towns on the river fishing is the principal if not the sole industry. Grafton is situated at the confluence of the Mississippi and Illinois rivers, and fishing from this point is conducted about equally in both rivers. A large number of fyke nets are employed here and are usually called "bait nets," as it was formerly the custom of the fishermen to use bait in them. Each outfit, which, as a rule, is fished by two men and often consists of more than 100 nets, is provided with a vat for tarring the nets. Each net is provided with a line 60 to 75 feet long and a large stone for an anchor. The depth of these nets at the front or largest hoop is generally about 4 feet 8 inches. They are set with the mouth downstream, the stone anchor at the end of the line holding them securely, while the current keeps them in position. The total number of fyke nets credited to Grafton and fished in both rivers was 1,675, valued at \$5,234.

Some of the fishermen operate in "lakes" that occur at intervals along the river's course, which, while connected with the river, are under private control. The exclusive right to fish in such lakes is sometimes quite valuable. In some cases payment is made in cash; in others a part of the catch is given for this privilege. A great many fish are also caught in sloughs. The catch from the lakes and sloughs is quite large.

Mussel shells.—The mussel-shell industry, which is of comparatively recent origin, has within the last year or two assumed considerable importance in this State. In addition to the fishermen engaged in gathering the mussels from the natural beds, the button-blank factories in 1899 gave employment to 293 persons.

The large increase in the quantity of products for the Mississippi River in this State, from 4,030,531 pounds in 1894 to 13,371,923 pounds in 1899, is due principally to the great advance in the mussel fishery, the yield of shells being 8,910,000 pounds, valued at \$43,468, including \$1,425 worth of pearls. The mussel-shell industry is rapidly extending, and in 1900 mussels were gathered as far down the Mississippi as Grafton and even below that point. Button-blank factories are increasing with the extension of the fishery.

Shells from northern waters turn out more blanks than those from lower down the river. In dressing, the niggerheads lose about 20 per cent and sand shells about 40 per cent. Some of the boats are provided with two drags or dredges, and others with four and even six. Each drag carries about 120 crowfoot hooks, or 30 lines with 4 hooks each. The crowfoot lines are attached to a hollow iron pipe, the dimensions of which are usually $\frac{1}{2}$ to $\frac{3}{4}$ inch in diameter and from 12 to 15 feet long. Mussels spawn early in the spring. A mussel shell 5 months old measures $\frac{3}{4}$ of an inch in diameter. A shell $2\frac{1}{2}$ to 3 years old will measure about $1\frac{1}{4}$ inches. The shells are soaked in water a week or ten days before they are cut, to soften the back of the shell and prevent brittleness in cutting.

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 679

Table showing, by waters, the number of persons employed in the fisheries of Illinois in 1899.

Waters.	Fisheries in which employed.											Total exclusive of duplication.	
	Seine.	Trammel net.	Fyke net.	Gill net.	Pound net.	Set line.	Drift line.	Hand line.	Traps.	Crowfoot lines, etc.	Miscellaneous.		Shoremen.
Mississippi River.....	346	189	315	.....	8	256	16	.....	.....	322	18	298	1,149
Ohio River.....	23	.....	64	.....	.....	119	9	.....	.....	.....	.....	.....	132
Illinois River.....	522	57	510	24	.....	179	.....	7	40	.....	163	66	995
Kankakee River.....	.....	.....	.....	.....	.....	7	.....	6	.....	.....	.....	.....	7
Sangamon River.....	8	2	15	.....	.....	18	.....	.....	5	.....	.....	.....	15
Wabash River.....	.....	2	15	.....	.....	41	.....	8	.....	.....	.....	.....	47
Kaskaskia River.....	23	.....	13	.....	.....	10	.....	.....	11	.....	.....	.....	31
Big Muddy River.....	.....	.....	7	.....	.....	8	.....	.....	6	.....	.....	.....	13
Total.....	922	250	939	24	8	638	25	21	62	322	181	354	2,389

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Illinois in 1899.

Waters.	Rowboats.		Steamboats.		House boats.		Seines.		
	No.	Value.	No.	Value.	No.	Value.	No.	Length (yards).	Value.
Mississippi River.....	731	\$11,016	1	\$600	46	\$2,771	141	23,902	\$6,771
Ohio River.....	125	625	.....	.....	33	1,530	12	1,222	515
Illinois River.....	546	9,746	15	10,035	115	17,712	135	52,162	19,926
Kankakee River.....	7	70	.....	.....	.....	.....	.....	.....	.....
Sangamon River.....	14	70	.....	.....	1	25	6	520	143
Wabash River.....	46	279	.....	.....	6	143	.....	.....	.....
Kaskaskia River.....	20	183	.....	.....	.....	.....	10	1,020	425
Big Muddy River.....	11	53	.....	.....	.....	.....	.....	.....	.....
Total.....	1,500	21,992	16	10,635	201	22,181	303	78,826	27,780

Waters.	Trammel nets.			Gill nets.			Fyke nets.		Pound nets.	
	No.	Length (yards).	Value.	No.	Length (yards).	Value.	No.	Value.	No.	Value.
Mississippi River.....	108	11,460	\$2,708	.....	.....	.....	5,195	\$18,146	6	\$290
Ohio River.....	.....	.....	.....	.....	.....	.....	731	4,292	.....	.....
Illinois River.....	43	5,915	1,033	12	2,400	\$240	7,310	41,152	.....	.....
Sangamon River.....	1	60	14	.....	.....	.....	111	313	.....	.....
Wabash River.....	1	85	40	.....	.....	.....	117	585	.....	.....
Kaskaskia River.....	.....	.....	.....	.....	.....	.....	118	528	.....	.....
Big Muddy River.....	.....	.....	.....	.....	.....	.....	32	148	.....	.....
Total.....	153	17,520	3,795	12	2,400	240	13,614	65,104	6	290

Waters.	Set lines.		Drift lines.		Hand lines.		Traps.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Mississippi River.....	1,017	\$993	408	\$41	.....	.....	.....	.....
Ohio River.....	539	532	310	81	.....	.....	.....	.....
Illinois River.....	680	759	.....	.....	10	\$8	713	\$709
Kankakee River.....	50	50	.....	.....	6	10	.....	.....
Sangamon River.....	312	17	.....	.....	.....	.....	94	94
Wabash River.....	168	83	.....	.....	8	5	.....	.....
Kaskaskia River.....	37	19	14	42
Big Muddy River.....	36	18	8	24
Total.....	2,837	2,471	718	72	24	23	829	809

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Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Illinois in 1899—Continued.

Waters.	Value of crowfoot lines, rakes, etc.	Value of miscellaneous apparatus.	Shore and accessory property.	Cash capital.	Total investment.
Mississippi River.....	\$2,144	\$55	\$34,085	\$21,060	\$100,670
Ohio River.....			157		7,682
Illinois River.....		133	11,491		112,944
Kankakee River.....			20		150
Sangamon River.....			103		779
Wabash River.....			14		1,149
Kaskaskia River.....			350		1,497
Big Muddy River.....			210		453
Total.....	2,144	188	46,430	21,060	225,324

Table showing, by waters and apparatus of capture, the yield of the fisheries of Illinois in 1899.

Apparatus and waters.	Crappie.		Dog-fish.		Drum, fresh-water.		Eels.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	35,556	\$1,434			108,234	\$2,855		
Ohio River.....	20	2			8,090	554		
Illinois River.....	166,388	6,432	468,950	\$5,597	100,889	2,162	900	\$52
Kaskaskia River.....	825	83			1,470	66		
Total.....	202,789	7,951	468,950	5,597	218,683	5,637	900	52
Trammel nets:								
Mississippi River.....	450	18			18,762	477		
Illinois River.....	7,700	361	10,000	140	120	5		
Wabash River.....					323	19		
Total.....	8,150	379	10,000	140	19,205	501		
Fyke nets:								
Mississippi River.....	20,278	860			75,718	1,790	240	14
Ohio River.....	1,108	115			61,600	3,196		
Illinois River.....	118,265	4,726	333,800	2,958	126,231	2,565		
Wabash River.....	385	32			1,628	79		
Kaskaskia River.....	772	77			1,876	87		
Big Muddy River.....	402	41			910	46		
Total.....	141,210	5,851	333,800	2,958	268,063	7,763	240	14
Gill nets:								
Illinois River.....	1,000	40						
Pound nets:								
Mississippi River.....	760	31			1,680	47		
Set lines:								
Mississippi River.....					49,302	1,363	15,810	923
Ohio River.....					33,804	1,973	2,285	119
Illinois River.....					17,828	343	9,133	436
Kankakee River.....	600	48						
Wabash River.....	205	17			1,380	89	655	46
Kaskaskia River.....							70	4
Total.....	805	65			102,314	3,768	27,953	1,528
Hand lines:								
Illinois River.....	1,181	63						
Wabash River.....	425	39						
Total.....	1,606	102						
Traps:								
Illinois River.....							170	10
Big Muddy River.....					260	13		
Total by waters:								
Mississippi River.....	57,044	2,343			253,696	6,532	16,050	937
Ohio River.....	1,128	117			103,494	5,723	2,285	119
Illinois River.....	294,634	11,622	802,750	8,695	246,068	5,075	10,203	498
Kankakee River.....	600	48						
Wabash River.....	1,016	88			3,331	187	655	46
Kaskaskia River.....	1,597	160			3,446	153	70	4
Big Muddy River.....	402	41			1,170	59		
Grand total.....	356,320	14,419	802,750	8,695	610,205	17,729	29,263	1,604

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 681

Table showing the yield of the fisheries of Illinois in 1899—Continued.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	9,895	\$712	491,734	\$13,027	920,066	\$18,115	83,326	\$4,257
Ohio River.....			2,725	160	1,795	73	1,201	88
Illinois River.....	52,570	4,722	1,061,326	29,006	4,787,630	120,074	394,533	14,253
Sangamon River.....			6,000	150	20,000	600		
Kaskaskia River.....			15,400	688	2,700	119	5,500	310
Total.....	62,465	5,434	1,576,185	43,031	5,732,191	138,981	484,560	18,908
Trammel nets:								
Mississippi River.....	2,345	184	318,713	7,410	191,430	3,455	32,745	1,676
Ohio River.....	1,000	100	61,300	1,737	197,238	5,305	8,414	350
Sangamon River.....			1,000	30	3,000	90		
Wabash River.....			575	35				
Total.....	3,345	284	381,588	9,212	391,668	8,850	41,159	2,026
Fyke nets:								
Mississippi River.....	6,254	334	682,503	17,595	300,287	5,629	147,467	7,715
Ohio River.....	660	71	65,265	3,106	11,651	529	27,682	1,492
Illinois River.....	46,459	4,091	1,160,628	32,166	3,282,054	85,961	274,950	10,472
Sangamon River.....			14,200	626	18,000	600		
Wabash River.....	747	67	2,800	134	1,396	58	10,341	502
Kaskaskia River.....			13,916	658	1,550	66	4,383	246
Big Muddy River.....	440	45	5,200	260	1,555	78	2,500	200
Total.....	54,560	4,608	1,944,510	54,335	3,616,493	92,921	467,328	20,627
Gill nets:								
Illinois River.....			20,000	400	40,000	800		
Pound nets:								
Mississippi River.....	250	20	10,545	300	7,665	219	2,300	149
Set lines:								
Mississippi River.....			71,603	2,098	27,250	565	189,565	10,363
Ohio River.....			34,510	1,741	1,032	46	46,060	3,148
Illinois River.....	600	40	1,100	27	77,065	1,818	222,428	7,632
Kankakee River.....	1,410	141			1,900	57	4,925	242
Sangamon River.....							8,200	368
Wabash River.....			2,360	181	315	18	14,940	1,150
Kaskaskia River.....							4,100	225
Big Muddy River.....			1,000	50	150	8	2,600	208
Total.....	1,910	181	110,573	4,097	107,712	2,512	492,818	23,336
Drift lines:								
Mississippi River.....			1,900	114			13,000	759
Ohio River.....			4,500	160			3,020	108
Total.....			6,400	274			16,020	867
Hand lines:								
Illinois River.....	2,050	155					620	35
Kankakee River.....	600	60						
Wabash River.....	1,000	100						
Total.....	3,650	315					620	35
Traps:								
Illinois River.....							43,975	1,698
Sangamon River.....							18,800	752
Kaskaskia River.....			625	32	470	24	1,300	78
Big Muddy River.....			515	26	300	15	740	59
Total.....			1,140	58	770	39	64,815	2,587
Total by waters:								
Mississippi River.....	18,744	1,250	1,576,998	40,544	1,446,698	27,983	468,403	24,919
Ohio River.....	660	71	107,000	5,167	14,478	648	77,963	4,836
Illinois River.....	102,579	9,108	2,304,352	63,326	8,383,987	213,958	944,920	34,440
Kankakee River.....	2,010	201			1,900	57	4,925	242
Sangamon River.....			20,200	706	41,000	1,290	27,000	1,120
Wabash River.....	1,747	167	5,785	350	1,711	76	25,281	1,652
Kaskaskia River.....			29,941	1,273	4,720	209	15,283	859
Big Muddy River.....	440	45	6,715	336	2,005	101	5,840	467
Grand total.....	126,180	10,842	4,050,941	111,707	9,896,499	244,322	1,569,615	68,535

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Table showing the yield of the fisheries of Illinois in 1899—Continued.

Apparatus and waters.	Hickory shad.		Lawyer.		Mooneye or tooth herring.		Paddle-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River...	11,200	\$7	1,210	\$52	1,400	\$43	137,676	\$3,801
Ohio River.....					45	8	3,714	183
Illinois River.....	5,000	75					23,225	999
Kaskaskia River.....							5,200	234
Total.....	16,200	82	1,210	52	1,445	46	169,815	5,217
Fyke nets:								
Mississippi River...					405	16	10,190	354
Ohio River.....					510	19	4,945	234
Illinois River.....							3,290	83
Wabash River.....					140	8	2,375	101
Kaskaskia River.....							2,266	105
Big Muddy River.....							1,648	82
Total.....					1,055	43	24,714	959
Trammel nets:								
Wabash River.....							295	18
Set lines:								
Mississippi River.....							350	16
Total by waters:								
Mississippi River...	11,200	7	1,210	52	1,805	59	148,216	4,171
Ohio River.....					555	22	8,659	417
Illinois River.....	5,000	75					26,515	1,082
Wabash River.....					140	8	2,670	119
Kaskaskia River.....							7,486	339
Big Muddy River.....							1,648	82
Grand total.....	16,200	82	1,210	52	2,500	89	195,174	6,210

Apparatus and waters.	Pike and pickerel.		Pike perch (wall-eyed).		Sturgeon, lake.		Sturgeon, shovel-nose.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River...	2,855	\$161	5,188	\$345	12,885	\$473	16,806	\$641
Ohio River.....			125	12	200	8	400	21
Illinois River.....	9,739	622	3,753	233				
Total.....	12,594	783	9,066	590	13,085	481	17,206	662
Trammel nets:								
Mississippi River...	1,070	61	1,265	80	9,724	296	50,500	810
Illinois River.....	520	31	64	6			8,000	160
Total.....	1,590	92	1,329	86	9,724	296	58,500	970
Fyke nets:								
Mississippi River...	785	47	3,242	179	2,125	91	12,438	284
Ohio River.....			722	71	1,150	68		
Illinois River.....	6,922	347	7,259	390	635	23	10,374	218
Wabash River.....			261	21			825	37
Total.....	6,707	394	11,484	661	3,910	182	23,637	539
Set lines:								
Mississippi River...	765	40	5,345	286	6,240	234	24,900	420
Ohio River.....			76	8	1,850	86	200	10
Kankakee River.....	630	54	300	30				
Wabash River.....			584	51			400	24
Total.....	1,395	94	6,305	375	8,090	320	25,500	454
Hand lines:								
Kankakee River...	300	24	150	15				
Wabash River.....			546	47				
Total.....	300	24	696	62				
Total by waters:								
Mississippi River...	5,475	309	15,040	890	30,974	1,094	104,644	2,155
Ohio River.....			923	91	3,200	162	600	81
Illinois River.....	16,181	1,000	11,076	629	635	23	18,374	878
Kankakee River.....	930	78	450	45				
Wabash River.....			1,391	119			1,225	61
Total.....	22,586	1,387	28,880	1,774	34,809	1,279	124,843	2,625

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 683

Table showing the yield of the fisheries of Illinois in 1899—Continued.

Apparatus and waters.	Rock bass.		Suckers.		Sun-fish.		White bass.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River...	2,494	\$136	53,632	\$1,526	21,966	\$667	4,356	\$184
Ohio River.....	60	6	3,699	179	450	20		
Illinois River.....	25,060	499	26,940	523	275,175	5,752	68,980	2,369
Total.....	27,614	641	84,171	2,228	297,591	6,439	78,335	2,553
Trammel nets:								
Mississippi River.....			32,745	762	5,875	162	1,020	48
Illinois River.....			200	8	14,000	338	132	5
Total.....			32,945	770	19,875	500	1,152	53
Fyke nets:								
Mississippi River...	1,118	70	37,633	1,083	5,800	200	1,475	69
Ohio River.....	887	86	45,960	2,080	300	13		
Illinois River.....	17,702	438	40,650	869	214,901	4,715	40,421	1,450
Wabash River.....	630	50	14,255	644	200	16	360	29
Big Muddy River.....			150	5				
Total.....	20,332	644	138,648	4,681	221,201	4,944	42,256	1,548
Gill nets:								
Illinois River.....					2,500	50		
Pound nets:								
Mississippi River.....			1,600	45				
Set lines:								
Mississippi River...	100	10					240	16
Illinois River.....							50	2
Kankakee River.....	312	25			500	25	350	35
Wabash River.....	250	20	1,840	121				
Total.....	662	55	1,840	121	500	25	640	53
Hand lines:								
Illinois River.....					1,104	51		
Wabash River.....	600	54			616	58		
Total.....	600	54			1,720	109		
Total by waters:								
Mississippi River...	3,707	216	125,610	3,416	33,641	1,029	7,090	317
Ohio River.....	947	92	49,559	2,259	750	83		
Illinois River.....	42,762	937	67,790	1,400	507,689	10,966	109,583	3,826
Kankakee River.....	812	25			500	25	350	35
Wabash River.....	1,480	124	16,095	765	816	74	360	29
Big Muddy River.....			150	5				
Grand total ..	49,208	1,394	259,204	7,846	548,397	12,067	117,383	4,207

Apparatus and waters.	Yellow perch.		Frogs.		Turtles and terrapin.		Mussel shells.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River...					102,810	\$1,785		
Ohio River.....	265	\$11			520	23		
Illinois River.....	9,850	197			208,137	4,181		
Total.....	10,115	208			311,467	5,989		
Trammel nets:								
Mississippi River.....					400	8		
Fyke nets:								
Mississippi River...	1,521	55			18,525	420		
Ohio River.....	4,633	192			1,013	49		
Illinois River.....	2,850	63			258,703	5,573		
Wabash River.....					785	30		
Total.....	9,004	310			278,976	6,072		
Crowfoot lines, etc.:								
Mississippi River.....							8,910,000	*\$43,468

*Including \$1,425 worth of pearls.

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Table showing the yield of the fisheries of Illinois in 1899—Continued.

Apparatus and waters.	Yellow perch.		Frogs.		Turtles and terrapin.		Mussel shells.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Set lines:								
Ohio River.....	820	\$38			1,030	\$47		
Illinois River.....					3,180	68		
Wabash River.....					730	48		
Total.....	820	38			4,940	153		
Miscellaneous:								
Mississippi River.....			4,422	\$536	8,000	160		
Illinois River.....			26,610	3,224	76,596	2,098		
Sangamon River.....					*1,300	40		
Total.....			31,032	3,760	85,896	2,298		
Total by waters:								
Mississippi River.....	1,521	55	4,422	536	129,735	2,373	8,910,000	\$43,468
Ohio River.....	5,718	241			2,563	119		
Illinois River.....	12,700	260	26,610	3,224	546,616	11,910		
Sangamon River.....					1,300	40		
Wabash River.....					1,465	78		
Grand total.....	19,939	556	31,032	3,760	681,679	14,520	8,910,000	43,468

* Taken by hand.

Summary, by apparatus and waters, of the fisheries of Illinois in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Drift lines:		
Mississippi River.....	2,023,288	\$50,221	Mississippi River.....	14,900	\$873
Ohio River.....	23,209	1,343	Ohio River.....	7,520	258
Illinois River.....	7,679,045	197,748	Total.....	22,420	1,141
Sangamon River.....	25,000	750	Hand lines:		
Kaskaskia River.....	31,093	1,500	Illinois River.....	4,955	304
Total.....	9,781,637	251,562	Kankakee River.....	1,050	99
Trammel nets:			Wabash River.....	3,187	298
Mississippi River.....	667,044	15,447	Total.....	9,192	701
Illinois River.....	308,688	8,546	Traps:		
Sangamon River.....	4,000	120	Illinois River.....	44,145	1,708
Wabash River.....	1,193	72	Sangamon River.....	18,800	752
Total.....	980,925	24,185	Kaskaskia River.....	2,395	134
Fyke nets:			Big Muddy River.....	1,815	113
Mississippi River.....	1,327,999	36,805	Total.....	67,155	2,707
Ohio River.....	228,086	11,321	Crowfoot lines, etc:		
Illinois River.....	5,945,092	157,098	Mississippi River.....	8,910,000	43,468
Sangamon River.....	32,200	1,126	Miscellaneous:		
Wabash River.....	37,078	1,808	Mississippi River.....	12,422	696
Kaskaskia River.....	24,863	1,139	Illinois River.....	103,206	5,322
Big Muddy River.....	12,805	757	Sangamon River.....	1,300	40
Total.....	7,608,123	210,054	Total.....	116,928	6,058
Gill nets:			Total by waters:		
Illinois River.....	63,500	1,290	Mississippi River.....	13,371,923	164,655
Pound nets:			Ohio River.....	380,482	20,148
Mississippi River.....	24,800	811	Illinois River.....	14,479,015	382,372
Set lines:			Kankakee River.....	11,977	756
Mississippi River.....	391,470	16,334	Sangamon River.....	89,500	3,156
Ohio River.....	121,667	7,216	Wabash River.....	65,117	3,943
Illinois River.....	331,284	10,356	Kaskaskia River.....	62,523	3,002
Kankakee River.....	10,927	657	Big Muddy River.....	18,370	1,136
Sangamon River.....	8,200	368	Grand total.....	28,479,807	579,168
Wabash River.....	23,659	1,765			
Kaskaskia River.....	4,170	229			
Big Muddy River.....	3,760	266			
Total.....	895,127	37,191			

KENTUCKY.

The fisheries in Kentucky in 1899 gave employment to 589 persons, most of whom are credited to the Ohio and Mississippi rivers. The amount of capital invested in the industry was \$87,286. Fyke nets were employed more extensively than any other form of apparatus.

The products amounted to 1,753,278 pounds, valued at \$78,899, the greater part of which was derived from the Ohio River. The leading species taken were buffalo-fish, 471,643 pounds, worth \$17,900; cat-fish, 415,934 pounds, worth \$20,806, and fresh-water drum, 390,909 pounds, worth \$18,715. Other important species were paddle-fish, suckers, and German carp. Shad (*Alosa ohioensis*) were taken in the Ohio River near Louisville, Ky., the catch being 6,550 pounds, valued at \$330.

