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THE MICHIGAN GENERAL CREEL CENSUS FOR 1959

By K. G. Fukano

This is the thirty-third consecutive year of the General Creel Census in Michigan. Conservation officers obtained the census records as a part of their regular duties. The purpose of the census is to obtain a sample of the sport fishing in all parts of the state. Creel records from special research projects of the Fish Division are not included.

During 1959, the officers secured records on 73,263 angler trips, divided into three major categories--trout, nontrout and Great Lakes waters; each group was further divided into lakes and streams. It is believed that this tabulation of the data gives the best available indication of the fishing quality and to some degree fishing intensity, in the six types of waters administered by the state. The numbers of anglers interviewed were as follows: (1) trout waters, 11,135 (15% of all anglers interviewed), of whom 2,387 fished in designated trout lakes and special trout ponds and 8,748 fished in streams; (2) nontrout waters, 53,623 (73%), of whom 47,031 fished in lakes and 6,592 fished in streams; (3) Great Lakes waters, 8,505 (12%), of whom 5,469 fished in the Great Lakes and 3,036 fished in the connecting waters.

Of the 73,263 anglers interviewed, 9,465 (13%) were nonresidents; 11,454 (16%) were women. For comparison with the above figure on nonresidents, the total sale of fishing licenses in 1959 was 967,371 of which 210,113 (22%) were nonresidents.[↓] Probably several factors are involved in the explanation of why the officers contacted a lower percentage of nonresidents than would be expected from the ratio of nonresidents to residents in the license sales: (1) Many nonresidents (45% of 94,409) purchased the temporary nonresident fishing license, which limited their fishing to a few days. (2) The wife of a resident licensee does not have to purchase a fishing license, but the nonresident wife does. (3) Most nonresidents cannot fish legally in six southern Michigan counties from January 1 to the opening of the trout season.

Anglers were contacted either while fishing or at the end of a fishing trip. Thus, the census is a partial rather than a complete record on 73,263 angling trips. It represents fewer than 73,263 individual anglers, for some were interviewed on more than one trip. Only legal-size fish are included in the summary, and the census is restricted to sport fishing.

Detailed analysis

The 73,263 anglers (10% fewer than in 1958) interviewed by conservation officers during 1959 had fished 166,777 hours and had caught 224,602 fish. The average catch per hour for all fishing was 1.3, or 0.1 higher than in 1958 (Table 1).

[↓] From "1959 License Sales by Counties" issued by Michigan Department of Conservation, 1960.

Records were obtained in 78 counties (Table 2). Some bias in the state-wide sample results from the fact that no records were obtained from five counties (Berrien, Calhoun, Hillsdale, Ionia, and Lenawee) and that fewer than 150 were obtained from certain other counties (Cass, Eaton, Kalamazoo, Otsego, Tuscola).

In this report the various types of waters are separated by Conservation Regions.

Fishing in Trout, Nontrout and Great Lakes Waters, by Conservation Regions

The numbers and percentages of anglers interviewed while fishing in the various waters are given in Table 3. Regions I and II furnished 93 percent of all records of trout fishing; Region III, 7 percent. In Regions I and II, 22 percent of all anglers fished for trout, whereas in Region III only 3 percent did so.

Nontrout fishing records constituted the largest percentage from Region II (78% of 35, 623 anglers) and the smallest percentage from Region I (52% of 11, 945 anglers).

Over a fifth of the anglers interviewed in Region III (21% of 25, 695 anglers) were fishing Great Lakes waters.

Number of Trout Caught in Trout Waters, by Conservation Regions

Of the 15, 578 trout recorded during 1959, brook trout constituted 57 percent; rainbow trout, 31 percent; and brown trout, 12 percent (Table 4). In 1958 these percentages were 48, 38 and 14, respectively.