Statement, by waters, of the number of persons employed in the fisheries of Kentucky in 1899.

Waters.	Fisheries in which employed.							Shores-men.	Total, exclusive of duplication.
	Seine.	Trammel net.	Fyke net.	Cast net.	Dip net.	Set line.	Hand and drift line.		
Ohio River	137		204	4	8	237	24	30	432
Kentucky River	2		10			30	1		32
Green River			14			14			14
Cumberland River			19			19			19
Tennessee River			14			15			15
Mississippi River	12	14	40			48	6	8	77
Total	151	14	301	4	8	363	31	38	589

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Kentucky in 1899.

Waters.	Fishing boats.		House boats.		Fyke nets.		Seines.		
	No.	Value.	No.	Value.	No.	Value.	No.	Length (yards).	Value.
Ohio River	311	\$2,187	108	\$5,732	1,390	\$8,334	66	6,360	\$2,635
Kentucky River	32	166	2	100	43	249	1	40	20
Green River	14	106	3	190	190	1,310			
Cumberland River	19	104	10	425	166	817			
Tennessee River	15	80	2	120	325	1,785			
Mississippi River	48	850	8	400	348	1,839	5	650	310
Total	439	3,493	133	6,967	2,462	14,334	72	7,050	2,955

Waters.	Trammel nets.			Cast nets.		Dip nets.	
	No.	Length (yards).	Value.	No.	Value.	No.	Value.
Ohio River				4	\$20	5	\$7
Mississippi River	7	700	\$160				

Waters.	Set lines.		Hand and other lines.		Shore and accessory property.	Cash capital.	Total investment.
	No.	Value.	No.	Value.			
Ohio River			1,329	\$1,142	\$20,520		\$70,577
Kentucky River			113	61	15	\$30,000	611
Green River			58	42	12		1,660
Cumberland River	93	\$93			35		1,474
Tennessee River	112	78			21		2,081
Mississippi River	248	210	120	12	1,599	5,500	10,880
Total	453	381	1,620	1,257	22,202	35,500	87,286

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Table showing, by waters and apparatus of capture, the yield of the fisheries of Kentucky in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Ohio River	442	\$42	44,326	\$2,087	36,325	\$1,788	27,495	\$1,350
Kentucky River	112	11	300	15			370	19
Mississippi River	870	62	30,600	764	21,100	524	5,500	223
Total	1,424	116	75,226	2,866	57,425	2,312	33,365	1,592
Fyke nets:								
Ohio River	1,080	105	76,988	4,095	7,701	402	137,282	7,141
Kentucky River	1,220	122	677	34	245	12	1,690	84
Green River	885	71	14,300	870	180	10	8,100	648
Cumberland River	326	27	13,630	478			6,280	278
Tennessee River	552	55	15,141	667			12,319	590
Mississippi River	1,150	63	113,300	2,994	5,330	121	8,455	370
Total	5,213	443	234,036	9,138	13,456	545	174,126	9,111
Trammel nets:								
Mississippi River	170	14	18,900	560	6,400	208	6,800	256
Cast nets:								
Ohio River			700	35			800	40
Dip nets:								
Ohio River			650	33			700	35
Set lines:								
Ohio River	637	64	42,346	2,171	570	26	88,802	4,773
Kentucky River	1,327	133	2,335	117			11,800	592
Green River	550	44	800	48			6,700	336
Cumberland River	5,443	205	11,200	449	180	5		
Tennessee River			7,500	337			8,596	410
Mississippi River			76,150	2,074			78,175	3,191
Total	7,957	446	140,331	5,196	750	31	194,073	9,502
Hand and drift lines:								
Ohio River			1,800	72			5,590	246
Kentucky River	100	8					480	24
Total	100	8	1,800	72			6,070	270
Total by waters:								
Ohio River	2,159	211	166,810	8,493	44,596	2,216	260,669	13,585
Kentucky River	2,759	274	3,312	166	245	12	14,340	719
Green River	1,435	115	15,100	918	180	10	14,800	1,184
Cumberland River	5,769	232	24,830	927	180	5	6,280	278
Tennessee River	552	55	22,641	1,004			20,915	1,000
Mississippi River	2,190	139	238,950	6,392	32,830	853	98,930	4,040
Grand total	14,864	1,026	471,643	17,900	78,031	3,096	415,934	20,806

Apparatus and waters.	Shad.		Hickory shad.		Pike perch (wall-eyed).		Pike perch (sauger).	
	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Ohio River	6,500	\$325			1,009	\$90	2,000	\$100
Mississippi River					470	32		
Total	6,500	325			1,479	122	2,000	100
Fyke nets:								
Ohio River	50	5	250	\$20	3,136	307	130	13
Cumberland River					151	16		
Tennessee River					105	11		
Mississippi River					782	42		
Total	50	5	250	20	4,174	\$376	130	13
Set lines:								
Ohio River					280	28		
Cumberland River					55	6		
Total					335	34		
Total by waters:								
Ohio River	6,550	330	250	20	4,425	425	2,130	113
Cumberland River					206	22		
Tennessee River					105	11		
Mississippi River					1,252	74		
Grand total	6,550	330	250	20	5,988	532	2,130	113

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 687

Table showing the yield of the fisheries of Kentucky in 1899—Continued.

Apparatus and waters.	Crapple.		Drum, fresh-water.		Eels.		Rock bass.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Ohio River.....	106	\$8	86,949	\$4,844			239	\$24
Kentucky River.....	120	12	400	20				
Mississippi River.....	900	64	8,300	198			700	44
Total.....	1,126	84	95,649	5,062			939	68
Fyke nets:								
Ohio River.....	2,581	199	93,119	5,631	125	\$10	1,104	97
Kentucky River.....			1,240	63				
Green River.....	500	24	12,600	788			360	29
Cumberland River.....	210	21	8,200	306			200	20
Tennessee River.....	80	8	16,852	754			82	8
Mississippi River.....	1,080	46	68,500	946	930	33	1,225	73
Total.....	4,451	308	190,511	8,488	1,055	43	2,971	227
Trammel nets:								
Mississippi River.....	1,100	88	3,900	104				
Cast nets:								
Ohio River.....			1,200	60				
Dip nets:								
Ohio River.....			800	40				
Set lines:								
Ohio River.....			52,669	3,243	1,572	81		
Kentucky River.....			5,180	259				
Green River.....			5,300	332	100	6		
Cumberland River.....			7,000	266	43	1		
Tennessee River.....			10,500	469				
Mississippi River.....			18,200	392	1,130	39		
Total.....			98,849	4,961	2,845	127		
Hand and drift lines:								
Kentucky River.....	190	15					50	4
Total by waters:								
Ohio River.....	2,687	207	234,737	13,818	1,697	91	1,343	121
Kentucky River.....	310	27	6,820	342			50	4
Green River.....	500	34	17,900	1,120	100	6	360	29
Cumberland River.....	210	21	15,200	572	43	1	200	20
Tennessee River.....	80	8	27,352	1,223			82	8
Mississippi River.....	3,080	198	88,900	1,640	2,060	72	1,925	117
Grand total.....	6,867	495	390,909	18,715	3,900	170	3,960	299

Apparatus and waters.	Mooneye or tooth herring.		Paddle-fish.		Sturgeon, lake.		Sturgeon, shovel-nose.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Ohio River.....	5,280	\$252	60,181	\$2,942	1,406	\$63	14,556	\$668
Mississippi River.....			16,200	420				
Total.....	5,280	252	76,381	3,368	1,406	63	14,556	668
Fyke nets:								
Ohio River.....	516	37	16,024	818	65	4	8,795	356
Green River.....			700	42			300	18
Cumberland River.....					168	5	345	10
Tennessee River.....			145	4				
Mississippi River.....	300	3	53,300	661			3,500	37
Total.....	816	40	70,169	1,525	233	9	12,940	421
Trammel nets:								
Mississippi River.....			300	8				
Cast nets:								
Ohio River.....	300	15					200	10
Set lines:								
Ohio River.....			410	18	2,880	172	4,921	262
Mississippi River.....							3,000	30
Total.....			410	18	2,880	172	7,921	292
Total by waters:								
Ohio River.....	6,096	304	76,615	3,778	4,351	239	28,471	1,296
Green River.....			700	42			300	18
Cumberland River.....					168	5	345	10
Tennessee River.....			145	4				
Mississippi River.....	300	3	69,300	1,095			6,500	67
Grand total.....	6,396	307	147,260	4,910	4,519	244	35,616	1,391

Table showing the yield of the fisheries of Kentucky in 1899—Continued.

Apparatus and waters.	Suckers.		Sun-fish.		Yellow perch.		Turtles.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Ohio River.....	52,573	\$2,545	1,320	\$72	1,000	\$40	1,271	\$58
Kentucky River.....	200	10						
Mississippi River.....	1,900	35	600	30			800	16
Total.....	54,673	2,590	1,920	102	1,000	40	2,071	74
Fyke nets:								
Ohio River.....	59,915	3,718	815	40	7,675	555	3,715	169
Kentucky River.....	1,048	52						
Green River.....	7,395	473					190	8
Cumberland River.....	1,514	62						
Tennessee River.....	1,315	60						
Mississippi River.....	4,833	106					1,545	31
Total.....	76,020	4,471	815	40	7,675	555	5,450	208
Cast nets:								
Ohio River.....	400	20						
Set lines:								
Ohio River.....					5,125	330	1,412	68
Mississippi River.....							1,900	38
Total.....					5,125	330	3,312	106
Total by waters:								
Ohio River.....	112,888	6,283	2,135	112	13,800	925	6,398	295
Kentucky River.....	1,248	62						
Green River.....	7,395	473					190	8
Cumberland River.....	1,514	62						
Tennessee River.....	1,315	60						
Mississippi River.....	6,733	141	600	30			4,245	85
Grand total.....	131,093	7,081	2,735	142	13,800	925	10,833	388

Summary, by apparatus and waters, of the fisheries of Kentucky in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Set lines:		
Ohio River.....	342,977	\$17,298	Ohio River.....	201,624	\$11,236
Kentucky River.....	1,502	87	Kentucky River.....	20,642	1,101
Mississippi River.....	87,940	2,418	Green River.....	13,450	966
Total.....	432,419	19,803	Cumberland River.....	23,921	932
Fyke nets:			Tennessee River.....	26,596	1,216
Ohio River.....	421,066	23,722	Mississippi River.....	178,555	5,764
Kentucky River.....	6,120	367	Total.....	464,788	21,215
Green River.....	45,510	2,991	Hand and drift lines:		
Cumberland River.....	51,024	1,225	Ohio River.....	7,390	318
Tennessee River.....	46,591	2,157	Kentucky River.....	820	51
Mississippi River.....	254,230	5,526	Total.....	8,210	369
Total.....	804,541	35,986	Total by waters:		
Cast nets:			Ohio River.....	978,807	52,862
Ohio River.....	3,600	180	Kentucky River.....	29,084	1,606
Dip nets:			Green River.....	58,960	3,957
Ohio River.....	2,150	108	Cumberland River.....	54,945	2,155
Trammel nets:			Tennessee River.....	73,187	8,873
Mississippi River.....	37,570	1,238	Mississippi River.....	658,295	14,946
			Grand total.....	1,753,278	78,899

Extent of the wholesale fishery trade in Kentucky in 1899.

Items.	No.	Value.
Establishments (one at Louisville and two at Hickman).....	3	\$21,350
Cash capital.....		35,500
Wages paid.....		21,712
Persons engaged.....	38	
Products sold:		
Fresh fish.....	pounds.	4,000,000
Oysters.....	gallons.	60,000
		220,000
		75,000

TENNESSEE.

The fisheries of Tennessee conducted in the Mississippi and waters tributary thereto employed 476 persons and required an investment of \$92,883 in 1899. The yield was 2,774,560 pounds of products, valued at \$87,537. More than half the catch was obtained in Reelfoot Lake, the Mississippi River being second with respect to the yield. Buffalo-fish, cat-fish, drum, suckers, and black bass are among the species taken in largest quantity. The catch of buffalo-fish amounted to 862,390 pounds, worth \$18,723, and of cat-fish 708,260 pounds, worth \$24,289. Drum amounted to 310,890 pounds, worth \$11,356; suckers, 147,689 pounds, worth \$5,266, and black bass, 142,352 pounds, worth \$8,671. The yield of paddle-fish was 211,185 pounds, worth \$4,657.

Nearly half of the catch in this State was taken with fyke nets. Other forms of apparatus with which large quantities of fish were secured were hand lines, seines, and trammel nets.

Table showing, by waters, the number of persons employed in the fisheries of Tennessee in 1899.

Waters.	Fisheries in which employed.							Shoresmen.	Total exclusive of duplication.
	Seines.	Fyke net.	Trammel net.	Line.	Shrimp trap.	Spear.	Grapple.		
Cumberland River		62		62				12	74
Tennessee River		35		97					97
Mississippi River	14	16	6	74	30			27	168
Reelfoot Lake	8	101	48	107		32	53	12	164
Open and Number Nine lakes	11	8	5					1	15
Obion and Big Hatchie rivers		18							18
Total	33	240	59	340	30	32	53	52	476

Table showing, by waters, the boats, apparatus, and property employed in the fisheries of Tennessee in 1899.

Waters and apparatus.	No.	Length (yards).	Value.	Waters and apparatus.	No.	Length (yards).	Value.
Cumberland River:				Reelfoot Lake—continued:			
Rowboats	62		\$310	Fyke nets	1,330		\$13,500
House boats	4		205	Trammel nets	24	2,600	780
Fyke nets	369		2,369	Set lines	248	49,600	496
Set lines	297	29,700	292	Hand lines	45		48
Shore and accessory property			6,418	Spears	32		112
Cash capital			15,000	Grappels	63		15
Tennessee River:				Shore and accessory property			4,885
Rowboats	101		568	Open and Number Nine lakes:			
House boats	6		380	Rowboats	10		240
Fyke nets	216		886	House boats	2		100
Set lines	800	76,850	690	Seines	2	450	215
Mississippi River:				Fyke nets	75		750
Rowboats	61		1,255	Trammel nets	4	200	72
House boats	6		340	Shore and accessory property			300
Gasoline launch	1		1,000	Obion and Big Hatchie rivers:			
Seines	4	995	495	Rowboats	18		180
Fyke nets	202		1,010	Fyke nets	144		640
Trammel nets	3	300	75	Shore and accessory property			350
Set lines	245	33,000	313	Total investment			\$2,883
Shrimp traps	600		150				
Shore and accessory property			8,304				
Cash capital			27,000				
Reelfoot Lake:							
Rowboats	127		2,540				
Seines	2	1,400	850				

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Table showing, by waters and apparatus of capture, the yield of the fisheries of Tennessee in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	728	\$44	80,700	\$1,751	43,900	\$947	5,330	\$181
Reelfoot Lake.....			10,000	200			7,000	280
Open and Number Nine lakes.....	4,600	276	9,200	216			7,000	182
Total.....	5,828	320	99,900	2,167	43,900	947	19,330	643
Fyke nets:								
Cumberland River.....	1,784	197	15,349	1,128	1,634	129	23,390	1,865
Tennessee River.....			5,479	276			18,625	931
Mississippi River.....	560	34	50,088	1,323	2,600	72	9,100	415
Reelfoot Lake.....	14,100	846	323,000	4,685	25,300	281	50,000	1,416
Open and Number Nine lakes.....	1,000	60	7,500	225			6,000	240
Obion and Big Hatchie rivers.....	980	98	27,200	908	6,200	186	6,100	469
Total.....	18,424	1,235	428,616	8,545	35,734	668	113,215	5,081
Trammel nets:								
Mississippi River.....			12,000	240	4,500	90	2,000	60
Reelfoot Lake.....	5,400	324	114,000	1,770			66,000	383
Open and Number Nine lakes.....	200	12	4,300	129			1,200	48
Total.....	5,600	336	130,300	2,139	4,500	90	69,200	491
Lines:								
Cumberland River.....			21,183	1,590	2,820	170	32,740	2,472
Tennessee River.....			17,891	915			93,675	4,684
Mississippi River.....			102,300	2,254			131,600	4,718
Reelfoot Lake.....	113,000	6,780					169,500	3,825
Total.....	113,000	6,780	141,374	4,759	2,820	170	417,515	15,699
Spears:								
Reelfoot Lake.....			62,200	1,113				
Grapnels:								
Reelfoot Lake.....							89,000	2,375
Total by waters:								
Cumberland River.....	1,784	197	36,532	2,718	4,454	299	56,130	4,337
Tennessee River.....			23,370	1,191			112,300	5,515
Mississippi River.....	1,288	78	245,088	5,568	51,000	1,109	148,030	5,374
Reelfoot Lake.....	132,500	7,950	509,200	7,768	25,300	281	371,500	8,024
Open and Number Nine lakes.....	5,800	348	21,000	570			14,200	470
Obion and Big Hatchie rivers.....	980	98	27,200	908	6,200	186	6,100	469
Grand total.....	142,352	8,671	862,390	18,723	86,954	1,875	708,260	24,289

Apparatus and waters.	Rock bass.		Pike perch (wall-eyed).		Pike perch (sauger).		Suckers.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	520	\$32	380	\$23			2,720	\$33
Reelfoot Lake.....							1,500	15
Total.....	520	32	380	23			4,220	48
Fyke nets:								
Cumberland River.....	990	105	850	97	463	\$41	9,400	781
Tennessee River.....			557	58			53,094	2,656
Mississippi River.....	435	26	520	31			2,315	44
Reelfoot Lake.....			1,100	57			22,000	220
Obion and Big Hatchie rivers.....	130	10	80	6			1,100	33
Total.....	1,555	141	3,107	249	463	41	87,909	3,784
Trammel nets:								
Reelfoot Lake.....							34,300	943
Lines:								
Tennessee River.....			6,030	474			21,260	1,141
Total by waters:								
Cumberland River.....	990	105	850	97	463	41	9,400	781
Tennessee River.....			6,587	532			74,354	3,797
Mississippi River.....	955	58	900	54			5,035	77
Reelfoot Lake.....			1,100	57			67,800	578
Obion and Big Hatchie rivers.....	130	10	80	6			1,100	33
Grand total.....	2,075	173	9,517	746	463	41	147,689	5,266

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 691

Table showing the yield of the fisheries of Tennessee in 1899—Continued.

Apparatus and waters.	Crappie.		Drum, fresh-water.		Eels.		Hickory shad.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	1,700	\$87	18,122	\$194				
Reelfoot Lake.....	9,300	465	8,500	170				
Open and Number Nine lakes.	8,100	385	6,100	92				
Total.....	19,100	887	31,722	456				
Fyke nets:								
Cumberland River.....	459	37	27,300	2,215				
Tennessee River.....			16,930	967			2,632	\$133
Mississippi River.....	820	42	5,646	89	200	\$4		
Reelfoot Lake.....	128,000	4,100	77,000	1,375				
Open and Number Nine lakes.	500	25	2,200	44				
Obion and Big Hatchie rivers.	3,400	308	7,600	267	50	2		
Total.....	133,179	4,512	136,676	4,957	250	6	2,632	133
Trammel nets:								
Mississippi River.....			3,000	30				
Reelfoot Lake.....	11,200	367	10,700	67				
Open and Number Nine lakes.			3,200	64				
Total.....	11,200	367	16,900	161				
Lines:								
Cumberland River.....			80,694	2,180	1,420	104		
Tennessee River.....			59,903	3,277			3,943	225
Mississippi River.....			21,895	251	5,510	171		
Reelfoot Lake.....			13,100	74	7,000	167		
Total.....			125,592	5,782	13,930	442	3,943	225
Total by waters:								
Cumberland River.....	459	37	57,994	4,395	1,420	104		
Tennessee River.....			76,833	4,244			6,575	358
Mississippi River.....	2,520	129	48,663	664	5,710	175		
Reelfoot Lake.....	148,500	4,922	109,900	1,686	7,000	167		
Open and Number Nine lakes.	8,600	360	10,500	200				
Obion and Big Hatchie rivers.	3,400	308	7,600	267	50	2		
Grand total.....	163,479	5,756	310,890	11,856	14,180	448	6,575	358

Apparatus and waters.	Paddle-fish.		Sturgeon, lake.		Sturgeon, shovel-nose.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:						
Mississippi River.....	18,500	\$475			400	\$12
Reelfoot Lake.....	65,000	1,300				
Open and Number Nine lakes.	40,000	1,200				
Total.....	123,500	2,975			400	12
Fyke nets:						
Cumberland River.....	6,540	328	5,010	\$431	2,803	152
Tennessee River.....			5,290	265		
Mississippi River.....	2,445	73	280	8	1,405	42
Reelfoot Lake.....	78,000	1,260				
Obion and Big Hatchie rivers.	700	21				
Total.....	87,685	1,682	10,580	704	4,208	194
Lines:						
Cumberland River.....					2,500	250
Tennessee River.....					24,570	988
Mississippi River.....					720	22
Total.....					27,790	1,260
Total by waters:						
Cumberland River.....	6,540	328	5,010	431	5,303	402
Tennessee River.....			5,290	265	24,570	988
Mississippi River.....	20,945	548	280	8	2,525	76
Reelfoot Lake.....	148,000	2,560				
Open and Number Nine lakes.	40,000	1,200				
Obion and Big Hatchie rivers.	700	21				
Grand total.....	211,185	4,657	10,580	704	32,398	1,466

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Table showing the yield of the fisheries of Tennessee in 1899—Continued.

Apparatus and waters.	Sun-fish.		Yellow perch.		Shrimp.		Turtles.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River	300	\$15					2,200	\$49
Open and Number Nine lakes.	1,200	36					600	12
Total	1,500	51					2,800	61
Fyke nets:								
Cumberland River	2,068	190	705	\$44			1,210	33
Mississippi River								
Reelfoot Lake	31,200	781						
Open and Number Nine lakes.	700	35						
Obion and Big Hatchie rivers.	1,200	60						
Total	35,168	1,066	705	44			1,210	33
Lines:								
Mississippi River							4,150	83
Shrimp traps:								
Mississippi River					20,040	\$1,670		
Total by waters:								
Cumberland River	2,068	190	705	44				
Mississippi River	300	15			20,040	1,670	7,560	165
Reelfoot Lake	31,200	781						
Open and Number Nine lakes.	1,900	71					600	12
Obion and Big Hatchie rivers.	1,200	60						
Grand total	86,668	1,117	705	44	20,040	1,670	8,160	177

Summary, by apparatus and waters, of the fisheries of Tennessee in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Lines:		
Mississippi River	175,500	\$3,843	Cumberland River	91,857	\$6,766
Reelfoot Lake	101,300	2,430	Tennessee River	227,272	11,704
Open and Number Nine lakes.	76,900	2,349	Mississippi River	266,175	7,499
Total	352,600	8,622	Reelfoot Lake	292,600	10,846
Fyke nets:			Total	877,404	36,815
Cumberland River	98,745	7,740	Shrimp traps:		
Tennessee River	102,607	5,286	Mississippi River	20,040	1,670
Mississippi River	77,624	2,236	Spears:		
Reelfoot Lake	749,700	14,766	Reelfoot Lake	62,200	1,113
Open and Number Nine lakes.	17,900	629	Grapple:		
Obion and Big Hatchie rivers.	54,740	2,368	Reelfoot Lake	89,000	2,375
Total	1,101,316	33,025	Total by waters:		
Trammel nets:			Cumberland River	190,102	14,506
Mississippi River	21,500	420	Tennessee River	329,879	16,990
Reelfoot Lake	241,600	3,244	Mississippi River	560,839	15,668
Open and Number Nine lakes.	8,900	253	Reelfoot Lake	1,536,400	34,774
Total	272,000	8,917	Open and Number Nine lakes.	102,600	3,231
			Obion and Big Hatchie rivers.	54,740	2,368
			Grand total	2,774,560	87,537

Table showing the extent of the wholesale trade in fishery products in Tennessee in 1899.

Items.	Union City and Bluebank.		Memphis.		Total.	
	No.	Value.	No.	Value.	No.	Value.
Establishments	3	\$3,925	3	\$4,175	6	\$8,100
Cash capital		15,500				27,000
Wages paid		5,200		4,356		9,556
Persons engaged	15		11		26	
Total investment		24,625		20,031		44,656
Products sold:						
Fresh fish	1,240,000	67,950	680,000	43,050	1,920,000	111,000
Oysters	260	338	600	650	760	988
Value of products		68,288		43,700		111,988

ALABAMA.

The fisheries of Alabama here considered are only those of the Tennessee River within that State. In 1899 68 persons were engaged in these fisheries, and the investment was \$4,463. Of this amount, \$2,233 represented the value of fyke nets. The products amounted to 852,460 pounds, valued at \$42,588. The principal species taken were cat-fish, 233,580 pounds, worth \$11,691; fresh-water drum, 224,060 pounds, worth \$11,153; hickory shad, 158,480 pounds, worth \$7,924; suckers, 124,800 pounds, worth \$6,241.

More than half of the catch of fish was taken with wooden traps, of which 47 were in use, worth \$705.

Table showing the number of persons employed in the fisheries of Alabama in 1899.

Fisheries in which employed.	No.
Set line.....	62
Fyke net.....	60
Wooden trap.....	6
Total, exclusive of duplication.....	68

Table showing the boats and apparatus of capture employed in the fisheries of Alabama in 1899.

Items.	No.	Value.
Fishing boats.....	87	\$374
House boats.....	22	700
Set lines.....	540	451
Fyke nets.....	526	2,233
Wooden traps.....	47	705
Total investment.....		4,463

Table showing, by apparatus of capture, the yield of the fisheries of Alabama in 1899.

Species.	Set lines.		Fyke nets.		Wooden traps.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Black bass.....	4,960	\$248	5,280	\$264	.....	.....	10,240	\$512
Buffalo-fish.....	21,400	1,070	23,780	1,189	28,200	\$1,410	73,380	3,669
Cat-fish.....	27,910	1,407	27,070	1,354	178,600	8,930	233,580	11,691
Drum, fresh-water.....	25,900	1,295	28,960	1,398	169,200	8,460	224,060	11,153
Bels.....	5,070	254	2,970	149	.....	.....	8,040	403
Hickory shad.....	12,680	633	14,220	711	131,600	6,580	158,480	7,924
Pike perch (wall-eyed).....	\$ 390	170	4,410	221	.....	.....	7,800	391
Sturgeon, lake.....	.....	.....	4,480	224	.....	.....	4,480	224
Sturgeon, shovel-nose.....	7,600	380	.....	.....	.....	.....	7,600	380
Suckers.....	16,170	809	52,230	2,612	56,400	2,820	124,800	6,241
Total.....	125,060	6,266	163,400	8,122	564,000	28,200	852,460	42,588

MISSISSIPPI.

In Mississippi in 1899 the fisheries in the waters of the Mississippi River and tributaries gave employment to 546 persons, with an investment of \$43,371. The products amounted to 3,920,942 pounds, valued at \$97,711. The leading species was buffalo-fish, the catch of which was 2,023,230 pounds, worth \$33,747. Cat-fish, drum, paddle-fish, and shrimp were also taken in considerable quantities. The yield of caviar from the roe of paddle-fish was 32,775 pounds, valued at \$14,391.

The greater part of the products in this State was derived from the Mississippi and Yazoo rivers. Fyke nets and seines were the most important forms of apparatus used, the former being valued at \$11,715 and the latter at \$4,945.

Table showing, by waters, the number of persons employed in fisheries of Mississippi in 1899.

Waters.	Fisheries in which employed.							Shores-men.	Total, exclusive of duplication.
	Seine.	Trammel net.	Fyke net.	Pound net.	Set line.	Drift line.	Shrimp trap.		
Mississippi River	46	4	57	3	90	22	147	25	265
Yazoo River	2		120		78			11	150
Lake Horn	10								10
Lake Moon	16							3	19
Miscellaneous waters.....	62	8	5		17			12	96
Total	136	12	182	3	185	22	147	51	540

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Mississippi in 1899.

Waters.	Fishing boats.		House boats.		Seines.			Fyke nets.	
	No.	Value.	No.	Value.	No.	Yards.	Value.	No.	Value.
Mississippi River	*214	\$6,250	24	\$1,695	15	2,025	\$1,040	645	\$3,225
Yazoo River	104	2,060	5	250				1,390	8,340
Lake Horn	5	200			1	800	400		
Lake Moon	10	1,650			2	1,600	800		
Miscellaneous waters.....	50	2,015			13	5,360	2,705	30	150
Total	383	12,175	29	1,945	31	9,875	4,945	2,065	11,715

Waters.	Trammel nets.			Pound nets.		Set lines.			Drift lines.	
	No.	Yards.	Value.	No.	Value.	No.	Yards.	Value.	No.	Value.
Mississippi River	2	200	\$60	1	\$50	406	40,600	\$524	640	\$.32
Yazoo River						732	73,200	915		
Miscellaneous waters.....	4	400	110			80	9,200	92		
Total	6	600	170	1	50	1,218	123,000	1,631	640	32

Waters.	Shrimp traps.		Otter traps.		Shore and accessory property.	Cash capital.	Total investment.
	No.	Value.	No.	Value.			
Mississippi River	2,800	\$541			\$1,583	\$4,200	\$19,200
Yazoo River			40	\$13	1,111		12,689
Lake Horn					125		725
Lake Moon					2,000		4,450
Miscellaneous waters.....					1,235		6,307
Total	2,800	541	40	13	6,054	4,200	43,371

* Includes one vessel of 13 tons, valued at \$1,400, and two gasoline launches, valued at \$1,200.

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 695

Table showing, by waters and apparatus of capture, the yield of the fisheries of Mississippi in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:						
Mississippi River.....	2,015	\$121	212,400	\$3,628	900	\$17
Lake Horn.....	300	21	20,000	400		
Lake Moon.....			624,000	9,360		
Miscellaneous waters.....	2,983	179	194,400	3,718	5,300	98
Total.....	5,298	321	1,050,800	17,106	6,200	115
Trammel nets:						
Mississippi River.....			1,800	36		
Miscellaneous waters.....	2,900	174	28,000	560		
Total.....	2,900	174	29,800	596		
Fyke nets:						
Mississippi River.....	2,500	150	242,200	4,895	3,010	47
Yazoo River.....	1,600	80	631,000	9,465	1,615	32
Miscellaneous waters.....	480	29	19,000	570		
Total.....	4,580	259	892,200	14,930	4,625	79
Pound nets:						
Mississippi River.....	100	6	10,000	300		
Set lines:						
Mississippi River.....			37,300	754		
Yazoo River.....			1,590	24		
Miscellaneous waters.....			1,540	87		
Total.....			40,430	815		
Total by waters:						
Mississippi River.....	4,615	277	503,700	9,613	3,910	64
Yazoo River.....	1,600	80	632,500	9,489	1,615	32
Lake Horn.....	300	21	20,000	400		
Lake Moon.....			624,000	9,360		
Miscellaneous waters.....	6,363	382	242,940	4,885	5,300	98
Grand total.....	12,878	760	2,023,230	33,747	10,825	194

Apparatus and waters.	Eels.		Pike and pickerel.		Pike perch (wall-eyed).		Rock bass.		Sturgeon, shovel-nose.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Mississippi River.....					190	\$12	2,016	\$118	400	\$6
Lake Horn.....			360	\$25			500	35		
Miscellaneous waters.....							4,875	230		
Total.....			350	25	190	12	7,391	383	400	6
Fyke nets:										
Mississippi River.....					926	59	4,600	212	3,100	35
Yazoo River.....							2,320	110		
Miscellaneous waters.....							209	13		
Total.....					926	59	7,129	335	3,100	35
Trammel nets:										
Mississippi River.....							250	10		
Pound nets:										
Mississippi River.....					100	6				
Set lines:										
Mississippi River.....	2,180	\$15							5,100	59
Yazoo River.....	1,365	41								
Miscellaneous waters.....	385	12								
Total.....	3,930	68							6,100	59
Total by waters:										
Mississippi River.....	2,180	15			1,216	77	6,866	940	8,600	100
Yazoo River.....	1,365	41	360	25			2,320	110		
Lake Horn.....							500	35		
Miscellaneous waters.....	385	12					5,084	243		
Grand total.....	3,930	68	350	25	1,216	77	14,770	728	8,600	100

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Table showing the yield of the fisheries of Mississippi in 1899—Continued.

Apparatus and waters.	Cut-fish.		Crappie.		Drum, fresh-water.		Paddle-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	4,955	\$196	10,000	\$594	13,200	\$213	100,500	\$2,391
Lake Horn.....	3,800	152	6,000	420	7,000	140	26,000	780
Lake Moon.....	2,600	104			1,200	18	200,000	4,000
Miscellaneous waters.....	12,200	425	14,500	698	24,900	396	266,600	5,270
Total.....	23,555	877	30,500	1,712	46,300	767	593,100	12,441
Trammel nets:								
Mississippi River.....	700	28			1,500	23	400	10
Miscellaneous waters.....	6,000	280	5,800	290	3,400	68	12,000	360
Total.....	6,700	308	5,800	290	4,900	91	12,400	370
Fyke nets:								
Mississippi River.....	14,545	576	2,515	128	37,200	579	15,205	340
Yazoo River.....	23,200	696	2,050	94	88,000	1,325	327,000	3,570
Miscellaneous waters.....	300	15	1,100	66	800	16	600	18
Total.....	38,045	1,287	5,665	288	126,000	1,920	342,805	3,928
Pound nets:								
Mississippi River.....	1,400	70			1,200	24		
Drift lines:								
Miscellaneous waters.....	19,200	711						
Set lines:								
Mississippi River.....	194,000	7,160			15,120	250		
Yazoo River.....	84,700	2,541			3,520	53		
Miscellaneous waters.....	29,700	1,348			1,260	25		
Total.....	308,400	11,049			19,890	328		
Total by waters:								
Mississippi River.....	234,800	8,741	12,515	722	68,220	1,089	116,105	2,741
Yazoo River.....	107,900	3,237	2,050	94	91,520	1,378	327,000	3,570
Lake Horn.....	3,800	152	6,000	420	7,000	140	26,000	780
Lake Moon.....	2,600	104			1,200	18	200,000	4,000
Miscellaneous waters.....	48,200	2,068	21,400	1,054	30,350	565	279,200	5,648
Grand total.....	397,300	14,302	41,965	2,290	198,290	3,130	948,305	16,739

Apparatus and waters.	Suckers.		Shrimp.		Turtles.		Caviar.		Otter skins.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Mississippi River.....	4,900	\$76					1,750	\$613		
Lake Horn.....	2,400	48					500	100		
Lake Moon.....	700	11					15,875	9,525		
Miscellaneous waters.....	7,200	178					14,250	4,013		
Total.....	15,200	313					32,375	14,251		
Trammel nets:										
Mississippi River.....					100	\$2				
Fyke nets:										
Mississippi River.....	23,060	353			800	16				
Yazoo River.....	65,900	989					400	140		
Miscellaneous waters.....	1,300	26								
Total.....	90,260	1,368			800	16	400	140		
Pound nets:										
Mississippi River.....	300	6								
Shrimp traps:										
Mississippi River.....			119,838	\$9,430						
Otter traps:										
Yazoo River.....									10	\$25
Total by waters:										
Mississippi River.....	28,260	435	119,838	9,430	900	18	1,750	613		
Yazoo River.....	65,900	989					400	140	10	25
Lake Horn.....	2,400	48					500	100		
Lake Moon.....	700	11					15,875	9,525		
Miscellaneous waters.....	8,500	204					14,250	4,013		
Grand total.....	105,760	1,687	119,838	9,430	900	18	32,775	14,391	10	25

Summary, by apparatus and waters, of the fisheries of Mississippi in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Set lines:		
Mississippi River.....	353,226	\$7,985	Mississippi River.....	253,700	\$8,238
Lake Horn.....	66,850	2,121	Yazoo River.....	91,175	2,659
Lake Moon.....	844,375	23,018	Miscellaneous waters..	32,875	1,422
Miscellaneous waters..	547,208	15,205	Total.....	377,750	12,319
Total.....	1,811,659	48,329	Drift lines:		
Trammel nets:			Mississippi River.....	19,200	711
Mississippi River.....	4,750	109	Shrimp traps:		
Miscellaneous waters..	58,100	1,732	Mississippi River.....	119,898	9,430
Total.....	62,850	1,841	Otter traps:		
Fyke nets:			Yazoo River.....	10	25
Mississippi River.....	349,661	7,390	Total by waters:		
Yazoo River.....	1,143,085	16,501	Mississippi River.....	1,113,475	34,275
Miscellaneous waters..	23,789	753	Yazoo River.....	1,234,620	19,210
Total.....	1,516,835	24,644	Lake Horn.....	66,500	2,096
Pound nets:			Lake Moon.....	844,375	23,018
Mississippi River.....	13,100	412	Miscellaneous waters..	661,972	19,112
			Grand total.....	3,920,942	97,711

LOUISIANA.

The fisheries of Louisiana in the Mississippi River and tributaries are unimportant in comparison to the coast fisheries of the State. The persons employed numbered 326, the amount of capital invested was \$18,745, and the yield of all species was 1,942,185 pounds, valued at \$57,072. The waters from which the largest quantity of products was derived were the Red River, 629,350 pounds, \$16,322; Mississippi River, 446,857 pounds, \$16,542; Black River, 161,816 pounds, \$4,782; and the Ouachita River, 145,460 pounds, \$3,745. The apparatus of capture consisted chiefly of lines, fyke nets, and seines. The species taken in greatest abundance were buffalo-fish and cat-fish, the catch of the former being 799,320 pounds, worth \$15,655, and of the latter 682,347 pounds, worth \$22,373. Other important species were fresh-water drum, crappie, black bass, and paddle-fish or spoon-bill cat.

Table showing, by waters, the number of persons employed in fisheries of Louisiana in 1899.

Waters.	Fisheries in which employed.							Shoresmen.	Total exclusive of duplication.
	Seine.	Fyke net.	Trammel net.	Cast net.	Set line.	Wooden fish trap.	Shrimp trap.			Alligator, terrapin, and other hunters.
Fausse River.....	10								10
Black River.....		6			15			6	18
Mississippi River.....		56			88		64	17	143
Ouachita River.....		16			12			5	21
Red River.....		43		25	68				68
Lake Black Fork..	7								7
Lake Centennial..	2								2
Lake Concordia..	12		2						14
Lake Old River...	8								8
Lake Palmyra.....	12							1	13
Lake Bistineau...		2			2	4			4
Lake Catahoula..					10				10
Lake Cross.....			2		8				8
Total.....	51	122	4	25	203	4	64	28	326

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Table showing, by waters, the boats, apparatus, and property employed in the fisheries of Louisiana in 1899.

Waters.	Fishing boats.		House boats.		Seines.			Fyke nets.	
	No.	Value.	No.	Value.	No.	Length (yards).	Value.	No.	Value.
Fausse River.....	4	\$120			3	450	\$250		
Black River.....	18	345						48	\$240
Mississippi River.....	132	2,570	14	\$770				331	1,665
Ouachita River.....	17	240	2	120				180	900
Red River.....	77	3,239	41	1,150				169	816
Lake Black Fork.....	3	90			2	300	150		
Lake Centennial.....	1	15			1	80	30		
Lake Concordia.....	7	300			3	450	260		
Lake Old River.....	4	160			2	600	350		
Lake Palmyra.....	5	250			2	1,000	500		
Lake Bistineau.....	4	35						12	48
Lake Catahoula.....	10	200							
Lake Cross.....	8	60							
Total.....	290	7,644	57	2,040	13	2,880	1,540	740	3,669

Waters.	Trammel nets.			Wooden fish traps.		Shrimp traps.	
	No.	Length (yards).	Value.	No.	Value.	No.	Value.
Mississippi River.....						1,746	\$263
Lake Concordia.....	1	120	\$30				
Lake Bistineau.....				2	\$275		
Lake Cross.....	1	120	30				

Waters.	Set lines.		Guns.		Otter traps.		Shore and accessory property.	Total investment.
	No.	Value.	No.	Value.	No.	Value.		
Fausse River.....							\$160	\$580
Black River.....	75	\$112	3	\$60	96	\$28	10	795
Mississippi River.....	419	515	15	300	48	14	158	6,255
Ouachita River.....	48	60			120	35	95	1,450
Red River.....	331	317					900	6,422
Lake Black Fork.....							80	320
Lake Centennial.....								45
Lake Concordia.....							46	635
Lake Old River.....							55	565
Lake Palmyra.....							180	930
Lake Bistineau.....	2	2					2	862
Lake Catahoula.....	50	68					46	313
Lake Cross.....	8	8					5	123
Total.....	933	1,082	18	360	264	77	1,735	18,745

Table showing, by waters and apparatus of capture, the yield of the fisheries of Louisiana in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Fausse River.....	7,200	\$360	29,000	\$580			872	\$85
Lake Black Fork.....	3,900	190	13,500	270	85	\$2	400	16
Lake Centennial.....	145	9	6,000	120			600	24
Lake Concordia.....	1,400	84	54,000	1,080			950	29
Lake Old River.....	1,200	72	52,000	780			3,000	120
Lake Palmyra.....			58,000	870	200	3	2,350	94
Total.....	13,745	715	212,500	3,700	285	5	8,172	318
Fyke nets:								
Black River.....	1,600	96	37,000	740			600	18
Mississippi River.....	790	47	122,400	2,029	860	15	7,025	268
Ouachita River.....	1,200	72	80,000	1,600			5,400	195
Red River.....			24,000	810			268,000	8,043
Lake Bistineau.....	1,000	100	1,500	53	1,000	160	500	30
Total.....	4,590	315	264,900	5,232	1,860	165	281,625	8,554
Trammel nets:								
Lake Concordia.....	300	18	6,900	133			1,000	30
Wooden fish-traps:								
Lake Bistineau.....	1,000	100	45,000	1,575			1,000	60

Table showing the yield of the fisheries of Louisiana in 1899—Continued.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.			
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.		
Lines:										
Black River.....			18,000	\$360			92,000	\$2,760		
Mississippi River.....			17,570	352			175,800	6,715		
Ouachita River.....			850	19			28,000	840		
Red River.....			229,000	4,142			35,250	1,090		
Lake Bistineau.....	100	\$10	500	17	500	\$75	100	6		
Lake Catahoula.....							52,000	1,560		
Lake Cross.....	3,000	270	4,000	140			8,000	440		
Total.....	3,100	280	270,020	5,010	500	75	390,650	13,411		
Total by waters:										
Fausse River.....	7,200	360	29,000	580			872	35		
Black River.....	1,600	96	55,000	1,100			92,600	2,778		
Mississippi River.....	790	47	189,970	2,861	860	15	182,325	6,983		
Ouachita River.....	1,200	72	80,950	1,619			33,400	1,035		
Red River.....			253,000	4,952			303,250	9,183		
Lake Black Fork.....	3,800	190	18,500	270	85	2	400	16		
Lake Centennial.....	145	9	6,000	120			600	24		
Lake Concordia.....	1,700	102	60,900	1,218			1,950	59		
Lake Old River.....	1,200	72	52,000	780			3,000	120		
Lake Palmyra.....			58,000	870	200	3	2,350	94		
Lake Bistineau.....	2,100	210	47,000	1,645	1,500	225	1,600	96		
Lake Catahoula.....							52,000	1,560		
Lake Cross.....	3,000	270	4,000	140			8,000	440		
Grand total.....	22,735	1,428	799,320	15,655	2,645	245	682,847	22,373		
Apparatus and waters.	Crappie.		Drum, fresh-water.		Eels.		Paddle-fish.		White bass.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.	Lbs.	Val.
Seines:										
Fausse River.....	8,365	\$418	1,900	\$38			12,000	\$240		
Lake Black Fork.....	4,200	210	2,000	40			6,000	120		
Lake Centennial.....	800	18	900	18			800	16		
Lake Concordia.....	2,700	162	3,900	59			25,000	375		
Lake Old River.....	5,800	290	7,200	108			37,000	555		
Lake Palmyra.....			4,000	60			40,000	400		
Total.....	21,365	1,098	19,900	323			120,800	1,706		
Lines:										
Black River.....			1,400	21	260	\$8				
Mississippi River.....			13,010	247	1,410	45				
Ouachita River.....			9,400	188						
Red River.....			44,100	1,669						
Lake Bistineau.....	200	20							50	\$5
Lake Cross.....	12,000	1,080							3,000	270
Total.....	12,200	1,100	67,910	2,125	1,670	53			3,050	275
Fyke nets:										
Black River.....	2,900	174	2,000	30						
Mississippi River.....	1,335	76	18,185	291			10,200	230		
Ouachita River.....	2,600	166	13,600	272			1,200	24		
Red River.....			28,700	553						
Lake Bistineau.....	800	80							100	10
Total.....	7,635	486	62,485	1,146			11,400	254	100	10
Trammel nets:										
Lake Concordia.....	700	42	500	8						
Wooden fish-traps:										
Lake Bistineau.....	1,000	100								
Total by waters:										
Fausse River.....	8,365	418	1,900	38			12,000	240		
Black River.....	2,900	174	3,400	51	260	8				
Mississippi River.....	1,335	76	81,195	688	1,410	45	10,200	230		
Ouachita River.....	2,600	166	23,000	460			1,200	24		
Red River.....			72,800	2,222						
Lake Black Fork.....	4,200	210	2,000	40			6,000	120		
Lake Centennial.....	800	18	900	18			800	16		
Lake Concordia.....	3,400	204	4,400	67			25,000	375		
Lake Old River.....	5,800	290	7,200	108			37,000	555		
Lake Palmyra.....			4,000	60			40,000	400		
Lake Bistineau.....	2,000	200							150	15
Lake Cross.....	12,000	1,080							3,000	270
Grand total.....	42,900	2,826	150,795	3,602	1,670	53	182,200	1,960	3,150	285

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Table showing the yield of the fisheries of Louisiana in 1899—Continued.