The 8,933 brook trout taken in 1959 were divided as follows: Region I, 5,423 (61%); Region II, 2,940 (33%); and Region III, 570 (6%). Of 4,853 rainbow trout reported, Region II contributed 3,331 (69%); Region I, 1,119 (23%); Region III, 403 (8%). Of 1,792 brown trout recorded, 1,379 (77%) were caught in Region II; 253 (14%), in Region I; and 160 (9%), in Region III.

From Regions I and II came 93 percent of the 15,578 trout reported from the trout waters.

Other Species Caught in Trout Waters

Brook, brown, and rainbow trout constituted 94 percent of all fish taken in trout waters. The number of each of 14 other kinds of fish reported were as follows:

Suckers	376	Largemouth bass	10
Bluegill	367	Walleye	9
Yellow perch	75	Smallmouth bass	8
Chubs	40	Round whitefish	7
Northern pike	40	White bass	5
Rock bass	39	Lake trout	2
Pumpkinseed	12	Black crappie	<u>1</u>
		Total	991

Catch per Hour--Trout Waters,

by Conservation Regions

As shown in Table 5 trout fishermen caught 0.6 fish per hour, the same as in 1958. The fishing quality index (trout only) was 0.6 trout per hour for the trout streams and 0.4 trout per hour for the designated trout

lakes and special trout ponds. The highest catch per hour for trout streams (0.8 trout) was reported from Region I, whereas the highest catch per hour for trout lakes (0.7) was recorded in Region III. Most (79%) of the trout fishermen interviewed fished on streams.

Composition of Catch--Nontrout Waters,

by Conservation Regions

Conservation officers recorded 30 kinds of fish from nontrout waters. Bluegills and yellow perch together made up 64 percent of the catch (69% in Region I, 61% in Region II and 67% in Region III--see Table 6). The black crappie was the only other species that made up as much as 10 percent of the total catch in a region (13% in Region II and 12% in Region III).

Other species important in the catch were: pumpkinseed, northern pike, rock bass, largemouth bass, walleye, smallmouth bass and rainbow trout.

The 10 species mentioned have retained approximately the same rank in importance during the 10-year period 1950-1959 (Table 7). In 1959 these 10 species comprised 94 percent of the total recorded catch and at least 93 percent of the catch in every region. The remaining 20 kinds made up 6 percent and are listed below.

American smelt	2,556	Warmouth	57
Suckers	2,119	Bowfin	30
Bullheads	1,285	Freshwater drum	19
Carp	1,205	Shiners	12
Cisco	640	Sauger	11
Lake trout	211	Redhorses	8
Brook trout	195	Muskellunge	7
Catfishes	157	Chubs	4
Brown trout	79	Gars	4
Lake whitefish	60	Round whitefish	3
		Total	8,662

Brook, brown, and rainbow trout made up 1 percent of the total catch from nontrout waters.

The state-wide catch (as recorded in the census) of the 10 important species and the number and percentage contributed by each region is presented in Table 8. In nontrout waters, the bluegill was the dominant species (50,458 reported) in the state as a whole. Most bluegills (59% of the state total) and largemouth bass were recorded in Region III. Region II (from which almost half of the total nontrout catch recorded for 1959 was taken) yielded the highest catches of yellow perch, black crappie, pumpkinseed, northern pike, rock bass, smallmouth bass and rainbow trout. The largest number of walleyes was reported from Region I. Regions II and III together produced 95 percent of all bluegills recorded in the census.

Catch per Hour--Nontrout Waters,
by Conservation Regions

Anglers who fished the nontrout waters had the same fishing success (1.2 fish per hour--see Table 9) as in 1958. Fishing quality was about the same in the three regions: 1.2 in I and II; 1.3 in III; and it was essentially the same in lakes and streams (1.2-1.3) except for nontrout streams in Region I (0.7).

Composition of Catch--Great Lakes Waters

The yellow perch made up 93 percent of 68,574 fish reported from Great Lakes waters in 1959 (Table 10). Walleyes, smallmouth bass and rock bass contributed another 5 percent. The numbers of each of the 15 other kinds that made up the remaining 2 percent were as follows:

Freshwater drum	526	Suckers	9
Northern pike	432	Brook trout	7
Pumpkinseed	139	Rainbow trout	2
Catfishes	89	Round whitefish	2
American smelt	88	Carp	1
White bass	57	Cisco	1
Muskellunge	47	Largemouth bass	<u>1</u>
Crappies	20	Total	1,421

Catch per Hour--Great Lakes Waters

In 1959 the data for Great Lakes waters were tabulated separately for each Great Lake and each connecting water. Table 11 shows the influence of the high catch per hour from Lake Huron (5.3 fish) on the fishing quality index for the Great Lakes waters. The average catch per hour for all Great Lakes and connecting waters was 2.9 fish (3.7 for the Great Lakes and 1.4 for the connecting waters).

Residence of Anglers--All Waters

Of the 73,263 anglers recorded in the 1959 general creel census, 63,798 anglers (87%) were residents of Michigan and 9,465 anglers (13%) were nonresidents (Table 12). The greatest number of nonresident fishermen (3,970) was contacted in Region II, where they comprised 11 percent of the total, but nonresident anglers constituted 23 percent of the anglers interviewed in Region I.

Anglers residing in all 83 Michigan counties were recorded in the census (Table 13). Residents of Wayne County made up 16 percent of all residents; Kent County, 6; Genesee, 6; Saginaw, 4; and Ingham, 4 (total for the five counties, 36 percent).

Nonresident anglers came from 36 states, the District of Columbia and the Province of Ontario (Table 13a). Ohio contributed 38 percent of all nonresidents; Indiana, 34; Illinois, 12; and Wisconsin, 11 (total for these four states, 95 percent).

Resident anglers caught 1.3 fish per hour whereas nonresident anglers caught 1.4 fish per hour (all waters combined, see Table 14).

Sex of Anglers

Of the 73,263 anglers interviewed in 1959, 11,454 (15%) were women. They comprised 9 percent of the trout anglers, 17 percent of the nontrout anglers and 13 percent of fishermen on the Great Lakes (Table 15).

Comparison of 1959 Data with that of Other Years

Tables 15 to 19 summarize the general creel census for the past 10 years. The catch per hour for all waters has ranged from 1.2 fish in 1957 and 1958 to 1.6 in 1950 (Table 16). For 1959 the catch for all waters was 0.1 fish below the simple average for the 10-year period.

For trout waters the highest catches per hour were recorded in 1954 and 1955 (0.8 trout per hour) and the lowest (0.6) in 1950, 1953, 1958 and 1959.

During the 1950-1959 period the catch per hour in nontrout waters has ranged from 1.6 fish in 1950 to 1.2 in 1956, 1957, 1958 and 1959. The simple 10-year average was 1.3 fish per hour.

The catch per hour has been consistently higher for the Great Lakes waters than for trout or (inland) nontrout waters (Table 19). In 1950-1959 anglers fishing the Great Lakes waters averaged 2.8 fish per hour as compared to an average of 1.3 fish per hour in nontrout waters. The catch in Great Lakes waters has varied from 1.3 fish per hour in 1957 to 4.8 in 1950. The 1959 catch per hour was 0.1 fish above the simple average for the 10-year period.

Table 20 lists the total fishing time in thousands of hours and the catch per hour for the various waters since 1928.

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INSTITUTE FOR FISHERIES RESEARCH

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Report approved by G. P. Cooper

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Table 1.--Total number of anglers, hours fished, number of fish caught and catch per hour for each conservation region, all waters, 1959

Region	Number of male anglers	Number of female anglers	Total anglers	Total hours fished	Total fish caught	Catch per hour
I	10,480	1,465	11,945	30,879.8	40,331	1.3
II	30,047	5,576	35,623	78,087.6	100,639	1.3
III	21,282	4,413	25,695	57,809.7	83,632	1.4
State total	61,809	11,454	73,263	166,777.1	224,602	1.3