Apparatus and waters.	Pike.		Pike perch (wall-eyed).		Rock bass.		Suckers.		Caviar.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Fausse River.....					1,500	\$75	600	\$12		
Lake Black Fork.....					1,200	60	300	6		
Lake Centennial.....					200	12				
Lake Concordia.....					1,800	108	1,110	17	625	\$219
Lake Old River.....					1,000	50	2,700	41	1,625	406
Lake Palmyra.....							1,800	34	1,500	375
Total.....					5,700	305	6,510	110	3,750	1,000
Lines:										
Red River.....							300	15		
Fyke nets:										
Black River.....					1,400	84	3,400	51		
Mississippi River.....			50	\$3	2,790	163	18,340	279		
Ouachita River.....	300	\$18			800	48				
Total.....	300	18	50	3	4,990	295	21,740	930		
Trammel nets:										
Lake Concordia.....					225	14				
Total by waters:										
Fausse River.....					1,500	75	600	12		
Black River.....					1,400	84	3,400	51		
Mississippi River.....			50	3	2,790	163	18,340	279		
Ouachita River.....	300	18			800	48				
Red River.....							300	15		
Lake Black Fork.....					1,200	60	300	6		
Lake Centennial.....					200	12				
Lake Concordia.....					2,025	122	1,110	17	625	219
Lake Old River.....					1,000	50	2,700	41	1,625	406
Lake Palmyra.....							1,800	34	1,500	375
Grand total.....	300	18	50	3	10,915	614	28,550	455	3,750	1,000

Apparatus and waters.	Shrimp.		Turtles.		Alligator hides.		Otter skins.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Lines:								
Ouachita River.....			1,400	\$28				
Fyke nets:								
Mississippi River.....					680	14		
Ouachita River.....					500	10		
Total.....			1,180	24				
Shrimp traps:								
Mississippi River.....	52,980	\$4,395						
Otter traps:								
Black River.....							56	\$140
Mississippi River.....							182	455
Ouachita River.....							110	275
Total.....							348	870
Guns:								
Black River.....					1,200	\$300		
Mississippi River.....					3,750	938		
Total.....					4,950	1,238		
Total by waters:								
Black River.....					1,200	300	56	140
Mississippi River.....	52,980	4,395	680	14	3,750	938	182	455
Ouachita River.....			1,900	38			110	275
Grand total.....	52,980	4,395	2,580	52	4,950	1,238	348	870

Summary, by apparatus and waters, of the fisheries of Louisiana in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Shrimp traps:		
Fausse River	61,437	\$1,758	Mississippi River	52,980	\$4,395
Lake Black Fork	31,485	914	Other traps:		
Lake Centennial	3,945	217	Black River	56	140
Lake Concordia	91,485	2,133	Mississippi River	182	465
Lake Old River	111,525	2,422	Ouachita River	110	275
Lake Palmyra	107,850	1,836	Total	348	870
Total	412,727	9,280	Guns:		
Lines:			Black River	1,200	300
Black River	111,660	3,149	Mississippi River	3,750	938
Mississippi River	207,290	7,339	Total	4,950	1,238
Ouachita River	39,750	1,075	Total by waters:		
Red River	308,650	6,916	Fausse River	61,437	1,758
Lake Bistineau	1,450	133	Black River	161,816	4,782
Lake Catahoula	52,000	1,560	Mississippi River	446,857	16,542
Lake Cross	30,000	2,200	Ouachita River	145,460	3,745
Total	750,800	22,372	Red River	629,350	16,322
Fyke nets:			Lake Black Fork	31,485	914
Black River	48,900	1,193	Lake Centennial	8,945	217
Mississippi River	182,655	3,415	Lake Concordia	101,110	2,383
Ouachita River	105,600	2,395	Lake Old River	111,525	2,422
Red River	320,700	9,406	Lake Palmyra	107,850	1,836
Lake Bistineau	4,900	423	Lake Bistineau	54,350	2,391
Total	662,755	16,832	Lake Catahoula	52,000	1,560
Trammel nets:			Lake Cross	30,000	2,200
Lake Concordia	9,625	250	Grand total	1,942,185	57,072
Wooden fish-traps:					
Lake Bistineau	48,000	1,835			

ARKANSAS.

The commercial fisheries of Arkansas are prosecuted wholly in the Mississippi River and its tributaries. Some of the more important tributaries of the Mississippi in this State are the Arkansas, White, St. Francis, and Ouachita rivers, and Big Lake. Large quantities of fishery products are also derived from other waters.

In 1899 the number of persons employed in the fisheries was 463. The capital invested in boats, apparatus of capture, and fishing property amounted to \$39,105. The boats, including house boats, numbered 437, valued at \$10,357. The fishing apparatus was valued at \$25,147, and the shore and accessory property at \$3,601.

The products aggregated 4,896,591 pounds, valued at \$168,071. The principal species obtained were buffalo-fish, 2,388,890 pounds, \$52,521; cat-fish, 838,514 pounds, \$42,044; fresh-water drum, 304,105 pounds, \$7,848. Black bass, crappie, paddle-fish, sun-fish, frogs, and various other species were taken in considerable quantities. Caviar made from the roe of the paddle-fish or spoon-bill cat amounted to 34,175 pounds, valued at \$11,488.

The most productive forms of fishing apparatus were seines and fyke nets, the catch with the former being 2,036,582 pounds, valued at \$62,505, and with the latter 1,404,613 pounds, valued at \$44,664. Next in importance, with respect to the quantity and value of products, were pound nets, trammel nets, and set lines.

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Table showing, by waters, the number of persons employed in the fisheries of Arkansas in 1899.

Waters.	Fisheries in which employed.									Total, exclusive of duplication.
	Seine.	Pound net.	Trammel net.	Fyke net.	Set line.	Miscellaneous line.	Spear.	Otter trap and gun.	Shoresmen.	
Arkansas River.....	17	2	3	50	42					66
White River.....	18	2	15	72	73					84
St. Francis River.....	6	12	32	54	34					122
Ouachita River.....	7		6	16	20	8	70	86	8	20
Cache River.....	4		4	8	8					8
Mississippi River.....	30		2	32	31	5		10	17	54
Horseshoe and Porter lakes.....	10			3						18
Big Lake.....	17	8	16	15	15	20		20	24	27
Miscellaneous waters.....	72		2	14	6	6			7	79
Total.....	181	24	80	264	229	39	90	120	32	463

Table showing, by waters, the apparatus employed in the fisheries of Arkansas in 1899.

Waters.	Fishing boats.		House boats.		Seines.			Pound nets.		Drag nets.	
	No.	Value.	No.	Value.	No.	Length (yards).	Value.	No.	Value.	No.	Value.
Arkansas River.....	60	\$1,018	4	\$380	6	1,710	\$572	1	\$35		
White River.....	102	651	15	275	8	920	475	1	40		
St. Francis River.....	102	2,820	10	465	2	300	150	8	400		
Ouachita River.....	15	110	1	35						20	\$160
Cache River.....	5	38	2	40	2	240	100				
Mississippi River.....	44	1,975	10	465	9	1,750	880				
Horseshoe and Porter lakes.....	7	240	2	125	1	800	400				
Big Lake.....	27	540			7	980	450	6	300		
Miscellaneous waters.....	31	1,180			13	6,405	3,285				
Total.....	393	8,572	44	1,785	48	13,105	6,262	16	775	20	160

Waters.	Trammel nets.			Fyke nets.		Set lines.		Miscellaneous lines.	
	No.	Length (yards).	Value.	No.	Value.	No.	Value.	No.	Value.
Arkansas River.....	7	140	\$42	247	\$1,099	75	\$92		
White River.....	25	1,605	625	525	2,764	628	528		
St. Francis River.....	16	1,925	405	925	4,625	141	127	8	\$10
Ouachita River.....	40	1,400	320	29	145	145	138		
Cache River.....	2	150	70	50	340	42	35		
Mississippi River.....	1	100	25	272	1,360	137	183	162	23
Horseshoe and Porter lakes.....				90	900				
Big Lake.....	8	1,200	320	300	1,600	60	35	20	20
Miscellaneous waters.....	3	310	90	138	1,080	24	15	6	8
Total.....	102	6,730	1,897	2,576	13,813	1,252	1,153	196	61

Waters.	Spears.		Otter traps.		Guns.		Shrimp traps.		Shore and accessory property.	Total investment.
	No.	Value.	No.	Value.	No.	Value.	No.	Value.		
Arkansas River.....									52	\$3,290
White River.....									88	5,446
St. Francis River.....	70	\$35	1,923	\$482	70	\$350			850	10,719
Ouachita River.....									40	948
Cache River.....									3	626
Mississippi River.....							130	\$33	1,023	5,967
Horseshoe and Porter lakes.....									125	1,790
Big Lake.....	20	30	144	36	12	60			550	3,841
Miscellaneous waters.....									870	6,478
Total.....	90	65	2,067	518	82	410	130	33	3,601	39,105

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 703

Table showing the yield of the fisheries of Arkansas in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Arkansas River			124,500	\$2,690			32,550	\$1,228
White River	1,950	\$147	100,900	3,571			120,300	6,599
St. Francis River			19,000	285			1,400	49
Cache River	75	6	2,700	108			600	54
Mississippi River	1,700	102	102,400	1,827	14,870	\$380	2,800	113
Horseshoe and Porterlakes	600	42	25,000	500			3,000	120
Big Lake	23,000	1,160	84,000	1,260	800	12	4,200	210
Miscellaneous waters	10,700	549	518,900	10,173	3,600	89	17,100	683
Total	38,025	1,996	977,400	20,414	19,270	481	181,950	9,056
Drammel nets:								
Arkansas River			1,700	51			400	24
White River	2,400	188	30,000	1,185			8,700	634
St. Francis River	18,800	940	57,400	768			9,200	343
Ouachita River	2,400	240	4,800	192			1,800	104
Cache River	75	6	2,800	112			600	54
Mississippi River	100	6	600	12			300	12
Big Lake	18,000	900	42,000	630	200	3	3,200	160
Miscellaneous waters	1,218	65	8,500	140	100	2	650	30
Total	42,993	2,345	147,800	3,090	300	5	24,350	1,361
Pound nets:								
Arkansas River			18,000	360			4,000	160
White River	100	8	600	24			100	8
St. Francis River			225,000	3,375			6,000	210
Big Lake	8,000	400	42,000	630	400	6	9,000	450
Total	8,100	408	285,600	4,389	400	6	19,100	828
Fyke nets:								
Arkansas River			72,550	2,230			21,900	1,085
White River	3,850	398	196,000	7,462			108,900	6,809
St. Francis River	16,700	838	314,600	4,992	100	2	62,000	2,219
Ouachita River	130	13	1,800	72			3,400	264
Cache River	375	31	6,000	240			4,700	439
Mississippi River	460	28	100,840	2,342	4,098	102	3,405	132
Horseshoe and Porterlakes	335	24	7,000	140			2,100	84
Big Lake	21,000	1,050	90,000	1,350	1,000	15	8,000	400
Miscellaneous waters	8,657	490	28,600	454	260	4	4,409	193
Total	51,607	2,872	817,390	19,282	5,458	123	218,814	11,625
Set lines:								
Arkansas River			22,750	823			9,500	491
White River	3,475	254	86,550	3,073			183,550	10,359
St. Francis River			600	12			44,100	1,549
Ouachita River	690	69	5,600	244			17,800	1,254
Cache River	275	22	5,300	212			4,050	335
Mississippi River			25,100	640			80,600	3,366
Big Lake							34,000	1,035
Miscellaneous waters							7,400	111
Total	4,440	345	145,900	5,004			381,000	18,500
Miscellaneous lines:								
St. Francis River	11,000	550					2,200	110
Mississippi River							6,800	310
Big Lake	23,000	1,160					3,000	150
Miscellaneous waters	6,000	300						
Total	40,000	2,000					12,000	570
Spears:								
Big Lake			10,000	150				
Drag nets:								
Ouachita River	280	28	4,800	192			1,300	104
Total by waters:								
Arkansas River			239,500	6,154			68,350	2,988
White River	11,775	995	414,050	15,315			421,550	24,409
St. Francis River	46,500	2,328	615,600	9,482	100	2	124,900	4,480
Ouachita River	3,500	350	17,900	700			23,800	1,726
Cache River	800	65	15,800	672			9,950	882
Mississippi River	2,250	136	228,940	4,821	18,968	482	93,005	3,933
Horseshoe and Porterlakes	925	66	32,000	640			5,100	204
Big Lake	93,000	4,650	258,000	4,070	2,400	36	61,400	2,405
Miscellaneous waters	20,575	1,404	556,000	10,767	3,960	95	29,559	1,017
Grand total	185,345	9,994	2,388,890	52,521	25,428	615	838,514	42,044

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Table showing the yield of the fisheries in Arkansas in 1899—Continued.

Apparatus and waters.	Crappie.		Drum, fresh-water.		Eels.		Paddle-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Selines:								
Arkansas River			35,100	\$730			34,500	\$1,085
White River	9,900	\$676	8,300	313				
St. Francis River	1,000	50	3,000	45				
Cache River	150	12	650	26				
Mississippi River	880	45	5,600	79			14,900	374
Horseshoe and Porter lakes	2,000	140	8,000	160			40,000	1,200
Big Lake	33,000	1,650	1,000	15			1,200	24
Miscellaneous waters	16,000	828	43,370	744			446,440	8,883
Total	62,930	3,401	105,020	2,112			537,040	11,566
Trammel nets:								
Arkansas River			500	15				
White River	3,400	270	8,000	320				
St. Francis River	17,200	860	2,800	43				
Ouachita River	80	8	1,200	48				
Cache River	375	28	650	26				
Mississippi River	150	6	700	7			200	6
Big Lake	25,000	1,250	100	2				
Miscellaneous waters	2,428	130	600	12			180	4
Total	48,633	2,552	14,550	473			380	9
Pound nets:								
Arkansas River			3,000	60			4,000	120
White River	200	16	150	6				
St. Francis River	500	25	4,000	60				
Big Lake	16,000	800	300	5	200	\$4	400	4
Total	16,700	841	7,450	131	200	4	4,400	124
Fyke nets:								
Arkansas River			42,450	1,316			4,000	120
White River	4,300	341	32,400	1,273				
St. Francis River	20,380	1,047	14,260	203	200	6	120	3
Ouachita River	800	80	1,300	47				
Cache River	850	71	1,100	44				
Mississippi River	625	31	17,215	281			4,085	109
Horseshoe and Porter lakes	1,800	126	4,000	80			300	9
Big Lake	40,000	2,000	800	12			600	12
Miscellaneous waters	12,286	700	2,080	39			500	15
Total	81,641	4,396	115,605	3,295	200	6	9,585	268
Set lines:								
Arkansas River			19,550	659				
White River	8,650	613	23,900	875				
St. Francis River			3,000	41	1,310	43		
Ouachita River	800	80	2,000	9				
Cache River	750	62	900	36				
Mississippi River			11,130	177	1,192	37		
Big Lake	4,800	240			800	16		
Total	15,000	995	60,480	1,797	3,302	96		
Miscellaneous lines:								
St. Francis River	1,700	85						
Big Lake	4,800	240						
Total	6,500	325						
Drag nets:								
Ouachita River	800	80	1,000	40				
Total by waters:								
Arkansas River			100,600	2,780			42,500	1,325
White River	26,450	1,916	72,750	2,787				
St. Francis River	41,380	2,067	27,060	892	1,510	49	120	8
Ouachita River	2,480	248	5,600	144				
Cache River	2,125	173	3,300	132				
Mississippi River	1,655	82	34,645	544	1,192	37	19,165	488
Horseshoe and Porter lakes	3,800	266	12,000	240			40,300	1,209
Big Lake	123,600	6,180	2,200	84	1,000	20	2,200	40
Miscellaneous waters	30,714	1,658	46,050	795			447,120	8,902
Grand total	232,204	12,690	304,105	7,848	3,702	106	551,405	11,967

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 705

Table showing the yield of the fisheries of Arkansas in 1899—Continued.

Apparatus and waters.	Pike and pick- erel.		Pike perch (wall- eyed).		Rock bass.		Sturgeon, shovel- nose.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
White River	50	\$7	650	\$88			500	\$40
St. Francis River					200	\$10		
Mississippi River			357	23	990	44	900	21
Horseshoe and Porter lakes					720	50		
Big Lake	2,600	78	400	20	2,000	100		
Miscellaneous waters	580	33	220	12	425	26		
Total	3,230	118	1,627	143	4,335	230	1,400	61
Trammel nets:								
White River							2,000	80
St. Francis River	260	8	55	8	2,030	48		
Mississippi River					100	4		
Big Lake	1,600	48	150	8	400	28		
Miscellaneous waters	115	8	25	1	170	11		
Total	1,975	64	230	12	2,700	91	2,000	80
Pound nets:								
Big Lake	1,600	48	200	10	300	18		
Fyke nets:								
White River							6,000	240
St. Francis River	900	37	225	12	3,695	162	210	2
Mississippi River			831	50	2,210	93	2,270	35
Horseshoe and Porter lakes					290	15		
Big Lake	700	21	200	10	600	30		
Miscellaneous waters	214	5	155	8	396	26		
Total	1,814	63	1,411	80	7,191	326	8,480	277
Set lines:								
White River			750	73				
St. Francis River							265	3
Ouachita River			220	25				
Mississippi River							3,160	32
Total			970	98			3,425	35
Drag nets:								
Ouachita River			80	4				
Total by waters:								
White River	50	7	1,400	161			8,600	300
St. Francis River	1,160	45	280	15	5,925	220	475	5
Ouachita River			250	29				
Mississippi River			1,188	73	3,300	141	6,330	88
Horseshoe and Porter lakes					1,010	65		
Big Lake	6,500	195	950	48	3,300	176		
Miscellaneous waters	909	46	400	21	991	63		
Grand total	8,619	293	4,468	347	14,526	665	15,305	453
Apparatus and waters.	Suckers.		Sun-fish.		White bass.		Turtles.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
White River	200	\$8	2,250	\$174	1,250	\$93		
St. Francis River	1,600	24	2,500	88				
Cache River			300	24	50	4		
Mississippi River	3,750	33	980	35			1,560	\$34
Horseshoe and Porter lakes	900	18						
Big Lake	20,230	305	15,000	225			2,200	66
Miscellaneous waters	11,050	194	5,700	96			600	18
Total	37,790	582	26,730	642	1,800	97	4,360	118
Trammel nets:								
White River			3,400	271	1,225	96		
St. Francis River			8,000	202				
Cache River			250	21	50	4		
Mississippi River							250	5
Big Lake			9,000	135				
Miscellaneous waters	400	6	450	18			150	3
Total	400	6	21,100	647	1,275	100	400	8

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Table showing the yield of the fisheries of Arkansas in 1899—Continued.

Apparatus and waters.	Suckers.		Sun-fish.		White bass.		Turtles.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Pound nets:								
White River			100	\$8				
Big Lake.....	6,200	\$93	8,500	128				
Total.....	6,200	93	8,600	136				
Fyke nets:								
White River	500	20	3,850	309	1,600	\$125		
St. Francis River.....	13,830	216	19,600	551			1,500	\$44
Cache River			375	31	350	29		
Mississippi River.....	6,495	109					2,232	56
Horseshoe and Porter lakes.....	1,000	20						
Big Lake.....	12,560	188	13,000	195			800	24
Miscellaneous waters.....	4,300	65	3,525	69				
Total.....	38,685	618	40,350	1,155	1,950	154	4,532	124
Set lines:								
White River			4,950	387	2,500	175		
Cache River			700	58	225	19		
Mississippi River.....							398	9
Total.....			5,650	445	2,725	194	398	9
Total by waters:								
White River	700	28	14,550	1,149	6,575	489		
St. Francis River.....	15,430	240	30,100	841			1,500	44
Cache River			1,625	134	675	56		
Mississippi River.....	10,245	142	980	35			4,440	104
Horseshoe and Porter lakes.....	1,900	38						
Big Lake.....	39,050	586	45,500	683			3,000	90
Miscellaneous waters.....	15,750	265	9,675	183			750	21
Grand total	83,075	1,299	102,430	3,025	7,250	545	9,690	259
Apparatus and waters.	Shrimp.		Frogs.		Caviar.		Otter skins.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....					175	\$44		
Horseshoe and Porter lakes.....					875	350		
Miscellaneous waters.....					33,125	11,094		
Total.....					34,175	11,488		
Spears:								
St. Francis River.....			25,000	\$3,275				
Big Lake.....			6,000	700				
Total.....			31,000	3,975				
Guns:								
St. Francis River.....			35,560	4,647			360	\$900
Big Lake.....			13,200	1,540				
Total.....			48,760	6,187			360	900
Otter traps:								
St. Francis River.....							40	100
Big Lake.....							100	250
Total.....							140	350
Shrimp traps:								
Mississippi River.....	7,200	\$600						
Total by waters:								
St. Francis River.....			60,560	7,922			400	1,000
Mississippi River.....	7,200	600			175	44		
Horseshoe and Porter lakes.....					875	350		
Big Lake.....			19,200	2,240			100	250
Miscellaneous waters.....					33,125	11,094		
Grand total	7,200	600	79,760	10,162	34,175	11,488	500	1,250

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 707

Summary, by apparatus and waters, of the fisheries of Arkansas in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Set lines:		
Arkansas River	226,650	\$6,733	Arkansas River	51,800	\$1,978
White River	246,250	11,716	White River	314,325	15,809
St. Francis River	28,700	651	St. Francis River	49,275	1,648
Cache River	4,525	234	Ouachita River	27,110	1,681
Mississippi River	151,862	3,154	Cache River	12,200	744
Horseshoe and Porter lakes	81,095	2,680	Mississippi River	121,580	4,261
Big Lake	189,690	6,115	Big Lake	39,600	1,291
Miscellaneous waters	1,107,810	33,422	Miscellaneous waters	7,400	111
Total	2,036,682	62,505	Total	623,290	27,518
Trammel nets:			Miscellaneous lines:		
Arkansas River	2,000	90	St. Francis River	14,900	746
White River	59,125	3,044	Mississippi River	6,800	310
St. Francis River	115,745	3,215	Big Lake	30,800	1,540
Ouachita River	9,780	592	Miscellaneous waters	6,000	300
Cache River	4,800	251	Total	58,500	2,895
Mississippi River	2,400	57	Spears:		
Big Lake	99,650	3,164	St. Francis River	25,000	3,275
Miscellaneous waters	14,986	430	Big Lake	16,000	850
Total	309,086	10,843	Total	41,000	4,125
Point nets:			Guns:		
Arkansas River	29,000	700	St. Francis River	35,920	6,547
White River	1,250	70	Big Lake	13,200	1,540
St. Francis River	235,500	3,670	Total	49,120	7,087
Big Lake	93,100	2,596	Otter traps:		
Total	358,850	7,036	St. Francis River	40	100
Fyke nets:			Big Lake	100	250
Arkansas River	140,900	4,751	Total	140	350
White River	357,400	16,977	Shrimp traps:		
St. Francis River	468,920	10,334	Mississippi River	7,200	600
Ouachita River	7,430	476	Total by waters:		
Cache River	13,750	885	Arkansas River	450,950	13,247
Mississippi River	144,746	3,368	White River	978,350	47,616
Horseshoe and Porter lakes	16,825	498	St. Francis River	974,000	29,085
Big Lake	189,260	5,307	Ouachita River	52,530	3,137
Miscellaneous waters	65,382	2,068	Cache River	35,275	2,114
Total	1,404,613	44,664	Mississippi River	434,588	11,750
Drag nets:			Horseshoe and Porter lakes	97,920	3,078
Ouachita River	8,210	448	Big Lake	671,400	21,653
			Miscellaneous waters	1,201,578	36,831
			Grand total	4,896,591	168,071

MISSOURI.

The fisheries of Missouri are conducted chiefly in the Mississippi and Missouri rivers, although considerable fishing is carried on in the St. Francis River, Little River, Big Lake, and various other waters. The number of persons employed, including fishermen and shoresmen, was 1,531, the amount of capital invested was \$645,671, and the products aggregated 7,551,442 pounds, valued at \$211,301. More than half of this quantity was obtained from the Mississippi River. The forms of fishing apparatus of greatest prominence, and the quantity and value of products obtained with them, were: Seines, taking 1,655,514 pounds, \$52,302; fyke nets, 1,530,103 pounds, \$49,189; trammel nets, 843,686 pounds, \$25,420; and set and drift lines, 888,977 pounds, \$35,831.