Table 2.--Number of anglers interviewed by conservation officers during
1959 and 1958, by counties

County	1959	1958	County	1959	1958
Alcona	751	907	Lake	976	763
Alger	903	1,035	Lapeer	1,065	409
Allegan	1,150	1,007	Leelanau	622	863
Alpena	1,524	1,467	Lenawee	...	...
Antrim	1,068	1,340	Livingston	3,045	1,443
Arenac	358	544	Luce	1,443	1,619
Baraga	245	140	Mackinac	1,282	2,114
Barry	1,581	1,882	Macomb	1,691	2,929
Bay	785	309	Manistee	1,153	1,654
Benzie	1,323	1,718	Marquette	939	1,205
Berrien	...	...	Mason	807	786
Branch	1,770	2,478	Mecosta	1,497	1,107
Calhoun	...	145	Menominee	235	151
Cass	124	1,622	Midland	383	657
Charlevoix	1,905	1,927	Missaukee	1,094	966
Cheboygan	2,746	2,287	Monroe	688	618
Chippewa	646	1,070	Montcalm	788	1,207
Clare	798	1,360	Montmorency	1,512	1,789
Clinton	152	224	Muskegon	2,039	1,839
Crawford	562	786	Newaygo	1,186	1,242
Delta	1,598	1,966	Oakland	1,936	631
Dickinson	215	653	Oceana	830	1,857
Eaton	21	...	Ogemaw	584	832
Emmet	1,182	1,277	Ontonagon	868	468
Genesee	852	863	Osceola	900	748
Gladwin	1,707	2,522	Oscoda	605	1,177
Gogebic	1,158	513	Otsego	107	316
Grand Traverse	885	1,616	Ottawa	670	750
Gratiot	270	196	Presque Isle	407	497
Hillsdale	...	...	Roscommon	2,378	3,156
Houghton	441	195	Saginaw	422	25
Huron	1,974	1,654	St. Clair	1,137	1,820
Ingham	284	251	St. Joseph	1,006	596
Ionia	...	317	Sanilac	575	811
Iosco	1,061	1,204	Schoolcraft	1,147	1,130
Iron	655	1,781	Shiawassee	327	332
Isabella	417	400	Tuscola	147	129
Jackson	156	425	Van Buren	157	153
Kalamazoo	89	521	Washtenaw	2,170	3,043
Kalkaska	750	210	Wayne	894	40
Kent	554	59	Wexford	721	684
Keweenaw	170	...			
			Total	73,263	81,427

Table 3. --Number and percentage of fishermen interviewed on trout, non-trout and Great Lakes waters, by conservation regions, 1959

Region	Trout waters		Nontrout waters		Great Lakes waters		Total number of anglers
	Number	Percentage	Number	Percentage	Number	Percentage	
I	3,721	31	6,221	52	2,003	17	11,945
II	6,627	19	27,983	78	1,013	3	35,623
III	787	3	19,419	76	5,489	21	25,695
State total	11,135	15	53,623	73	8,505	12	73,263

Table 4. --Number and percentage of total trout catch made up by each of the three species of trout--all trout waters, by conservation regions, 1959

Region	Brook trout		Brown trout		Rainbow trout		Total number of trout
	Number	Percentage	Number	Percentage	Number	Percentage	
I	5,423	80	253	4	1,119	16	6,795
II	2,940	38	1,379	18	3,331	44	7,650
III	570	50	160	14	403	36	1,133
State total	8,933	57	1,792	12	4,853	31	15,578

Table 5.--General creel census data for trout lakes, trout streams and all trout waters by conservation regions, 1959

	Number of anglers	Hours fished	Fish caught	Catch per hour	Trout caught	Trout per hour
<u>Trout lakes</u>						
Region I	949	2,041.0	1,300	0.6	1,300	0.6
Region II	1,226	2,991.0	1,232	0.4	746	0.2
Region III	212	311.5	217	0.7	217	0.7
State total	2,387	5,343.5	2,749	0.5	2,263	0.4
<u>Trout streams</u>						
Region I	2,772	6,529.6	5,596	0.9	5,495	0.8
Region II	5,401	13,662.5	7,303	0.5	6,904	0.5
Region III	575	1,348.8	921	0.7	916	0.7
State total	8,748	21,540.9	13,820	0.6	13,315	0.6
<u>All trout waters</u>						
Region I	3,721	8,570.6	6,896	0.8	6,795	0.8
Region II	6,627	16,653.5	8,535	0.5	7,650	0.5
Region III	787	1,660.3	1,138	0.7	1,133	0.7
State total	11,135	26,884.4	16,569	0.6	15,578	0.6

Table 6.--Percentage of the total catch contributed by the 10 most important species taken in nontrout waters, by conservation regions, 1959

Species	Region I		Region II		Region III	
	Num-ber	Per-cent-age	Num-ber	Per-cent-age	Num-ber	Per-cent-age
Bluegill	2, 327	14	18, 178	27	29, 953	56
Yellow perch	9, 546	55	23, 327	34	6, 059	11
Black crappie	505	3	8, 913	13	6, 623	12
Pumpkinseed	404	2	4, 070	6	3, 347	6
Northern pike	1, 333	8	3, 679	5	503	1
Rock bass	571	3	3, 113	5	1, 388	3
Largemouth bass	242	1	957	1	1, 231	2
Walleye	1, 203	7	677	1	56	↓0
Smallmouth bass	233	1	733	1	336	1
Rainbow trout	282	2	590	1	418	1
Miscellaneous	712	4	4, 335	6	3, 615	7
Total	17, 358	100	68, 572	100	53, 529	100

↓ Less than 0.5

Table 7.--Percentage of the total catch contributed by the 10 most important species taken in nontrout waters, 1950-1959

Species	Year										Mean, 1950- 1959
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	
Bluegill	44	42	40	43	37	35	36	38	40	36	39
Yellow perch	29	34	33	27	31	32	31	27	29	28	30
Black crappie	8	6	8	9	8	11	7	8	9	11	8
Pumpkinseed	4	4	5	5	5	4	5	5	4	6	5
Northern pike	3	3	3	4	5	4	6	4	4	4	4
Rock bass	3	3	4	4	3	3	3	4	3	4	3
Largemouth bass	1	2	2	2	2	2	2	2	1	2	2
Walleye	1	2	2	1	1	2	2	1	2	1	2
Smallmouth bass	1	1	1	1	1	1	1	1	1	1	1
Rainbow trout	↓0	↓0	↓0	↓0	2	2	2	2	1	1	1
Total	94	97	98	96	95	96	95	92	94	94	95

↓ Less than 0.5

Table 8. --Numbers caught and percentage of the total catch contributed by the 10 most important species taken in nontrout waters

Species	Region I		Region II		Region III		Total
	Number	Per- cent- age	Number	Per- cent- age	Number	Per- cent- age	
Bluegill	2, 327	5	18, 178	36	29, 953	59	50, 458
Yellow perch	9, 546	24	23, 327	60	6, 059	16	38, 932
Black crappie	505	3	8, 913	56	6, 623	41	16, 041
Pumpkinseed	404	5	4, 070	52	3, 347	43	7, 821
Northern pike	1, 333	24	3, 679	67	503	9	5, 515
Rock bass	571	11	3, 113	62	1, 388	27	5, 072
Largemouth bass	242	10	957	39	1, 231	51	2, 430
Walleye	1, 203	62	677	35	56	3	1, 936
Smallmouth bass	233	18	733	56	336	26	1, 302
Rainbow trout	282	22	590	46	418	32	1, 290
Miscellaneous	712	8	4, 335	50	3, 615	42	8, 662
Total	17, 358	13	68, 572	49	53, 529	38	139, 459

Table 9.--General creel census data for nontrout lakes, nontrout streams and all nontrout waters combined, by conservation regions, 1959