The mussel fishery yielded 2,084,000 pounds of shells, valued at \$9,217, the catch being secured with crowfoot lines and rakes. The mussels were landed principally at Hannibal, Canton, and La Grange. The shipments of shells from Hannibal amounted to 30 carloads of

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50,000 pounds each, of which 28½ carloads were of the variety termed "niggerheads," and the remainder were "sand shells." The niggerheads sold for 40 cents and the sand shells for 75 cents per 100 pounds.

Some of the more important species of fish obtained were: Buffalo-fish, 1,862,226 pounds, \$44,743; cat-fish, 875,050 pounds, \$40,755; suckers, 495,307 pounds, \$14,181; crappie, 358,913 pounds, \$18,310; and black bass, 394,336 pounds, \$20,362. Frogs were also taken in large quantities, the catch being 237,600 pounds, valued \$29,313.

Table showing, by waters, the number of persons employed in the fisheries of Missouri in 1899.

Waters.	Fisheries in which employed.											Total exclusive of duplication.	
	Seine.	Trammel net.	Fyke net.	Set line.	Drift and hand line and grapnel.	Spear.	Gun.	Otter trap.	Found net.	Crowfoot lines and rakes.	Baskets.		Shoresmen.
Mississippi River	161	207	162	36	121	2	359	814					
Missouri River	111	21	145	161	47	334							
St. Francis River	3	14	20	94	42	88	58	95	97				
Little River and Big Lake	38	42	24	60	66	106	56	46	8	100			
Swamps and lakes (sunken lands)	69	39	10	59	4	80	80	186					
Total	382	116	606	476	148	274	194	81	8	121	2	406	1,531

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Missouri in 1899.

Waters.	Fishing boats.		House boats.		Seines.			Trammel nets.		
	No.	Value.	No.	Value.	No.	Length (yards).	Value.	No.	Length (yards).	Value.
Mississippi River	303	\$4,917	62	\$3,150	61	8,370	\$3,360	90	7,408	\$1,634
Missouri River	*264	4,018	.....	.....	48	4,505	1,950	11	530	330
St. Francis River	99	1,790	4	200	1	150	70	7	650	240
Little River and Big Lake	97	2,000	3	180	17	2,400	1,200	21	1,800	735
Swamps and lakes (sunken lands)	169	1,998	.....	.....	27	3,420	1,430	21	1,975	569
Total	932	14,723	69	3,530	154	18,845	8,010	150	12,363	3,508

Waters.	Fyke nets.		Pound nets.		Set lines.		Drift lines, hand lines, grapnels.		Spears.		Guns.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Mississippi River	2,636	\$9,907	.....	.....	774	\$688	690	\$68	.....	.....	.....	.....
Missouri River	541	2,701	.....	.....	286	280	.....	.....	.....	.....	.....	.....
St. Francis River	435	2,175	.....	.....	136	68	42	47	88	\$120	58	\$290
Little River and Big Lake	360	1,800	10	\$1,000	236	120	66	77	106	178	56	280
Swamps and lakes (sunken lands)	55	267	.....	.....	120	146	4	5	80	140	80	400
Total	4,027	16,850	10	1,000	1,552	1,302	802	197	274	438	194	970

Waters.	Otter traps.		Crowfoot lines and rakes.		Baskets.		Shore and accessory property.	Cash capital.	Total investment.
	No.	Value.	No.	Value.	No.	Value.			
Mississippi River .....	.....	.....	234	\$555	85	\$127	\$261,639	\$222,650	\$508,695
Missouri River .....	.....	.....	.....	.....	.....	.....	60,780	45,800	115,859
St. Francis River	2,076	\$519	.....	.....	.....	.....	705	.....	6,224
Little River and Big Lake	552	138	.....	.....	.....	.....	805	.....	8,513
Swamps and lakes (sunken lands) .....	.....	.....	.....	.....	.....	.....	1,425	.....	6,380
Total	2,628	667	234	555	85	127	325,354	268,450	645,671

* Includes one gasoline launch valued at \$650.

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 709

Table showing, by waters and apparatus of capture, the yield of the fisheries of Missouri in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	1,492	\$105	197,358	\$6,019	229,605	\$6,282	51,403	\$2,900
Missouri River.....	650	65	66,870	2,370	.....	.....	47,880	2,921
St. Francis River.....	1,000	50	5,000	75	100	2	780	39
Little River and Big Lake.	58,000	2,900	202,000	3,030	1,820	28	10,400	520
Swamps and lakes (sunken lands).....	8,710	728	60,960	1,913	19,560	291	13,411	724
Total.....	69,852	3,848	532,188	13,407	251,075	5,603	123,874	7,104
Trammel nets:								
Mississippi River.....	100	10	165,670	3,970	84,500	1,455	45,817	2,355
Missouri River.....	.....	.....	13,380	538	.....	.....	610	37
St. Francis River.....	16,000	800	28,600	432	300	5	2,920	144
Little River and Big Lake.	42,000	2,100	97,000	1,455	1,560	54	7,400	370
Swamps and lakes (sunken lands).....	4,370	409	34,560	1,138	8,200	104	4,745	262
Total.....	62,470	3,319	339,210	7,533	94,560	1,678	61,492	3,168
Fyke nets:								
Mississippi River.....	2,654	201	318,054	8,512	100,700	2,050	104,606	4,861
Missouri River.....	560	54	121,195	4,862	.....	.....	64,410	3,727
St. Francis River.....	36,800	1,840	104,000	1,570	600	9	10,100	485
Little River and Big Lake.	38,200	1,910	133,000	1,995	2,050	31	12,000	600
Swamps and lakes (sunken lands).....	1,100	55	17,200	424	300	9	3,390	225
Total.....	79,314	4,060	698,449	17,963	103,650	2,099	194,506	9,898
Pound net:								
Little River and Big Lake.	21,000	1,050	104,000	1,560	800	12	18,000	900
Set lines:								
Mississippi River.....	.....	.....	82,304	2,174	3,175	55	107,613	4,994
Missouri River.....	.....	.....	33,775	1,362	.....	.....	59,445	3,611
St. Francis River.....	.....	.....	.....	.....	.....	.....	76,600	2,129
Little River and Big Lake.	.....	.....	.....	.....	.....	.....	111,000	3,116
Swamps and lakes (sunken lands).....	.....	.....	6,300	279	.....	.....	31,380	1,275
Total.....	.....	.....	122,379	3,815	3,175	55	386,038	15,124
Hand and drift lines:								
Mississippi River.....	.....	.....	.....	.....	.....	.....	35,040	1,746
St. Francis River.....	51,200	2,560	.....	.....	.....	.....	8,700	455
Little River and Big Lake.	103,500	5,175	.....	.....	.....	.....	16,600	830
Swamps and lakes (sunken lands).....	7,000	350	.....	.....	.....	.....	2,100	105
Total.....	161,700	8,085	.....	.....	.....	.....	62,440	3,116
Spears:								
St. Francis River.....	.....	.....	23,000	345	.....	.....	.....	.....
Little River and Big Lake.	.....	.....	48,000	720	.....	.....	.....	.....
Total.....	.....	.....	71,000	1,065	.....	.....	.....	.....
Grapnel:								
St. Francis River.....	.....	.....	.....	.....	.....	.....	12,200	610
Little River and Big Lake.	.....	.....	.....	.....	.....	.....	14,000	700
Total.....	.....	.....	.....	.....	.....	.....	26,200	1,310
Baskets:								
Mississippi River.....	.....	.....	.....	.....	.....	.....	3,000	135
Total by waters:								
Mississippi River.....	4,246	316	763,386	20,675	417,980	8,842	347,479	16,991
Missouri River.....	1,210	119	235,220	9,132	.....	.....	171,845	10,296
St. Francis River.....	105,000	5,250	160,600	2,422	1,000	16	111,300	3,842
Little River and Big Lake.	282,700	13,135	584,000	8,760	6,220	125	189,400	7,035
Swamps and lakes (sunken lands).....	21,180	1,542	119,020	3,754	28,050	464	55,026	2,591
Grand total.....	394,336	20,362	1,862,226	44,745	453,260	9,447	875,050	40,755

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Table showing the yield of the fisheries of Missouri in 1899—Continued.

Apparatus and waters.	Crappie.		Drum, fresh-water.		Eels.		Hickory shad.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	2,489	\$152	25,350	\$771				
Missouri River.....	3,425	237	17,900	721	115	\$10		
St. Francis River.....	2,000	100	25	1				
Little River and Big Lake.....	78,000	3,900	2,100	32				
Swamps and lakes (sunken lands).....	13,170	707	4,000	79				
Total.....	99,084	5,096	49,375	1,604	115	10		
Trammel nets:								
Mississippi River.....	1,000	70	17,562	489				
Missouri River.....	477	35	525	21				
St. Francis River.....	19,400	970	200	30				
Little River and Big Lake.....	60,300	3,015	500	8				
Swamps and lakes (sunken lands).....	7,165	373	3,280	80				
Total.....	88,342	4,463	22,067	628				
Fyke nets:								
Mississippi River.....	5,602	318	56,006	1,361	340	15	450	\$7
Missouri River.....	3,798	283	33,245	1,359				
St. Francis River.....	50,700	2,535	760	11	300	7		
Little River and Big Lake.....	56,000	2,800	825	13				
Swamps and lakes (sunken lands).....	900	46	180	2				
Total.....	117,000	6,011	91,016	2,746	640	22	450	7
Set lines:								
Mississippi River.....			15,337	398	2,916	109		
Missouri River.....	787	55	18,370	717	740	71		
St. Francis River.....					500	10		
Little River and Big Lake.....					2,300	35		
Total.....	787	55	33,707	1,145	6,456	225		
Hand and drift lines:								
St. Francis River.....	6,900	345						
Little River and Big Lake.....	14,000	700						
Swamps and lakes (sunken lands).....	1,800	90						
Total.....	22,700	1,135						
Pound net:								
Little River and Big Lake.....	31,000	1,550	1,200	18	600	12		
Total by waters:								
Mississippi River.....	9,091	570	114,235	3,019	3,256	124	450	7
Missouri River.....	8,487	610	70,040	2,848	855	81		
St. Francis River.....	79,000	3,950	985	42	800	17		
Little River and Big Lake.....	239,300	11,965	4,625	71	2,900	47		
Swamps and lakes (sunken lands).....	23,035	1,215	7,460	161				
Grand total.....	358,913	18,310	197,365	6,141	7,811	269	450	7

Apparatus and waters.	Mooneye or tooth herring.		Paddle-fish.		Pike.		Pike perch (wall-eyed).	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Mississippi River.....	3,595	\$120	71,100	\$1,986			2,653	\$179
Missouri River.....			49,990	1,828			310	21
St. Francis River.....					200	\$6	80	4
Little River and Big Lake.....			3,900	78	5,900	177	1,017	51
Swamps and lakes (sunken lands).....			18,480	685	750	67	80	4
Total.....	3,595	120	143,470	4,577	6,850	250	4,140	259
Trammel nets:								
Mississippi River.....							60	6
Missouri River.....			2,470	91				
St. Francis River.....					1,100	83	160	8
Little River and Big Lake.....					3,900	117	475	24
Swamps and lakes (sunken lands).....			1,200	60	400	82		
Total.....			3,670	151	5,400	182	695	38

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 711

Table showing the yield of the fisheries of Missouri in 1899—Continued.

Apparatus and waters.	Mooneye or tooth herring.		Paddle-fish.		Pike.		Pike perch (wall-eyed).	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Fyke nets:								
Mississippi River.....	600	\$15	35,476	\$882			1,778	\$118
Missouri River.....			5,165	189	1,900	\$114	9,565	586
St. Francis River.....			700	14	1,050	32	375	19
Little River and Big Lake Swamps and lakes (sunken lands).....			1,200	24	1,000	30	450	23
Total.....	600	15	42,541	1,109	3,950	176	12,283	752
Set lines:								
Missouri River.....			250	8			215	13
Pound net:								
Little River and Big Lake.....			1,000	20	3,100	93	500	25
Total by waters:								
Mississippi River.....	4,195	135	106,576	2,868			4,491	303
Missouri River.....			57,875	2,136	1,900	114	10,090	620
St. Francis River.....			700	14	2,350	71	615	31
Little River and Big Lake Swamps and lakes (sunken lands).....			6,100	122	13,900	417	2,442	123
Grand total.....	4,195	135	190,931	5,865	19,300	701	17,893	1,087

Apparatus and waters.	Rock bass.		Sturgeon, lake.		Sturgeon, shovel-nose.		Suckers.		Sun-fish.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Mississippi River.....	1,074	\$91	700	\$30	700	\$12	16,545	\$511	1,078	\$43
Missouri River.....			1,550	56	17,725	646	35,785	1,390		
St. Francis River.....	65	3					1,400	21	1,600	24
Little River and Big Lake Swamps and lakes (sunken lands).....	4,430	222					53,650	808	29,830	437
Total.....	1,070	64					166,950	5,118	3,450	142
Total.....	6,639	380	2,250	86	18,425	658	274,530	7,848	35,958	646
Trammel nets:										
Mississippi River.....	50	3	400	12	37,700	665	12,500	282		
Missouri River.....							1,280	49		
St. Francis River.....	1,300	50							7,100	112
Little River and Big Lake Swamps and lakes (sunken lands).....	2,800	140							21,000	315
Total.....	4,150	193	400	12	37,700	665	95,290	2,954	28,100	427
Fyke nets:										
Mississippi River.....	2,436	164	6,169	199	13,550	274	32,607	901	762	39
Missouri River.....					4,320	167	36,495	1,401		
St. Francis River.....	660	25					10,600	161	22,300	342
Little River and Big Lake Swamps and lakes (sunken lands).....	940	47					11,580	174	27,000	406
Total.....	4,136	241	6,169	199	17,870	441	100,992	2,899	51,462	815
Set lines:										
Mississippi River.....					23,860	458	6,000	90		
Missouri River.....			400	12	52,675	2,289	3,495	142		
Swamps and lakes (sunken lands).....							2,500	60		
Total.....			400	12	76,535	2,747	11,995	292		
Pound nets:										
Little River and Big Lake.....	900	45					12,500	188	16,000	240
Total by waters:										
Mississippi River.....	3,560	258	7,269	241	75,810	1,409	67,652	1,784	1,840	82
Missouri River.....			1,950	68	74,720	3,102	77,055	2,982		
St. Francis River.....	2,025	78					12,000	182	31,000	478
Little River and Big Lake Swamps and lakes (sunken lands).....	9,070	454					77,930	1,170	93,830	1,398
Grand total.....	15,825	859	9,219	309	150,530	4,511	495,307	14,181	131,520	2,128

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Table showing the yield of the fisheries of Missouri in 1899—Continued.

Apparatus and waters.	White bass.		Turtles.		Frogs.		Mussel shells.		Otter skins.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Mississippi River.....	160	\$5	24,834	\$414						
Little River and Big Lake.....			9,600	288						
Total.....	160	5	34,434	702						
Trammel nets:										
Mississippi River.....	150	9								
Fyke nets:										
Mississippi River.....	450	16	7,185	238						
Missouri River.....	440	22								
St. Francis River.....			1,300	39						
Little River and Big Lake.....			700	21						
Total.....	890	38	9,185	298						
Set lines:										
Mississippi River.....			200	4						
Spears:										
St. Francis River.....					27,800	\$3,618				
Little River and Big Lake.....					35,604	4,421				
Swamps and lakes (sunken lands).....					28,200	3,290				
Total.....					91,604	11,329				
Guns:										
St. Francis River.....					44,500	5,718				
Little River and Big Lake.....					55,500	6,900				
Swamps and lakes (sunken lands).....					45,996	5,366				
Total.....					145,996	17,984				
Traps:										
St. Francis River.....									394	\$985
Little River and Big Lake.....									368	920
Total.....									762	1,905
Crowfoot lines and rakes:										
Mississippi River.....							2,084,000	\$9,217		
Total by waters:										
Mississippi River.....	760	30	32,219	656			2,084,000	\$9,217		
Missouri River.....	440	22								
St. Francis River.....			1,300	39	72,300	9,336			394	985
Little River and Big Lake.....			10,300	309	91,104	11,821			368	920
Swamps and lakes (sunken lands).....					74,196	8,656				
Grand total.....	1,200	52	48,819	1,004	237,600	29,313	2,084,000	\$9,217	762	1,905

* Value of mussel shells includes 2 pearls valued at \$135.

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES.

Summary, by apparatus and waters, of the fisheries of Missouri in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seines:			Hand and drift lines—cont'd.		
Mississippi River	630,186	\$18,620	Little River and Big Lake...	134,100	\$6,705
Missouri River	241,700	10,265	Swamps and lakes (sunken lands)	10,900	545
St. Francis River	12,250	325	Total	245,840	12,386
Little River and Big Lake	460,847	12,471			
Swamps and lakes (sunken lands)	310,581	10,522	Spears:		
Total	1,655,614	52,208	St. Francis River	50,800	3,963
Trammel nets:			Little River and Big Lake...	83,604	6,141
Mississippi River	365,509	9,326	Swamps and lakes (sunken lands)	28,200	3,290
Missouri River	18,742	771	Total	162,604	12,394
St. Francis River	77,080	2,584			
Little River and Big Lake	296,925	7,598	Guns:		
Swamps and lakes (sunken lands)	145,430	5,141	St. Francis River	44,500	5,718
Total	843,686	25,420	Little River and Big Lake...	55,500	6,900
Fyke nets:			Swamps and lakes (sunken lands)	45,966	5,366
Mississippi River	689,425	20,201	Total	145,966	17,984
Missouri River	281,093	12,764			
St. Francis River	240,245	7,089	Traps:		
Little River and Big Lake	284,945	8,074	St. Francis River	394	985
Swamps and lakes (sunken lands)	34,395	1,061	Little River and Big Lake...	368	920
Total	1,530,103	49,189	Total	762	1,905
Pound net:			Grapnel:		
Little River and Big Lake...	210,600	5,713	St. Francis River	12,200	610
			Little River and Big Lake...	14,000	700
			Total	26,200	1,310
Set lines:					
Mississippi River	241,405	8,282	Baskets:		
Missouri River	170,152	8,310	Mississippi River	3,000	185
St. Francis River	77,100	2,139	Crowfoot lines and rakes:		
Little River and Big Lake	113,300	3,150	Mississippi River	2,084,000	9,217
Swamps and lakes (sunken lands)	40,180	1,614			
Total	642,137	23,495	Total by waters:		
Hand and drift lines:			Mississippi River	4,048,515	67,527
Mississippi River	35,040	1,746	Missouri River	711,687	32,110
St. Francis River	60,800	3,340	St. Francis River	581,369	26,753
			Little River and Big Lake...	1,594,189	57,372
			Swamps and lakes (sunken lands)	615,682	27,539
			Grand total	7,551,442	211,301

Table showing the extent of the wholesale fishery trade of Missouri in 1899.

Items.	No.	Value.
St. Louis:		
Establishments	8	\$242,200
Cash capital		208,000
Wages paid		126,766
Persons engaged	219	
Products sold:		
Fresh and frozen fish	5,384,858	376,800
Salted and pickled fish	7,554,000	655,400
Smoked fish	625,755	47,020
Canned products		127,000
Lobsters	70,087	15,418
Oysters opened	182,996	186,195
Oysters in shell	9,942	95,800
Clams	250	1,000
Turtles	35,800	3,580
Terrapin	1,200	150
Frogs	12,000	2,000
Total value of products		1,450,363
Kansas City:		
Establishments	7	58,500
Cash capital		45,800
Persons engaged	47	
Products sold:		
Fresh fish	1,678,716	137,073
Oysters	216,544	299,485
Lobsters	196	39
Total value of products		436,597

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In 1899 the fisheries of Iowa gave employment to 2,637 persons, of whom 2,511, including 1,476 shoresmen, are credited to the Mississippi River, and the remainder to its tributaries. The amount of capital invested in boats, fishing apparatus, and shore and accessory property was \$360,169. The principal forms of apparatus employed in the capture of food-fish were seines and fyke nets. Set lines, hand lines, pound nets, and trammel nets were fished less extensively. The total yield of the fisheries of the State was 23,901,922 pounds, valued at \$207,801. The most important product consisted of mussel shells used in the pearl-button industry, the catch being 20,354,000 pounds, having a value, including \$3,617 worth of pearls and \$1,617 worth of baroque pearls, of \$97,449. The food-fishes taken in greatest quantity were German carp, 1,039,375 pounds, worth \$22,518; cat-fish, 750,678 pounds, worth \$37,845; and buffalo-fish, 937,076 pounds, worth \$26,559. Black bass, crappie, sturgeon, pike perch (wall-eyed), sun-fish, paddle-fish, fresh-water drum, and suckers were also plentiful. Carp have increased to a much greater extent than any other edible species, the catch in 1899 being five times as large as in 1894. The entire catch of mussel shells and the greater part of the food-fish were obtained from the Mississippi River.

The extent of the economic fisheries of Iowa is not in proportion to the length of the water-courses, principally because of restrictive laws imposed on the operations of commercial fishermen, an interdiction prevailing against the use of any form of fishing apparatus other than hook and line except in the Mississippi and Missouri rivers.

While many of the persons engaged in fishing in Iowa depend entirely on that industry for a living, a majority of them have other vocations, especially during the winter. Many farmers along the banks of the Mississippi derive a larger income from their fishing operations than from their farms. During the season many of the fishermen inhabit temporary quarters erected along the river banks or live in house boats that may be moved from place to place. Very few of the men engaged in the fisheries are on wages, nearly all of them being independent and controlling their apparatus.

By far the most valuable fishery prosecuted in the State is the gathering of mussel shells used in the manufacture of pearl buttons. These shells are taken exclusively in the Mississippi River. In 1894 only about \$2,000 worth of shells were taken, while in 1899 the value of the catch had increased to nearly \$100,000. In fact the increase in value of the fisheries of this State is due entirely to the development of this industry. Various kinds of apparatus are employed in the mussel fishery, but crowfoot lines are more commonly used than any other.

The mussel shells are all sold to factories engaged in the manufacture either of pearl-button blanks or the finished buttons. In most

cases, however, only the blanks are made, these being shipped East to be finished. The manufacture of buttons from these shells was first begun in Muscatine, and that city is now the center of this industry, 28 button factories being located there in 1899. The mussel beds in the vicinity of Muscatine have become very much thinned out by continual fishing during the past few years, and the scarcity there has necessitated bringing the shells from a greater distance every year. This fact is no doubt responsible for the erection of many factories along the Mississippi River above and below Muscatine. In 1899 there were factories in 16 different towns along the latter river in this State.

With the exception of the taking of mussel shells for use in pearl-button manufacture, no branch of the fisheries of Iowa is of very recent development. The use of the various forms of apparatus has gradually increased from year to year with the increase of population and the improvement of shipping facilities. During the last four or five years the fisheries have been fully as prosperous as at any previous time. The total yield has never been greater, and more fishermen are now given employment than ever before. On the other hand, black bass, crappie, and some other game fish appear to be decreasing in abundance, as determined by the quantity caught by the fishermen.