	Number of anglers	Hours fished	Fish caught	Catch per hour
<u>Nontrout lakes</u>				
Region I	5,776	13,771.6	16,602	1.2
Region II	25,843	54,936.1	63,961	1.2
Region III	15,412	34,366.7	43,409	1.3
State total	47,031	103,074.4	123,972	1.2
<u>Nontrout streams</u>				
Region I	445	1,052.0	756	0.7
Region II	2,140	3,927.5	4,611	1.2
Region III	4,007	8,312.7	10,120	1.2
State total	6,592	13,292.2	15,487	1.2
<u>All nontrout waters</u>				
Region I	6,221	14,823.6	17,358	1.2
Region II	27,983	58,863.6	68,572	1.2
Region III	19,419	42,679.4	53,529	1.3
State total	53,623	116,366.6	139,459	1.2

Table 10.--Percentage of the total catch contributed by the four species
taken most frequently in Great Lakes waters

Species	Year										Mean, 1950- 1959
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	
Yellow perch	96	94	84	85	90	91	86	81	93	93	89
Walleye	1	1	4	1	1	2	3	7	4	3	3
Smallmouth bass	1	1	2	1	1	1	2	1	↓0	1	1
Rock bass	↓0	1	6	4	2	2	3	4	1	1	2
Total	98	97	96	91	94	96	94	93	98	98	95

↓ Less than 0.5

Table 11. --General creel census data for Great Lakes and connecting waters, 1959

Lake or waters	Number of anglers	Hours fished	Fish caught	Catch per hour
Lake Superior	39	93.0	10	0.1
Lake Michigan	1,572	6,421.0	10,355	1.6
Lake Huron	3,494	8,139.6	43,465	5.3
Lake Erie	364	949.0	3,415	3.6
Total, Great Lakes	5,469	15,602.6	57,245	3.7
Waters between Lake Superior and Lake Huron	267	778.0	2,720	3.5
Waters between Lake Huron and Lake Erie	2,769	7,145.5	8,609	1.2
Total, connecting waters	3,036	7,923.5	11,329	1.4
All Great Lakes waters	8,505	23,526.1	68,574	2.9

Table 12. --Number of resident and nonresident anglers and percentage of nonresident anglers in each conservation region, all waters, 1959

Region	Total anglers	Resident anglers	Nonresident anglers	Percentage nonresident anglers
I	11,945	9,249	2,696	23
II	35,623	31,653	3,970	11
III	25,695	22,896	2,799	11
State total	73,263	63,798	9,465	13

Table 13. --Residence of Michigan fishermen interviewed in the general creel census, 1959[↓]

County of residence	Male anglers	Female anglers	Total anglers	County of residence	Male anglers	Female anglers	Total anglers
Alcona	173	22	195	Lake	87	11	98
Alger	512	39	551	Lapeer	432	69	501
Allegan	551	76	627	Leelanau	228	11	239
Alpena	353	53	406	Lenawee	106	16	122
Antrim	362	65	427	Livingston	518	96	614
Arenac	192	24	216	Luce	1,160	91	1,251
Baraga	114	11	125	Mackinac	246	18	264
Barry	577	113	690	Macomb	1,247	242	1,489
Bay	1,696	212	1,908	Manistee	537	35	572
Benzie	562	66	628	Marquette	647	87	734
Berrien	250	56	306	Mason	252	20	272
Branch	318	70	388	Mecosta	352	87	439
Calhoun	371	86	457	Menominee	212	36	248
Cass	97	21	118	Midland	793	127	920
Charlevoix	727	125	852	Missaukee	194	19	213
Cheboygan	611	68	679	Monroe	433	87	520
Chippewa	286	30	316	Montcalm	409	72	481
Clare	345	58	403	Montmorency	276	58	334
Clinton	294	61	355	Muskegon	1,746	226	1,972
Crawford	197	28	225	Newaygo	266	29	295
Delta	547	53	600	Oakland	1,470	305	1,775
Dickinson	277	27	304	Oceana	352	35	387
Eaton	226	46	272	Ogemaw	135	14	149
Emmet	529	74	603	Ontonagon	491	54	545
Genesee	3,148	782	3,930	Osceola	342	27	369
Gladwin	304	35	339	Oscoda	230	23	253
Gogebic	718	82	800	Otsego	177	42	219
Grand Traverse	617	89	706	Ottawa	554	98	652
Gratiot	466	74	540	Presque Isle	190	31	221
Hillsdale	20	13	33	Roscommon	275	51	326
Houghton	341	30	371	Saginaw	2,177	338	2,515
Huron	493	54	547	St. Clair	504	79	583
Ingham	1,910	486	2,396	St. Joseph	413	119	532
Ionia	236	46	282	Sanilac	227	21	248
Iosco	167	11	178	Schoolcraft	462	49	511
Iron	465	48	513	Shiawassee	525	85	610
Isabella	388	61	449	Tuscola	236	44	280
Jackson	485	107	592	Van Buren	125	18	143
Kalamazoo	736	133	869	Washtenaw	1,033	187	1,220
Kalkaska	225	30	255	Wayne	8,185	1,915	10,100
Kent	3,292	756	4,048	Wexford	570	52	622
Keweenaw	35	1	36				
				Total	53,027	9,346	62,373