The seines employed range in length from 50 to 250 yards each, and in depth from 10 to 20 feet, the size of the mesh being from 1½ to 2½ inches. Some have parallel and others tapering brails. From two to four or more persons are required to operate each seine. Where several men are required at each fishery, they share equally, the owner of the rig receiving an additional share. The season for fishing begins as soon as the ice is out of the rivers, generally about March 15, and continues until about the middle of November, periods of low water being most favorable. In some localities, especially in the Mississippi River north of Dubuque, seines are occasionally used under the ice during the winter, the catch at such times consisting almost exclusively of buffalo and fresh-water drum.

Sometimes very large hauls are made by the seines. The best haul in Iowa during the last two years was made in January, 1898, near North McGregor, and consisted of 28,000 pounds, of which 600 pounds were pike perch (wall-eyed), 9,000 pounds buffalo-fish, and 18,400 pounds fresh-water drum. In March, 1884, a very large haul was made in Minnesota Reach, near the line of Iowa and Minnesota, consisting of 240,000 pounds, almost all of which were fresh-water drum.

The fyke nets, frequently termed "bait nets" or "hoop nets" by the fishermen, have 5 to 7 hoops, usually 6, and are without leaders or wings. They are baited principally with stale cheese.

Some of the fishermen, especially about Madison, use fyke nets constructed of soft copper wire netting instead of twine. In addition to being far more durable, they are said to yield larger returns of fish.

The set-line fishery begins usually about the first of June and continues until the end of September; some of the fishermen, however, use this form of apparatus throughout the season of open water. The lines are generally baited late in the afternoon and are raised the next morning. The bait used consists of suckers, minnows, dog-fish, crawfish, dough balls, cheese, mussels, etc. The fish used for bait are caught by means of seines made of mosquito netting. These seines are about 5 yards long and cost about one dollar each. Dog-fish make the most desirable bait. These fish are obtained by seines from the shallow puddles during June and July, and are placed in live-cars, from which a supply is drawn as needed; they average about 2 ounces in weight, and each fisherman usually collects from 1,000 to 1,800 in number, which last from one to two months.

The Mississippi River fisheries are most extensive in Allamakee, Muscatine, Louisa, Des Moines, and Lee counties, but are prosecuted to some extent all along the Iowa border of this stream. Allamakee County ranks first in the quantity and value of fish produced, the annual yield approximating 700,000 pounds. In Clayton County the fishing centers are North and South McGregor, Clayton, and Guttenburg. Seines, fyke nets, and set lines are the forms of apparatus employed in these two counties, and the catch consists largely of fresh-water drum, cat-fish, buffalo-fish, carp, and suckers, which are marketed at Dubuque and other Iowa and Illinois points and even as far west as Omaha and Kansas City. Sometimes very large hauls of drum are made by the seines used in these counties.

Dubuque and Specht Ferry are the most important fishing-points in Dubuque County, and at the former place a large quantity of fish obtained from Chicago and localities up the Mississippi River are marketed. Trap nets, known locally as "pond nets," were introduced here in 1892, the idea having been obtained from Wisconsin.

Bellevue, Green Island, and Sabula are the fishing centers of Jackson County, the seine being the most important form of apparatus used. Two dealers at Bellevue handle about \$10,000 worth of fish annually.

Along the Mississippi between Sabula and Muscatine, in Clinton and Scott counties, the fisheries are of small extent, except at Clinton and Davenport; but at neither one of these places is the local product equal to the market demand.

From Muscatine to the mouth of Skunk River the Mississippi is much wider, with numerous bayous, and the current much more sluggish. As a result the fisheries of this section, including the counties of Muscatine, Louisa, and Des Moines, are the most extensive in Iowa, the combined annual product in the three counties approximating 1,500,000 pounds. The fisheries are located at various points along the river, but the greater part of the catch is marketed at Muscatine and Burlington. More carp are obtained by the fishermen living in these three counties than in all the rest of the State.

In Lee County, bordering the Mississippi River, a number of fishermen use seines, trammel nets, fyke nets, and set lines at Fort Madison and along the Keokuk Canal from Montrose to Keokuk, the annual product approximating 500,000 pounds. Buffalo-fish, carp, cat-fish, fresh-water drum, and suckers are the most abundant species.

At various places along Skunk River, from its mouth to a distance of about 50 miles, economic fisheries of more or less importance existed in 1899.

On Des Moines River below Des Moines there are no commercial fisheries except at Bonaparte and Ottumwa. For several miles below Bonaparte there is some fishing with fyke nets and set lines. The catch, amounting to about 30,000 pounds annually, consists of cat-fish, buffalo-fish, suckers, carp, and fresh-water drum.

At Ottumwa, where there are a number of commercial fishermen, many persons on Sundays and holidays engage in spearing fish, the product amounting probably to 25,000 pounds annually, consisting of quillback and buffalo-fish.

Large quantities of fish are obtained from the Des Moines and Coon rivers by anglers at the city of Des Moines, as well as various other points on those streams.

The Big Sioux River forms the boundary between the States of Iowa and South Dakota. It is deep and narrow and in its lower portion is well supplied with numerous varieties of fish. Formerly considerable fishing was done all along the Big Sioux River below Sioux Falls, but at present the commercial fisheries are confined to that portion of the river below Chatsworth, the total yield amounting to about 80,000 pounds.

Compared with the Mississippi River, that portion of the Missouri River bordering the State of Iowa is not well supplied with fish. Of the seven counties which border this stream only four—viz, Woodbury, Pottawattamie, Mills, and Fremont—support commercial fisheries.

In Woodbury County the fishermen reside at Sioux City and engage principally in the fyke-net fishery, with a limited amount of set-line fishing. The catch consists mostly of cat-fish, with smaller quantities of buffalo-fish, fresh-water drum, etc.

The fishermen of Pottawattamie County fish from the mouth of Little Sioux River to the mouth of Platte River, a distance of 70 miles, the catch being marketed at Council Bluffs, Omaha, and in the interior of Iowa. Seines are the principal apparatus employed. The season usually begins about the 1st of June and continues until the river is closed by ice. The product amounts to about 80,000 pounds annually.

About 2 miles southwest of Council Bluffs is Lake Manawa, which is approximately 2 miles in length and 1 mile in width. This lake yields a quantity of large-mouth black bass, pickerel, crappie, buffalo-fish, and shovel-nose sturgeon, not only to the sportsmen, but to poachers who operate with seines. The black bass weigh from one-half to 4

pounds, the pickerel from 1½ to 12 pounds, and the crappie about one-fourth of a pound.

In Dickinson County Lake Okoboji and Spirit Lake, covering about 12 square miles each, are well stocked with fish, the principal varieties being pike perch (wall-eyed), yellow or ringed perch, grass pike, both species of black bass, and white bass. Large quantities of these are taken during both summer and winter by the anglers. During the winter hand lines are fished through holes cut in the ice. This fishery was quite extensive previous to 1895, but it is now of little consequence, due to the strong local efforts which have been made to prohibit it on account of the alleged destruction of the fishery resources of the lakes to the detriment of their attractiveness during the summer.

Table showing, by waters, the number of persons employed in the fisheries of Iowa in 1899.

Waters.	Fisheries in which employed.							Shoresmen.	Total, exclusive of duplication.
	Hand line.	Set line.	Seine.	Fyke net.	Pound net.	Trammel net.	Crow-foot line, etc.		
Mississippi River	4	263	312	217	9	119	674	1,476	2,511
Skunk River		4		3		2			6
Des Moines River		25		16					33
Big Sioux River		18	14			15			28
Missouri River		29	14	22		7			50
Iowa River			4						4
Nishnabotna River			4			3			5
Total	4	339	348	258	9	146	674	1,476	2,637

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Iowa in 1899.

Waters and apparatus.	No.	Length (yards).	Value.	Waters and apparatus.	No.	Length (yards).	Value.
Mississippi River:				Des Moines River:			
Boats	1,058		\$15,860	Boats	36		\$237
Hand lines			7	Set lines	61	6,150	60
Set lines	829	89,025	827	Fyke nets	50		200
Seines	129	19,924	7,470	Shore and accessory property			70
Fyke nets	3,854		15,693	Missouri River:			
Pound nets	40		655	Boats	52		540
Trammel nets	63	6,537	1,540	Set lines	38	3,870	65
Crowfoot lines, etc			4,759	Seines	6	695	270
Shore and accessory property			188,197	Fyke nets	96		512
Cash capital			102,250	Trammel nets	4	255	110
Skunk River:				Shore and accessory property			645
Boats	6		75	Iowa River:			
Set lines	9	870	9	Boats	2		40
Fyke nets	56		242	Seines	2	180	45
Trammel nets	2	110	34	Shore and accessory property			25
Shore and accessory property			25	Nishnabotna River:			
Big Sioux River:				Boats	4		46
Boats	30		268	Seines	2	95	50
Set lines	85	1,960	38	Trammel nets	2	90	45
Seines	6	630	295	Shore and accessory property			40
Trammel nets	11	765	185	Total investment			341,669
Shore and accessory property			240				

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 719

Table showing, by waters and apparatus of capture, the yield of the fisheries of Iowa in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Hand lines:								
Mississippi River.....	2,500	\$140						
Set lines:								
Mississippi River.....			41,528	\$1,144	32,335	\$973	236,872	\$11,436
Skunk River.....			340	10			2,583	155
Des Moines River.....			6,225	225			23,230	1,552
Big Sioux River.....			850	34	250	10	9,780	670
Missouri River.....			7,100	272	480	20	10,085	746
Total.....			56,043	1,685	33,065	1,003	282,550	14,559
Seines:								
Mississippi River.....	10,097	714	357,498	8,684	629,940	13,053	63,934	3,158
Big Sioux River.....			19,130	795	12,965	460	3,200	24
Missouri River.....			22,525	756	15,370	482	8,280	242
Iowa River.....	425	28	2,615	85	5,830	120	500	30
Nishnabotna River.....	400	40	2,800	85	800	28	1,000	70
Total.....	10,922	782	404,568	10,405	664,905	14,143	69,014	3,524
Fyke nets:								
Mississippi River.....	3,955	317	312,890	9,364	170,905	3,706	354,800	16,818
Skunk River.....			11,780	365	2,000	40	1,570	94
Des Moines River.....	320	30	14,880	463	1,576	49	2,800	180
Missouri River.....			6,080	286	1,000	40	24,730	1,839
Total.....	4,275	347	345,630	10,478	175,480	3,835	383,900	18,931
Pound nets:								
Mississippi River.....	300	17	13,040	288	12,565	185	2,436	127
Trammel nets:								
Mississippi River.....	5,310	347	99,335	3,010	137,560	2,770	10,893	567
Skunk River.....	100	8	600	18	1,750	35	165	10
Big Sioux River.....			8,840	342	7,645	295	860	65
Missouri River.....			7,820	295	6,155	234	860	62
Nishnabotna River.....	1,050	105	1,200	38	260	18		
Total.....	6,460	460	117,795	3,703	153,360	3,352	12,778	704
Total by waters:								
Mississippi River.....	22,162	1,535	824,291	22,490	983,305	20,687	668,935	32,106
Skunk River.....	100	8	12,720	393	3,750	75	4,318	259
Des Moines River.....	320	30	21,105	688	1,575	49	26,030	1,732
Big Sioux River.....			28,820	1,171	20,860	765	10,940	759
Missouri River.....			43,525	1,609	23,005	776	38,955	2,889
Iowa River.....	425	28	2,615	85	5,830	120	500	30
Nishnabotna River.....	1,450	145	4,000	123	1,050	46	1,000	70
Grand total.....	24,467	1,746	937,076	26,559	1,039,375	22,518	750,678	37,845

Apparatus and waters.	Pike and pick- erel.		Pike perch (wall- eyed).		Pike perch (sauger).		Rock bass.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Hand lines:								
Mississippi River.....			375	\$18				
Set lines:								
Mississippi River.....			7,742	467				
Missouri River.....	1,800	\$120						
Seines:								
Mississippi River.....	15,050	585	11,000	588	4,385	\$180	1,195	\$16
Big Sioux River.....	300	21						
Missouri River.....	350	28						
Nishnabotna River.....	500	40						
Total.....	16,200	674	11,000	588	4,385	180	1,195	16
Fyke nets:								
Mississippi River.....	2,077	111	1,175	50	1,305	54		
Pound nets:								
Mississippi River.....	750	30	245	12	125	5	185	3
Trammel nets:								
Mississippi River.....	7,165	274	3,600	156	2,035	71	925	14
Big Sioux River.....	1,080	74						
Missouri River.....	750	52						
Nishnabotna River.....	500	35						
Total.....	9,495	485	3,600	156	2,035	71	925	14
Total by waters:								
Mississippi River.....	25,042	1,000	24,137	1,291	7,850	310	2,305	33
Big Sioux River.....	1,380	95						
Missouri River.....	2,900	200						
Nishnabotna River.....	1,000	75						
Grand total.....	30,322	1,370	24,137	1,291	7,850	310	2,305	33

Table showing the yield of the fisheries of Iowa in 1899—Continued.

Apparatus and waters.	Drum, fresh-water.		Eels.		Hickory shad.		Paddle-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Set lines:								
Mississippi River	46,490	\$1,256	7,638	\$600			500	\$15
Skunk River	855	24	110	10				
Des Moines River			555	65				
Big Sioux River	300	12	300	24				
Missouri River	200	8						
Total	47,845	1,300	8,603	689			500	15
Seines:								
Mississippi River	168,520	3,672			180	\$6	18,190	594
Big Sioux River	500	20					10,250	295
Missouri River	1,350	42					3,900	128
Iowa River	1,430	40						
Total	171,800	3,774			180	6	32,340	1,017
Fyke nets:								
Mississippi River	68,255	1,793	2,340	158	600	12	1,950	48
Skunk River	1,250	35						
Des Moines River	800	32						
Missouri River	2,200	86						
Total	72,505	1,946	2,340	158	600	12	1,950	48
Pound nets:								
Mississippi River	3,760	88						
Trammel nets:								
Mississippi River	18,205	486						
Big Sioux River	320	12						
Missouri River	1,200	36					1,600	48
Total	19,725	534					1,600	48
Total by waters:								
Mississippi River	305,230	7,295	9,978	758	780	18	20,640	657
Skunk River	2,105	59	110	10				
Des Moines River	800	32	555	55				
Big Sioux River	1,120	44	300	24			10,250	295
Missouri River	4,950	172					5,500	176
Iowa River	1,430	40						
Grand total	315,635	7,642	10,943	847	780	18	36,390	1,128

Apparatus and waters.	Crappie.		Dog-fish.		Sturgeon, lake.		Sturgeon, shovel-nose.		Suckers.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.
Set lines:										
Mississippi River					11,350	\$323				
Missouri River					640	32				
Total					11,990	355				
Seines:										
Mississippi River	20,500	\$767	5,500	\$33	11,215	339	6,310	\$175	75,860	\$1,402
Big Sioux River									1,600	54
Missouri River					2,860	114			100	4
Iowa River	450	18							700	16
Nishnabotna River	950	67								
Total	21,900	852	5,500	33	14,075	453	6,310	175	78,260	1,476
Fyke nets:										
Mississippi River	10,175	408			6,233	205	700	13	83,748	1,766
Skunk River									870	20
Des Moines River	375	22							6,600	198
Missouri River									450	18
Total	10,550	430			6,233	205	700	13	91,668	2,000
Pound nets:										
Missouri River	625	25			550	24			1,820	37
Trammel nets:										
Mississippi River	8,135	106	650	5	2,720	87			14,848	283
Big Sioux River									2,000	60
Missouri River					1,200	60				
Nishnabotna River	900	63								
Total	4,035	169	650	5	3,920	147			16,848	323
Total by waters:										
Mississippi River	84,435	1,306	6,150	38	32,068	978	7,010	188	176,271	3,468
Skunk River									870	20
Des Moines River	375	22							6,600	198
Big Sioux River									3,600	114
Missouri River					4,700	206			550	20
Iowa River	450	18							700	16
Nishnabotna River	1,850	130								
Grand total	37,110	1,476	6,150	38	36,768	1,184	7,010	188	188,561	3,836

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 721

Table showing the yield of the fisheries of Iowa in 1899—Continued.

Apparatus and waters.	Sun-fish.		White bass.		Yellow perch.		Turtles.		Mussel shells.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.
Set lines:										
Mississippi River.....					1,875	\$32	1,500	\$30		
Seine:										
Mississippi River.....	28,755	\$641	3,820	\$162	3,660	82	13,425	297		
Iowa River.....	540	15								
Total.....	29,295	656	3,820	162	3,660	82	13,425	297		
Fyke nets:										
Mississippi River.....	12,705	316	2,750	120	3,255	109	2,900	59		
Pound nets:										
Mississippi River.....	1,415	39	125	5	125	5				
Trammel nets:										
Mississippi River.....	11,860	272	2,185	90	750	10				
Big Sioux River.....			400	24	300	15				
Total.....	11,860	272	2,585	114	1,050	25				
Crowfoot lines, etc.:										
Mississippi River.....									20,354,000	\$97,449
Total by waters:										
Mississippi River.....	54,735	1,268	8,880	377	9,665	238	17,825	386	20,354,000	97,449
Big Sioux River.....			400	24	300	15				
Iowa River.....	540	15								
Grand total.....	55,275	1,283	9,280	401	9,965	253	17,825	386	20,354,000	*97,449

* Includes \$3,617 worth of pearls and \$1,625 worth of baroque pearls.

Summary, by apparatus and waters, of the fisheries of Iowa in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Seine:			Crowfoot lines, etc.:		
Mississippi River.....	1,449,034	\$35,148	Mississippi River.....	20,354,000	\$97,449
Big Sioux River.....	45,045	1,069	Hand lines:		
Missouri River.....	49,735	1,796	Mississippi River.....	2,875	158
Iowa River.....	12,490	352			
Nishnabotna River.....	6,460	380	Set lines:		
Total.....	1,562,754	39,295	Mississippi River.....	387,830	16,276
Fyke nets:			Skunk River.....	3,888	199
Mississippi River.....	1,042,718	35,427	Des Moines River.....	30,010	1,832
Skunk River.....	17,470	564	Big Sioux River.....	11,480	760
Des Moines River.....	27,350	974	Missouri River.....	20,305	1,198
Missouri River.....	34,460	2,267	Total.....	453,513	20,255
Total.....	1,121,998	39,222	Total by waters:		
Pound nets:			Mississippi River.....	23,595,694	193,876
Mississippi River.....	38,066	890	Skunk River.....	23,973	824
Trammel nets:			Des Moines River.....	57,360	2,806
Mississippi River.....	321,171	8,528	Big Sioux River.....	77,970	3,306
Skunk River.....	2,615	71	Missouri River.....	124,085	6,048
Big Sioux River.....	21,445	887	Iowa River.....	12,490	352
Missouri River.....	19,585	787	Nishnabotna River.....	10,350	589
Nishnabotna River.....	3,900	259	Grand total.....	23,901,922	207,801
Total.....	368,716	10,532			

Table showing the extent of the wholesale fishery trade of Iowa in 1899.

Items	Dubuque.		Bellevue.		Clinton and Davenport.		Muscatine.	
	No.	Value.	No.	Value.	No.	Value.	No.	Value.
Establishments.....	2	\$2,500	2	\$1,500	3	\$7,000	2	\$2,500
Cash capital.....		2,500		1,500		8,500		5,000
Persons engaged.....	7		5		12		8	
Products sold:								
Fresh fish..... pounds..	314,980	16,093	241,684	10,839	543,650	25,262	394,864	17,156
Oysters..... gallons..	3,500	7,150			9,500	12,050	5,000	6,500
Turtles..... pounds..							9,200	115
Value of products.....		23,243		10,839		37,312		23,771

Items.	Burlington and Fort Madison.		Sloux City.		Total.	
	No.	Value.	No.	Value.	No.	Value.
Establishments.....	3	\$9,600	2	\$13,600	14	\$36,700
Cash capital.....		11,500		17,000		46,000
Persons engaged.....	14		17		63	
Products sold:						
Fresh fish..... pounds..	1,137,747	49,735	588,998	52,540	3,221,923	171,625
Oysters..... gallons..	18,500	24,050	35,860	48,761	74,360	98,511
Turtles..... pounds..					9,200	115
Value of products.....		73,785		101,301		270,251

WISCONSIN.

The fisheries of Wisconsin in the Mississippi and its tributary, the St. Croix River, were engaged in by 567 persons, and the amount of capital invested was \$37,825. The products consisted of 976,735 pounds of fish of various species, valued at \$22,029, and 16,260,000 pounds of mussel shells, with a value, including \$4,800 worth of pearls and 3,900 worth of baroque pearls, of \$66,110. The most important food-fishes were buffalo-fish, German carp, cat-fish, and sturgeon.

The greatest change that has taken place in the fisheries of this State in the Mississippi River since the last canvass in 1894 has been the development of the mussel fishery, now the most important fishery prosecuted on the river in Wisconsin. Prairie du Chien was the center of this industry in the State in 1899, about 200 men being employed here at different times of the year in taking mussels. Many valuable pearls are found in the mussels and serve as an extra inducement for the fishermen to engage in the fishery.

Two factories at Prairie du Chien were engaged in manufacturing pearl-button blanks from mussel shells, these blanks being shipped to New York City, where they were made into buttons. The two factories employed 58 men. The buildings, together with the accessory property necessary for carrying on the business, were valued at \$6,360, and the cash capital required was \$12,500. Between the two firms 520 tons of mussel shells were purchased at a cost of \$4,224. From these shells 73,043 gross of button blanks were manufactured, having a value of \$8,895.

There has been a slight decline in the fishing proper, due to the fact

that many of the regular fishermen abandoned fishing to gather muskels. Considering the value of the catch the most important apparatus used are seines, fyke nets, and set lines. Included with fyke nets are what are known locally as "bait nets," used principally in catching cat-fish. Another variety of fyke net is termed a "shut-off net," and consists of an ordinary fyke net with wings constructed of seines, the seines being used only temporarily for this purpose.

The fishing on the St. Croix River is confined to the vicinity of Hudson. The greater part of the catch was taken by means of spears used through the ice, the principal species secured being buffalo-fish, lake sturgeon, and shovel-nose sturgeon.

Table showing, by waters, the number of persons employed in fisheries of Wisconsin in 1899.

Waters.	Fisheries in which employed.									Shoresmen.	Total, exclusive of duplication.
	Set line.	Crow-foot line.	Seine.	Trammel net.	Fyke net.	Shut-off net.	Spear.	Shoulder rake.	Fork.		
Mississippi River.	97	320	89	6	46	24	30	156	50	76	551
St. Croix River.	2						15				16
Total.	99	320	89	6	46	24	45	156	50	76	567

Table showing, by waters, the boats, apparatus, and property employed in the fisheries of Wisconsin in 1899.

Waters and apparatus.	No.	Length (yards).	Value.	Waters and apparatus.	No.	Length (yards).	Value.
Mississippi River:				Mississippi River:			
Fishing boats	432		\$6,843	Shore and accessory property			\$10,730
House boats	3		160	Cash capital			12,500
Set lines	100	*25,410	164	St. Croix River:			
Crowfoot lines	320		2,415	Fishing boats	2		20
Seines	29	5,580	2,170	Set lines	5	†1,600	5
Trammel nets	5	300	85	Spears	15		22
Fyke nets	182		2,061	Shore and accessory property			45
Shut-off nets	8		80	Total investment			37,825
Spears	30		45				
Shoulder rakes	156		360				
Forks	50		120				

*Number of hooks used, 14,465.

†Number of hooks used, 1,000.

Table showing, by waters and apparatus, the yield of the fisheries of Wisconsin in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Set lines:								
Mississippi River			1,000	\$14			109,300	\$3,640
St. Croix River							15,000	560
Total			1,000	14			124,300	4,200
Seines:								
Mississippi River	3,535	\$199	78,750	1,677	109,300	\$1,722	58,875	2,057
Fyke nets:								
Mississippi River			80,000	1,356	29,915	501	36,900	1,395
Shut-off nets:								
Mississippi River			6,250	100	23,125	370	1,225	44
Trammel nets:								
Mississippi River	180	10	4,810	63	7,250	93	95	3
Spears:								
Mississippi River			2,000	55				
St. Croix River			11,000	275				
Total			13,000	330				
Total by waters:								
Mississippi River	3,715	209	172,810	3,265	169,590	2,686	206,395	7,139
St. Croix River			11,000	275			15,000	560
Grand total	3,715	209	183,810	3,540	169,590	2,686	221,395	7,699

Table showing the yield of the fisheries of Wisconsin in 1899—Continued.

Apparatus and waters.	Sturgeon, lake.		Sturgeon, shovel-nose.		Suckers.		Sun-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Set lines:								
Mississippi River.....	4,825	\$113						
Seines:								
Mississippi River.....	3,600	158	80,780	\$1,729	43,160	\$646	8,000	\$138
Fyke nets:								
Mississippi River.....	4,830	126	13,000	203	42,285	610	2,400	76
Shut-off nets:								
Mississippi River.....					5,475	66	185	3
Trammel nets:								
Mississippi River.....					1,250	15	760	12
Spears:								
Mississippi River.....			20,000	575				
St. Croix River.....	12,000	350	25,000	450				
Total.....	12,000	350	45,000	1,025				
Total by waters:								
Mississippi River.....	13,255	397	113,780	2,509	92,170	1,337	11,335	229
St. Croix River.....	12,000	350	25,000	450				
Grand total.....	25,255	747	138,780	2,959	92,170	1,337	11,335	229

Apparatus and waters.	Crappie.		Dog-fish.		Drum, fresh-water.		Eels.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Set lines:								
Mississippi River.....					2,125	\$25	1,250	\$58
Seines:								
Mississippi River.....	5,170	\$168	2,000	\$15	48,800	743	435	23
Fyke nets:								
Mississippi River.....	1,860	66			31,700	325	60	3
Shut-off nets:								
Mississippi River.....					2,500	30		
Trammel nets:								
Mississippi River.....	1,570	47			1,150	13		
Total.....	8,600	281	2,000	15	86,275	1,136	1,745	84

Apparatus and waters.	Pike and pickerel.		Pike perch (wall-eyed).		Pike perch (sauger).		Rock bass.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Set lines:								
Mississippi River.....	125	\$4	375	\$17	1,625	\$63		
Seines:								
Mississippi River.....	8,950	297	4,100	181	1,725	59	545	\$10
Fyke nets:								
Mississippi River.....	2,475	90	2,185	103	1,490	48		
Shut-off nets:								
Mississippi River.....	185	5						
Trammel nets:								
Mississippi River.....	1,800	51	120	4	120	4	60	1
Total.....	13,535	447	6,780	305	4,960	174	605	11

Apparatus and waters.	White bass.		Yellow perch.		Other fish.		Mussel shells.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Crowfoot lines:								
Mississippi River.....							13,860,000	\$54,460
Seines:								
Mississippi River.....	1,820	\$68	1,660	\$28	600	\$6		
Fyke nets:								
Mississippi River.....	1,975	65						
Trammel nets:								
Mississippi River.....	70	2	60	1			2,830,000	11,835
Shoulder rakes:								
Mississippi River.....							70,000	815
Forks:								
Mississippi River.....								
Total.....	3,865	135	1,720	29	600	6	16,260,000	*66,110

* Includes \$4,800 worth of pearls and \$3,900 worth of baroque pearls.

Summary, by apparatus and waters, of the fisheries of Wisconsin in 1899.

Apparatus and waters.	Lbs.	Valuc.	Apparatus and waters.	Lbs.	Value.
Set lines:			Spears:		
Mississippi River.....	120,625	\$3,934	Mississippi River.....	22,000	\$630
St. Croix River.....	15,000	560	St. Croix River.....	48,000	1,075
Total.....	135,625	4,494	Total.....	70,000	1,705
Crowfoot lines:			Shoulder rakes:		
Mississippi River.....	13,360,000	54,460	Mississippi River.....	2,830,000	11,335
Seines:			Forks:		
Mississippi River.....	461,805	9,924	Mississippi River.....	70,000	315
Fyke nets:			Total by waters:		
Mississippi River.....	251,076	4,969	Mississippi River.....	17,173,735	86,504
Shut-off nets:			St. Croix River.....	63,000	1,635
Mississippi River.....	38,945	618	Grand total.....	17,236,735	88,139
Trammel nets:					
Mississippi River.....	19,285	319			

MINNESOTA.

The fisheries of Minnesota in the Mississippi region were conducted in the Mississippi and the St. Croix rivers and in various lakes. The number of persons employed was 506, the investment was \$87,796, and the products amounted to 1,322,171 pounds, valued at \$40,258. The leading species of fish were buffalo-fish, cat-fish, crappie, pike, pike perch, sturgeon, shovel-nose sturgeon, and suckers. Frogs were also abundant, the catch being 92,254 pounds, valued at \$9,609.

On account of restrictive legislation the fisheries of the Mississippi River and tributaries in this State show a decided falling off since the last canvass of these waters, in 1894. The decrease in the catch from the lakes tributary to the Mississippi is due to the fact that no apparatus was allowed to be used in them except hand lines and spears. The resources of these lakes at the present time offer more inducements to sportsmen than to commercial fishermen.

The most important fisheries of this section of the Mississippi River are conducted between St. Paul and Winona, this region including that portion of the river known as Lake Pepin, which is about 35 miles in length, with an average width of over 3 miles. The fishery resources of this part of the river are destined to see a decided improvement on account of the mussel fishery, which, beginning in the vicinity of Muscatine, Iowa, has gradually extended up the river into Minnesota. Brownsville, however, was the only locality in Minnesota at which mussel shells were taken in 1899, and was also the highest point up the Mississippi River at which this industry was carried on.

Taking the value of the catch as the basis, the most important apparatus used on this river are haul seines, set lines, fyke nets, and trammel nets, named in the order of their importance. Included under fyke nets are what are known locally as "bait nets," which are much smaller than the ordinary fyke nets, their average length being from 8 to 10 feet. These have neither wings nor leaders, and cost \$2 to \$3. In using them a bag filled with stale cheese is placed near the back of the net to attract the fish. Cat-fish is the principal species taken in them.

The most valuable species taken in this part of the Mississippi River are cat-fish, buffalo-fish, shovel-nose sturgeon, German carp, wall-eyed pike, pike and pickerel, and lake sturgeon. The value of cat-fish is over one-third that of all the other species combined. Most of these were taken on set lines. The larger portion of the German carp were caught in haul seines, trammel nets, and fyke nets.

The principal species taken in the St. Croix River are buffalo-fish, lake sturgeon, shovel-nose sturgeon, and cat-fish. The catch of buffalo is divided almost equally between pound nets and spears. Sturgeon are taken principally by means of spears through the ice, but considerable quantities are secured in pound nets and haul seines. Cat-fish are taken almost entirely on set lines.

Several varieties of fish are obtained in the lakes of Minnesota, the most important of them being pike perch (wall-eyed), crappie, pike and pickerel, and bullheads. The most valuable product of these fisheries is the frog, the value of the catch in 1899 constituting nearly one-fourth that of the entire fishery yield of the State. The species taken is the "meadow frog," which is quite small, the average weight being between 1 and 2 ounces each. Frogs are caught in various ways, but chiefly in pits dug between sloughs and the adjoining high grass. The season for their capture in this manner is usually in the fall, when they are returning to the water. These pits are about 3 feet long, 2 feet wide, and 2 feet deep. Frogs are also taken by sticks and gunny sacks. In using sticks the frogs are usually killed and then sold in a dressed condition for food. Gunny sacks in a wet condition are used in their capture by being thrown over the frogs. Frogs are kept alive for market in gunny sacks placed in running water and covered with hay or straw to keep out the frost. About one-half of the frogs shipped out of the State are of small size and are sold for bait, most of them weighing less than 1 ounce each. Professional frog-catchers are said to make from \$5 to \$10 per day during the best of the season. Most of the catch is shipped direct to Chicago.

The frog industry in this State was started about 1895, and has grown in importance. In 1899 over \$5,000 worth were taken in the vicinity of Minneapolis alone. Litchfield was the next greatest frog-producing center in the State in that year. In 1900 this industry had shifted from the latter place to Smith Lake, where one dealer purchased over \$5,000 worth during the year.

Table showing, by waters, the number of persons employed in the fisheries of Minnesota in 1899.

Waters.	Fisheries in which employed.											Total, exclusive of duplication.	
	Hand line.	Set line.	Seine.	Trammel net.	Fyke net.	Gill net.	Pound net.	Scoop net.	Spears.	Crowfoot line.	Other apparatus.		Shoresmen.
Mississippi River ...	5	31	67	10	38	2	2	.....	60	5	.....	38	161
St. Croix River	9	4	16	.....	1	2	21	.....	33	.....	.....	77	77
Miscellaneous lakes	165	.....	.....	.....	.....	.....	.....	8	.....	.....	96	7	268
Total	179	35	83	10	39	2	23	8	93	5	90	43	506

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 727

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Minnesota in 1899.

Waters and apparatus.	No.	Length (yards).	Value.	Waters and apparatus.	No.	Length (yards).	Value.
Mississippi River:				St. Croix River:			
Boats.....	93		\$1,578	Fyke nets.....	2		\$20
Hand lines.....			12	Gill nets.....	4	165	30
Set lines.....	31	* 14,300	70	Pound nets.....	12		1,500
Crowfoot lines.....	5		40	Spears.....	60		90
Selnes.....	21	5,050	1,460	Shore and accessory property.....			1,152
Fyke nets.....	75		1,270	Miscellaneous lakes:			
Pound nets.....	2		130	Boats.....	153		1,257
Trammel nets.....	9	610	156	Hand lines.....			298
Shore and accessory property.....			38,600	Scoop nets.....	6		1
Cash capital.....			37,000	Spears.....	33		49
St. Croix River:				Shore and accessory property.....			2,668
Boats.....	17		170	Total investment.....			87,796
Hand lines.....			7				
Set lines.....	7	† 2,475	8				
Selnes.....	5	310	230				

* Number of hooks used, 7,680.

† Number of hooks used, 1,400.

Table showing, by waters and apparatus of capture, the yield of the fisheries of Minnesota in 1899.

Apparatus and waters.	Buffalo-fish.		Carp, German.		Cat-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Hand lines:						
Mississippi River.....					500	\$12
St. Croix River.....					180	5
Miscellaneous lakes.....					99,575	1,468
Total.....					100,255	1,485
Set lines:						
Mississippi River.....	125	\$2			94,500	3,288
St. Croix River.....					13,850	506
Total.....	125	2			108,350	3,794
Selnes:						
Mississippi River.....	57,125	1,467	36,500	\$688	15,040	489
St. Croix River.....	11,350	269	200	4	2,000	60
Total.....	68,475	1,736	36,700	592	17,040	549
Fyke nets:						
Mississippi River.....	12,750	204	5,250	57	20,800	746
St. Croix River.....	50	1	100	1		
Total.....	12,800	205	5,350	58	20,800	746
Pound nets:						
Mississippi River.....	2,000	60				
St. Croix River.....	45,000	985	800	16	5,550	185
Total.....	47,000	995	800	16	5,550	185
Trammel nets:						
Mississippi River.....	4,000	78	16,250	230	2,400	74
Spears:						
St. Croix River.....	45,000	975				
Total by waters:						
Mississippi River.....	76,000	1,811	58,000	875	133,240	4,609
St. Croix River.....	101,400	2,180	1,100	21	21,680	755
Miscellaneous lakes.....					99,575	1,468
Grand total.....	177,400	3,991	59,100	896	254,395	6,833

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Table showing the yield of the fisheries of Minnesota in 1899—Continued.

Apparatus and waters.	Crappie.		Dog-fish.		Drum, fresh-water.		Eels.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Hand lines:								
Mississippi River.....	1,525	\$51			625	\$10		
Miscellaneous lakes.....	60,965	2,464						
Total.....	62,490	2,515			625	10		
Set lines:								
Mississippi River.....					15,100	206	700	\$40
St. Croix River.....							200	22
Total.....					15,100	206	900	62
Seines:								
Mississippi River.....	2,185	82			22,885	291		
St. Croix River.....					5,600	109		
Total.....	2,185	82			28,485	400		
Fyke nets:								
Mississippi River.....	1,000	32			2,875	31		
St. Croix River.....					200	2		
Total.....	1,000	32			3,075	33		
Pound nets:								
St. Croix River.....			100	\$3	6,000	81		
Trammel nets:								
Mississippi River.....	60	3			3,125	36		
Total by waters:								
Mississippi River.....	4,770	168			44,610	574	700	40
St. Croix River.....			100	3	11,800	192	200	22
Miscellaneous lakes.....	60,965	2,464						
Grand total.....	65,735	2,632	100	3	56,410	766	900	62

Apparatus and waters.	Pike and pickerel.		Pike perch (wall-eyed).		Pike perch (sanger).		Rock bass.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Hand lines:								
Mississippi River.....	1,000	\$40	6,000	\$328	2,400	\$114	200	\$12
St. Croix River.....	800	34			1,000	50		
Miscellaneous lakes.....	65,835	1,860	71,375	3,159			9,877	228
Total.....	67,635	1,924	77,375	3,487	3,400	164	10,077	240
Set lines:								
Mississippi River.....			2,375	114	3,350	122		
Seines:								
Mississippi River.....	10,475	359	2,810	132	4,925	146		
St. Croix River.....	250	11			150	7		
Total.....	10,725	370	2,810	132	5,075	153		
Fyke nets:								
Mississippi River.....	2,500	72	2,600	126	5,925	169		
St. Croix River.....	300	12			100	5		
Total.....	2,800	84	2,600	126	6,025	174		
Gill nets:								
St. Croix River.....	500	25			500	25		
Trammel nets:								
Mississippi River.....	9,350	346	2,125	156	310	15		
Spears:								
St. Croix River.....	21,500	410						
Pound nets:								
Mississippi River.....	400	24	200	18	600	36		
St. Croix River.....	850	43			550	29		
Total.....	1,250	67	200	18	1,150	65		
Total by waters:								
Mississippi River.....	23,725	840	16,110	878	17,510	602	200	12
St. Croix River.....	2,700	125			2,300	116		
Miscellaneous lakes.....	87,335	2,260	71,375	3,159			9,877	228
Grand total.....	113,760	3,225	87,485	4,032	19,810	718	10,077	240

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 729

Table showing the yield of the fisheries of Minnesota in 1899—Continued.

Apparatus and waters.	Sturgeon, lake		Sturgeon, shovel-nose.		Suckers.		Sun-fish.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Hand lines:								
Mississippi River.....							685	\$25
St. Croix River.....							50	2
Miscellaneous lakes.....							14,995	353
Total.....							15,730	380
Set lines:								
Mississippi River.....	1,660	\$30	20,000	\$900				
St. Croix River.....			665	20				
Total.....	1,660	30	20,665	920				
Selnes:								
Mississippi River.....	34,125	737	50,750	1,022	27,885	\$439	1,400	44
St. Croix River.....	6,450	192	7,800	140	9,075	128	100	5
Total.....	40,575	929	58,550	1,162	36,960	567	1,500	49
Fyke nets:								
Mississippi River.....	3,300	65	11,000	149	6,600	67		
St. Croix River.....					600	8	60	2
Total.....	3,300	65	11,000	149	7,100	75	50	2
Pound nets:								
Mississippi River.....					6,250	250	400	28
St. Croix River.....	12,500	378	14,500	258	18,725	264	200	10
Total.....	12,500	378	14,500	258	24,975	514	600	38
Trammel nets:								
Mississippi River.....					17,150	334	585	30
Spears:								
St. Croix River.....	25,000	750	41,700	750				
Total by waters:								
Mississippi River.....	39,085	832	81,750	1,471	57,785	1,090	3,070	127
St. Croix River.....	43,950	1,320	64,665	1,168	28,400	400	400	19
Miscellaneous lakes.....							14,995	353
Grand total.....	83,035	2,152	146,415	2,639	86,185	1,490	18,465	499

Apparatus and waters.	White bass.		Yellow perch.		Other fish.		Frogs.		Mussel shells.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Value.	Lbs.	Value.
Hand lines:										
Mississippi River.....	1,400	\$66			100	\$4				
St. Croix River.....			50	\$2						
Miscellaneous lakes.....	250	15	3,825	40						
Total.....	1,650	81	3,875	42	100	4				
Set lines:										
Mississippi River.....	250	12								
Crowfoot lines:										
Mississippi River.....									40,000	\$160
Selnes:										
Mississippi River.....	1,310	55			500	22				
St. Croix River.....					250	4				
Total.....	1,310	55			750	26				
Fyke nets:										
Mississippi River.....	900	26								
St. Croix River.....			50	2						
Pound nets:										
Mississippi River.....					400	20				
St. Croix River.....	100	6	50	3	750	11				
Total.....	100	6	50	3	1,150	31				
Trammel nets:										
Mississippi River.....	60	3	400	20						
Scoop nets:										
Miscellaneous lakes.....							18,055	\$1,324		
Other apparatus:										
Miscellaneous lakes.....							74,199	8,285		
Total by waters:										
Mississippi River.....	3,920	162	400	20	1,000	46			40,000	160
St. Croix River.....	100	6	150	7	1,000	15				
Miscellaneous lakes.....	250	15	3,825	40			92,254	9,609		
Grand total.....	4,270	183	4,875	67	2,000	61	92,254	9,609	40,000	160

Summary, by apparatus and waters, of the fisheries of Minnesota in 1899.

Apparatus and waters.	Lbs.	Value.	Apparatus and waters.	Lbs.	Value.
Hand lines:			Pound nets:		
Mississippi River	14,435	\$662	Mississippi River	10,250	\$436
St. Croix River.....	2,080	93	St. Croix River.....	105,675	2,222
Miscellaneous lakes	326,697	9,577	Total.....	115,925	2,658
Total	343,212	10,332	Gill nets:		
Set lines:			St. Croix River	1,000	50
Mississippi River	138,063	4,114	Trammel nets:		
St. Croix River	14,715	548	Mississippi River	55,815	1,323
Total	152,775	4,662	Scoop nets:		
Crowfoot lines:			Miscellaneous lakes	18,055	1,324
Mississippi River	40,000	160	Spears:		
Seines:			St. Croix River	111,700	2,475
Mississippi River	267,915	5,873	Miscellaneous lakes	21,600	410
St. Croix River	43,225	929	Total.....	133,200	2,885
Total	311,140	6,802	Other apparatus:		
Fyke nets:			Miscellaneous lakes	74,199	8,285
Mississippi River	75,400	1,744	Total by waters:		
St. Croix River	1,450	33	Mississippi River	601,875	14,312
Total	76,850	1,777	St. Croix River	279,845	6,350
			Miscellaneous lakes	440,451	19,596
			Grand total	1,322,171	40,258

SOUTH DAKOTA.

In South Dakota the number of persons participating in the fisheries was 72, and the capital invested amounted to \$1,781. The yield was 135,893 pounds, valued at \$6,941, the greater part of which consisted of buffalo-fish and cat-fish.

The Missouri River is the principal fish-producing stream in South Dakota. It flows through the State for a distance of nearly 500 miles. The Dakota section of this river contains few varieties of fish, the most abundant being cat-fish, buffalo-fish, carp, suckers, and sturgeon. In the clearer waters of the adjacent bayous and the tributary streams other varieties are found, such as grass pike, pike perch (wall-eyed), bullheads, etc. Several varieties of cat-fish are found, but the channel cat is by far the most abundant.

At the various settlements along the banks of the Missouri there are a few persons who devote a portion or the whole of their time from April to October to fishing. The principal resorts for the fishermen are Littlebend, Pierre, Chamberlain, Yankton Agency, Niobrara, Yankton, Vermilion, and Elk Point. At each of these localities a number of set lines, bait nets, and occasionally seines and trammel nets are employed, either in the main stream or at the mouths of the tributaries, but the catch is small and all of it is marketed in the immediate vicinity. Some risk attends the setting of fixed apparatus in the Missouri, because of the liability of its being covered up or borne away by the shifting sand; and numerous snags and the shifting bottom restrict the use of seines.

The eastern tributaries of the Missouri are fairly well supplied with cat-fish, bullheads, buffalo-fish, suckers, grass pike, fresh-water drum, etc. At various points the farmers and other residents occasionally fish for their home use, but the fisheries are of no commercial importance except near the mouths of the streams. Along the Dakota River below Mitchell set lines and seines are employed at times from March to October. On the Vermilion River between Centerville and the Missouri a number of seines, trammel nets, and set lines are used by the farmer-fishermen. Big Sioux River below Canton supports seine and trammel-net fisheries.

The western branches of the Missouri comprise the remaining rivers of South Dakota, principal among which are Grand, Owl, Big Cheyenne, and White rivers. The fishery resources of these rivers are of very limited extent, except in the headwaters of the Big Cheyenne in the Black Hills, where several species of fine game fish are numerous. There are no commercial fisheries in any of these rivers.

A number of lakes exist in the eastern half of South Dakota, the largest of which are Big Stone and Traverse, which form a part of the eastern boundary of the State. The former is 35 miles long and has an abundance of game fish.

Of the great variety of fish in Big Stone Lake, the most abundant are black bass, pike perch (wall-eyed), rock bass, and yellow perch. In smaller quantities are found crappie, sun-fish, cat-fish, buffalo-fish, suckers, pickerel, etc. Formerly sturgeon were quite plentiful and of large size, the catch of one weighing 137 pounds being recorded; but at present they are scarce and of small size.

Although Lake Traverse covers about as much space on the map as Big Stone Lake, it is far less important than the latter. It is about 25 miles long and from three-fourths to 1½ miles wide. The most numerous fish are suckers, and perch. This lake is not used for fishing, except that the farmers living near the shores may occasionally fish for home use.

The principal lake entirely within South Dakota is Lake Madison, about 10 miles long by 1½ miles wide. This lake formerly had quite a variety of fish, but the species now remaining are buffalo-fish, bullheads, and yellow perch. The State interdiction against commercial fishing is strictly enforced in Lake County, and little market fishing exists. For several years Lake Madison has been drying up, and the fish are dying, the pickerel apparently having become exterminated.

Lake Herman is situated in Lake County and is about 2 miles long and a mile wide. The fish found here are buffalo-fish, bullheads, and yellow perch. The vigilance of the fish wardens has prevented commercial fishing in this lake for several years, but prior to 1895 several cheap, home-made seines were surreptitiously employed, the catch being sold to the neighboring farmers and in the town of Madison.

Situated in the southwestern portion of Minnehaha County is Wall

Lake, which covers about 1 square mile in area. The principal ones in Wall Lake are bullheads, yellow perch, buffalo-fish, pickerel, and sun-fish, all of which appear to be decreasing in abundance. They are caught by means of hand lines, principally during May and June, and also under the ice during the winter. On some special days during the summer as many as 100 men are fishing for pleasure in this lake.

In addition to those mentioned there are a number of lakes containing a variety of fish in some abundance which are resorted to by pleasure fishermen, but are not utilized for commercial purposes. Prominent among these are Lake Kampeska, Clear Lake, Bear Lake, Lake Andes, Swan Lake, Long Lake, Red Lake, Lake Poinsett, Twin Lakes, etc. These contain pickerel, buffalo-fish, bullheads, perch, etc.

In various parts of the eastern half of South Dakota are so-called dry lakes. Formerly these contained considerable water and were fairly well supplied with fish, but, depending on surface drainage, they have become dry since the agricultural development of adjacent lands. Notable instances of this are found in Kingsbury County, where flax and other crops are now grown on lands covered by extensive lakes previous to 1890.

Only a small portion of the fish obtained in South Dakota pass through the hands of regular marketmen, the principal part of the catch being sold in the towns by the fishermen and through the adjacent farming regions by peddlers. The fish handled in the markets are generally obtained from outside the State, the quantity of fish brought into the State exceeding that obtained from the rivers and lakes.

Table showing, by waters, the number of persons employed in the fisheries of South Dakota in 1899.

Waters.	Fisheries in which employed.				Total, exclusive of duplication.
	Seine.	Trammel net.	Fyke net.	Set line.	
Missouri River			6	21	23
Missouri and Dakota rivers.....	4		12	16	20
Missouri and Vermillion rivers.....	5	3	2	7	12
Missouri and Big Sioux rivers.....	15	2	4	2	17
Total	24	5	24	46	72

Table showing, by waters, the boats, apparatus, and property employed in the fisheries of South Dakota in 1899.

Waters.	Boats.		Seines.		Trammel nets.		Set lines.		Fyke nets.		Shore and accessory property.	Total investment.		
	No.	Val.	No.	Length (yds.).	Val.	No.	Length (yds.).	Val.	No.	Val.				
Missouri River.....	26	\$228							46	\$33	20	\$61	\$95	\$417
Missouri and Dakota rivers.....	21	187	2		\$85				20	20	52	208	100	600
Missouri and Vermillion rivers.....	12	98	2	180	38	3	110	\$34	9	18	4	12	50	250
Missouri and Big Sioux rivers.....	14	136	6	680	210	1	80	20	4	6	10	42	100	514
Total.....	73	649	10	860	233	4	190	54	79	77	86	823	345	1,781

FISHERIES OF MISSISSIPPI RIVER AND TRIBUTARIES. 733

Table showing, by waters and apparatus of capture, the yield of the fisheries of South Dakota in 1899.

Apparatus and waters.	Drum, fresh-water.		Paddle-fish.		Pike and pickerel.		Sturgeon, lake.		Sturgeon, shovel-nose.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Missouri and Dakota rivers.....					1,200	\$96			300	\$12
Missouri and Vermillion rivers.....					1,800	117				
Missouri and Big Sioux rivers.....	300	\$12	1,900	\$18	225	14				
Total.....	300	12	1,900	48	3,225	227			300	12
Trammel nets:										
Missouri and Vermillion rivers.....					900	54				
Missouri and Big Sioux rivers.....					100	6				
Total.....					1,000	60				
Set lines:										
Missouri River.....			150	4			420	\$15		
Missouri and Dakota rivers.....					200	16			100	4
Missouri and Vermillion rivers.....					400	27				
Total.....			150	4	600	43	420	15	100	4
Total by waters:										
Missouri River.....			150	4			420	15		
Missouri and Dakota rivers.....					1,400	112			400	16
Missouri and Vermillion rivers.....					3,100	198				
Missouri and Big Sioux rivers.....	300	12	1,900	48	325	20				
Grand total.....	300	12	2,050	52	4,825	330	420	15	400	16

Apparatus and waters.	Buffalo-fish.		Cat-fish.		Suckers.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Missouri and Dakota rivers.....	3,800	\$138	2,300	\$145	2,900	\$89	10,500	\$480
Missouri and Vermillion rivers.....	3,200	118	1,100	68	900	29	7,000	332
Missouri and Big Sioux rivers.....	29,260	1,160	4,128	265	7,650	244	43,463	1,743
Total.....	36,260	1,416	7,528	478	11,450	362	60,963	2,555
Trammel nets:								
Missouri and Vermillion rivers.....	300	12	3,250	184	350	12	4,800	262
Missouri and Big Sioux rivers.....	1,600	48	150	10	1,850	55	3,700	119
Total.....	1,900	60	3,400	194	2,200	67	8,500	381
Fyke nets:								
Missouri River.....	910	32	4,740	\$21	220	7	5,870	\$60
Missouri and Dakota rivers.....	4,500	167	14,340	946	1,100	40	19,940	1,153
Missouri and Vermillion rivers.....	350	14	950	58	70	3	1,370	75
Missouri and Big Sioux rivers.....	950	32	4,760	303	300	11	6,010	\$46
Total.....	6,710	245	24,790	1,628	1,690	61	33,190	1,934
Set lines:								
Missouri River.....	1,670	64	17,680	1,175			19,920	1,258
Missouri and Dakota rivers.....	600	22	7,250	470			8,150	512
Missouri and Vermillion rivers.....	150	5	3,120	197			3,670	229
Missouri and Big Sioux rivers.....			600	42	900	30	1,500	72
Total.....	2,420	91	28,650	1,884	900	30	33,240	2,071
Total by waters:								
Missouri River.....	2,580	96	22,420	1,496	220	7	25,790	1,618
Missouri and Dakota rivers.....	8,900	327	23,890	1,561	4,000	129	38,590	2,145
Missouri and Vermillion rivers.....	4,000	149	8,420	507	1,320	44	16,840	898
Missouri and Big Sioux rivers.....	31,810	1,240	9,638	620	10,700	340	54,673	2,280
Grand total.....	47,290	1,812	64,368	4,184	16,240	520	135,893	6,941

NEBRASKA.

In 1899 there were 196 persons engaged in the fisheries of Nebraska in the Missouri and Platte rivers. The capital invested was \$122,884, and the products amounted to 366,617 pounds, worth \$15,937. The greater part of the catch was taken in the Missouri River. The principal species obtained were buffalo-fish, 138,162 pounds, worth \$4,862; cat-fish, 84,970 pounds, worth \$6 068; and suckers 88,630 pounds, worth \$2,967.

The commercial fisheries of Nebraska are confined to Missouri River and the Platte below Kearney. Some fish are taken in other portions of the State, and especially in the small lakes, but the fisheries there are not of commercial importance. A State interdiction exists against the use of any form of net in any of the waters of this State except the Missouri River, but this law was not enforced previous to 1899. Seines, trammel nets, set lines, and fyke nets or "bait nets" comprise the forms of apparatus employed, the first named securing over two-thirds of the yield.

Of the commercial fisheries of Nebraska over 80 per cent exist along Missouri River, the catch from that stream in 1899 being 309,422 pounds out of a total yield in the State of 366,617 pounds. Most of the counties bordering this river have commercial fisheries, the more important being located in Douglas, Larpy, and Nemaha counties. The yield in the county first named is over one-half the total product in the State. Buffalo-fish, cat-fish, fresh-water drum, and paddle-fish are the most abundant species obtained, other species being suckers, lake sturgeon, pike perch (wall-eyed), and white bass.

In Knox County a number of seines, fyke nets, and set lines are used at the mouth of Niobrara River by residents of Niobrara. The catch, consisting of 25,000 pounds of cat-fish, buffalo-fish, suckers, etc., is marketed at Niobrara, Running Water, and the adjacent regions. The current of the Niobrara is very swift, consequently fishing is limited to periods of low water or to the "slack-waters."

In Dakota County several men use trammel nets in Crystal Lake and the Missouri River. Crystal Lake is a body of clear water, situated about 2 miles from Missouri River. It contains buffalo-fish, pike perch (wall-eyed), fresh-water drum, yellow perch, and grass pike, named in the order of abundance in which taken. The catch is marketed at Sioux City, Iowa, and in the interior of Dakota. One seine and several fyke nets were also used in the Missouri River at Dakota in 1899.

At Blair, Washington County, seines, fyke nets, and set lines are employed, the catch consisting of buffalo-fish, cat-fish, suckers, paddle-fish, and fresh-water drum, all of which are consumed locally.

In Douglas County seines, trammel nets, fyke nets, and set lines

are employed, more than two-thirds of the product being obtained by the first-named apparatus. The catch is marketed principally at Omaha, but that city depends for its fish supplies mainly on Mississippi River, the Great Lakes, and the Pacific Coast. Fish from the last-named region are frequently sold in Omaha at less than is obtained for the product from the Missouri. The Douglas County fishermen occasionally resort to Cut-off Lake, an old bed of the Missouri River, located near Omaha. In addition to the usual species found in the Missouri River the pickerel or grass pike occurs in considerable abundance in this lake.

At Bellevue, in Larpy County, a number of men use seines, fyke nets, and set lines, and at Plattsmouth and Rock Bluff, in Cass County, the same forms of apparatus are used, the catch at each locality consisting of buffalo-fish, cat-fish, quillbacks, paddle-fish, suckers, and lake sturgeon.

The fishermen of Otoe County reside at Nebraska City, the apparatus employed being seines, fyke nets, trammel nets, and set lines, and the catch consists of cat-fish, buffalo-fish, lake sturgeon, fresh-water drum, and paddle-fish. In Nemaha County the fisheries are centered at Pean, Brownsville, and Nemaha, and in Richardson County at St. Deron and Rulo. Seines and set lines are used to a small extent at these settlements, the catch being similar to that obtained farther up the river. Very few of the fishermen along this portion of the Missouri depend entirely on fishing for a living, but engage also in farming and other occupations.

Because of the unfavorable conditions of having little water in a large portion of its length during many months of the year Platte River can never have more than a limited and temporary supply of fish. During high water fish enter the stream from Missouri River in considerable abundance, and for a brief period are taken in comparatively large quantities by the farmers and others residing near the river. The species are not numerous, comprising cat-fish, buffalo-fish, paddle-fish, suckers, fresh-water drum or sheepshead, lake sturgeon, and eels. Many of the farmers living along the shores of the Platte have two or three fyke nets with which they occasionally take sufficient fish for home use. Set lines are also used. These consist of 6 to 12 hooks, baited with meat or refuse fish, attached to a single line, and the line connected with the shore, where it can be readily examined every morning. As the water recedes, many fish are left in the holes or basins, and these are often obtained in great quantities by the use of hay forks. Occasionally a surplus is obtained, a ready market for which is found in the adjacent villages.

The same varieties of fish occur in Loup River as are found in the Platte, besides a large quantity of pike perch (wall-eyed), supposed to be the result of deposits made by the U. S. Fish Commission. As this

river does not run dry, fish are obtainable therefrom at all seasons. The fisheries are not of commercial extent, and the fish are utilized by persons living along the river.

Table showing the number of persons employed in the fisheries of Nebraska in 1899.

Waters.	Fisheries in which employed.				Shoresmen.	Total, exclusive of duplication.
	Seine.	Trammel net.	Fyke net.	Set line.		
Missouri River.....	63	11	28	58	44	145
Platte River.....	22	1	13	29	10	51
Total.....	85	12	41	87	54	196

Table showing, by waters, the boats, apparatus, and capital employed in the fisheries of Nebraska in 1899.

Waters.	Boats.		Seines.			Trammel nets.			Fyke nets.		Set lines.		
	No.	Value.	No.	Length (yards).	Value.	No.	Length (yards).	Value.	No.	Value.	No.	Length (yards).	Value.
Missouri River.....	104	\$1,063	30	1,940	\$764	9	520	\$178	86	\$357	99	12,830	\$165
Platte River....	41	366	11	375	184	1	35	16	44	175	46	5,020	67
Total.....	145	1,429	41	2,315	948	10	555	193	130	532	145	17,852	232

Waters.	Shore and accessory property.	Cash capital.	Total investment.
	Missouri River.....	\$40,905	\$63,000	$106,432
Platte River.....	8,145	7,500	16,452
Total.....	49,050	70,500	122,884

Table showing, by apparatus and waters, the yield of the fisheries of Nebraska in 1899.

Apparatus and waters.	Black bass.		Buffalo-fish.		Cat-fish.		Crappie.		Drum, fresh-water.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Missouri River.....	650	\$65	81,460	\$2,747	20,600	\$1,521	400	\$28	11,530	\$321
Platte River.....			12,200	488	6,900	500			200	8
Total.....	650	65	93,660	3,235	27,500	2,021	400	28	11,730	329
Trammel nets:										
Missouri River.....			11,650	442	1,420	103			2,500	80
Platte River.....			300	12	120	8			100	4
Total.....			11,950	454	1,540	111			2,600	84
Set lines:										
Missouri River.....			19,840	727	17,960	1,287				
Platte River.....			1,300	52	14,200	996				
Total.....			21,140	779	32,160	2,283				
Fyke nets:										
Missouri River.....			9,662	322	20,470	1,412			750	27
Platte River.....			1,750	72	3,300	241				
Total.....			11,412	394	23,770	1,653			750	27
Total by waters:										
Missouri River.....	650	65	122,612	4,238	60,450	4,323	400	28	14,780	428
Platte River.....			15,550	624	24,520	1,745			300	12
Grand total.....	650	65	138,162	4,862	84,970	6,068	400	28	15,080	440

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Table showing the yield of the fisheries of Nebraska in 1899—Continued.

Apparatus and waters.	Eels.		Paddle-fish.		Pike and pickerel.		Pike perch (wall-eyed).		Sturgeon, lake.	
	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.	Lbs.	Val.
Seines:										
Missouri River.....			8,800	\$196	1,750	\$132			12,150	\$482
Platte River.....			3,800	114						
Total.....			12,100	310	1,750	132			12,150	482
Trammel nets:										
Missouri River.....			2,500	75	1,250	86	800	\$48	2,600	120
Platte River.....			125	5						
Total.....			2,625	80	1,250	86	800	48	2,600	120
Set lines:										
Missouri River.....									1,900	92
Platte River.....	300	\$25	1,650	54						
Total by waters:										
Missouri River.....			10,800	271	3,000	218	800	48	16,650	694
Platte River.....	300	25	6,675	173						
Grand total.....	300	25	16,375	444	3,000	218	800	48	16,650	694

Apparatus and waters.	Suckers.		White bass.		Yellow perch.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Missouri River.....	57,580	\$1,956					194,420	\$7,448
Platte River.....	6,700	245	200	\$10			30,000	1,365
Total.....	64,280	2,201	200	10			224,420	8,813
Trammel nets:								
Missouri River.....	10,110	253	100	6	300	\$12	83,230	1,225
Platte River.....	200	8					845	37
Total.....	10,310	261	100	6	300	12	84,075	1,262
Set lines:								
Missouri River.....	3,550	130					43,250	2,236
Platte River.....	1,150	46	1,000	50			19,600	1,223
Total.....	4,700	176	1,000	50			62,850	3,459
Fyke nets:								
Missouri River.....	7,640	265					38,522	2,026
Platte River.....	1,700	64					6,750	377
Total.....	9,340	329					45,272	2,403
Total by waters:								
Missouri River.....	78,880	2,604	100	6	300	12	309,422	12,935
Platte River.....	9,750	363	1,200	60			57,195	3,002
Grand total.....	88,630	2,967	1,300	66	300	12	366,617	15,937

Table showing the extent of the wholesale trade in fishery products in Nebraska in 1899.

Items.	Number.	Value.
	Establishments (1 at Lincoln, 3 at Omaha).....	4	$48,000
Cash capital.....		70,500
Persons engaged.....	54	
	Pounds.	Value.
Products sold:		
Fresh fish.....	1,805,312	\$165,484
Lobsters.....	12,562	2,512
Oysters.....	3,158,650	428,402
Total products.....	4,976,524	596,398

KANSAS.

While the fisheries of Kansas are of considerable economic importance in furnishing a supply of fresh food to persons living adjacent to the streams, yet commercially they are of small extent. The total number of professional fishermen in the State in 1899 was only 118, and the product was 277,920 pounds, for which the fishermen received \$13,546. The investment in the fisheries was \$3,836.

The fyke-net fishery was the most important, yielding 138,445 pounds, or nearly 50 per cent of the total product. Set lines, seines, and trammel nets ranked next in order and complete the list of apparatus employed. The principal species obtained were cat-fish, buffalo-fish, fresh-water drum, paddle-fish, suckers, eels, and lake sturgeon, the two first named comprising a large part of the catch. Along that portion of the Missouri River bordering the State of Kansas the fisheries are located at the principal centers of population, viz, Atchison, Leavenworth, and at the mouth of Kansas River.

While the fisheries in the vicinity of Atchison are of much local importance, they do not wholly supply the markets of that city. The fishing-grounds are in the Missouri River and certain of its old beds, the most important of which is Doniphan Lake, which is $2\frac{1}{2}$ miles long, three-fourths of a mile wide, and 2 to 25 feet deep. Some of the lakes are fed almost constantly by springs and small streams of clear water, in addition to the somewhat irregular inflow from the Missouri River. The fisheries are prosecuted in the spring and fall during the periods of low water.

The principal fishes in the vicinity of Atchison are cat-fish, buffalo-fish, paddle-fish, fresh-water drum, lake sturgeon, and suckers, three-fourths of which are taken by means of seines and lines. Haul seines are used on the sand bars in the river during low water, and in the lakes more or less at all times in the season. Set lines are used to some extent throughout the year, but principally during the spring. The trammel nets and hoop nets or fyke nets are used in the "slack waters," or arms of the main stream. Several lakes in this vicinity have been stocked with fish not indigenous to the region, such as pike perch (wall-eyed), pickerel, yellow perch, crappie, black bass, etc.

The fisheries of Leavenworth are of little consequence, consisting of a limited set-line, fyke-net, and seine fishery, in which from 12,000 to 20,000 pounds of buffalo-fish, cat-fish, lake sturgeon, fresh-water drum, suckers, and paddle-fish are annually obtained. The fish markets of Leavenworth depend on supplies from Illinois River, the Great Lakes, and the Pacific coast, in addition to the small local production.

The most extensive fisheries of Kansas River are near the entrance of that stream into the Missouri. Some use is made of seines and trammel nets, but the fyke-net or hoop-net fishery is by far the most important, yielding 80 per cent of the total product. Suckers are the most numerous species, with cat-fish and buffalo-fish next in order;

other species are fresh-water drum, eels, crappie, rock bass, black bass, pike perch (wall-eyed), etc. All of these are less abundant than formerly, which is partly attributable to the increased demand of a growing community. Other causes have doubtless contributed to the decrease, among which are the dam at Lawrence and sewage from the cities.

The fisheries of Lawrence are the most important on the Kansas River above Kansas City, yet they are not so extensive as a few years ago. During the high waters of the spring cat-fish, suckers, and buffalo-fish from the Missouri pass up Kansas River as far as the Lawrence dam, where they are taken in large quantities. The fishermen operate between the dam and Eudora. Set lines and fyke nets are used, the catch consisting of cat-fish, buffalo-fish, suckers, fresh-water drum, and eels. The cat-fish average in weight about 15 pounds, with a maximum of 100 pounds, and buffalo-fish from 10 to 30 pounds.

Topeka is the center for the fisheries of the Kansas River above the Lawrence dam, the annual yield approximating 15,000 pounds. The catch is obtained by a half dozen men fishing between Lawrence and Silver Lake, an old bed of the river about 10 miles west of Topeka.

Table showing, by waters, the number of persons employed in the fisheries of Kansas in 1899.

Waters.	Fisheries in which employed.				Total, exclusive of duplication.
	Seine.	Trammel net.	Fyke net.	Set line.	
Missouri River.....	12	9	8	36	45
Kansas River.....	6	2	57	38	73
Total.....	18	11	65	74	118

Table showing, by waters, the boats, apparatus, and property employed in the fisheries of Kansas in 1899.

Waters.	Boats.		Seines.		Trammel nets.			Fyke nets.		Set lines.		Shore and accessory property.	Total investment.	
	No.	Value.	No.	Length (yards).	Value.	No.	Length (yards).	Value.	No.	Value.	No.			Value.
Missouri River.....	44	\$466	5	560	\$218	5	440	\$140	35	\$176	56	\$124	\$220	\$1,344
Kansas River.....	74	821	3	225	60	1	50	20	247	1,213	45	81	297	2,492
Total.....	118	1,287	8	785	278	6	490	160	282	1,389	101	205	617	3,836

Table showing, by waters and apparatus of capture, the yield of the fisheries of Kansas in 1899.

Apparatus and waters.	Crappie.		Eels.		Sturgeon, lake.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Fyke nets:						
Kansas River.....	100	\$8	450	\$36	600	\$18
Set lines:						
Missouri River.....					1,200	60
Kansas River.....			620	58		
Total by waters:						
Missouri River.....					1,200	60
Kansas River.....	100	8	1,070	94	600	18
Grand total.....	100	8	1,070	94	1,800	78

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Table showing the yield of the fisheries of Kansas in 1899—Continued.

Apparatus and waters.	Black bass.		Buffalo-fish.		Cat-fish.		Drum, fresh-water.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Missouri River			9,520	\$390	6,385	\$462	880	\$36
Kansas River			900	45	1,835	110	750	30
Total			10,420	435	8,220	572	1,630	66
Fyke nets:								
Missouri River			4,700	193	3,945	269	540	18
Kansas River	60	\$6	19,545	825	31,680	1,913	2,500	101
Total	60	6	24,245	1,018	35,625	2,182	3,040	119
Set lines:								
Missouri River	600	48	6,280	291	23,130	1,569	650	21
Kansas River			4,600	213	23,600	1,476	1,550	69
Total	600	48	10,880	504	46,730	3,045	2,200	90
Trammel nets:								
Missouri River			6,210	256	4,220	328	700	28
Kansas River			240	12	165	10	375	15
Total			6,450	268	4,385	338	1,075	43
Total by waters:								
Missouri River	600	48	26,710	1,130	37,680	2,628	2,770	103
Kansas River	60	6	25,285	1,095	57,280	3,509	5,175	215
Grand total	660	54	51,995	2,225	94,960	6,137	7,945	318

Apparatus and waters.	Paddle-fish.		Pike and pickerel.		Suckers.		Total.	
	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.	Lbs.	Value.
Seines:								
Missouri River	1,700	\$68	200	\$16	14,360	\$502	33,045	\$1,474
Kansas River	500	15			2,370	95	6,355	295
Total	2,200	83	200	16	16,730	597	39,400	1,769
Fyke nets:								
Missouri River					2,200	83	11,385	563
Kansas River					72,125	2,898	127,060	5,805
Total					74,325	2,981	138,445	6,368
Set lines:								
Missouri River					7,725	316	39,685	2,305
Kansas River					2,350	101	32,720	1,917
Total					10,075	417	72,305	4,222
Trammel nets:								
Missouri River	1,650	62	125	10	9,985	342	22,890	1,026
Kansas River	4,000	120			100	4	4,880	161
Total	5,650	182	125	10	10,085	346	27,770	1,187
Total by waters:								
Missouri River	3,350	130	325	26	34,270	1,243	106,905	5,868
Kansas River	4,600	135			76,945	3,098	171,015	8,178
Grand total	7,850	265	325	26	111,215	4,341	277,920	13,546