[↓] The residence of 1,211 males and 214 females was not recorded; therefore, they are not included in Tables 13 and 13a.

Table 13a. --Residence of out-of-state fishermen interviewed
in the general creel census, 1959

State or province of residence	Male anglers	Female anglers	Total anglers
Alaska	2	...	2
Alabama	6	...	6
Arizona	12	...	12
Arkansas	1	...	1
California	18	5	23
Colorado	1	...	1
Florida	33	13	46
Georgia	2	1	3
Illinois	910	258	1,168
Indiana	2,510	728	3,238
Iowa	17	4	21
Kansas	4	2	6
Kentucky	51	17	68
Louisiana	3	...	3
Maine	1	1	2
Maryland	7	2	9
Massachusetts	19	2	21
Minnesota	13	4	17
Mississippi	2	...	2
Missouri	22	4	26
Nebraska	1	...	1
Nevada	1	1	2
New Jersey	11	2	13
New York	26	9	35
North Carolina	2	...	2
Ohio	2,832	719	3,551
Oklahoma	7	4	11
Oregon	3	...	3
Pennsylvania	47	12	59
South Carolina	1	...	1
South Dakota	1	...	1
Tennessee	12	2	14
Texas	7	3	10
Virginia	6	...	6
West Virginia	7	2	9
Wisconsin	951	95	1,046
Washington D. C.	6	2	8
Ontario	16	2	18
Total	7,571	1,894	9,465

Table 14.--Number of resident and nonresident anglers, number of hours fished, number of fish caught and catch per hour for each group--all waters, by conservation regions, 1959

	Number of anglers	Hours fished	Fish caught	Catch per hour
<u>Resident anglers</u>				
Region I	9,249	23,394.5	27,320	1.2
Region II	31,653	70,234.2	92,983	1.3
Region III	22,896	52,945.8	75,071	1.4
State total	63,798	146,574.5	195,374	1.3
<u>Nonresident anglers</u>				
Region I	2,696	7,485.3	13,011	1.7
Region II	3,970	7,853.4	7,656	1.0
Region III	2,799	4,863.9	8,561	1.8
State total	9,465	20,202.6	29,228	1.4

Table 15.--Comparison of data from the general creel census, 1959

Item	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Mean, 1950- 1959
Catch per hour											
All waters	1.6	1.4	1.4	1.3	1.5	1.5	1.3	1.2	1.2	1.3	1.4
Residents	1.7	1.4	1.4	1.3	1.5	1.5	1.3	1.2	1.2	1.3	1.4
Nonresidents	1.1	1.0	1.1	1.0	1.0	1.3	1.1	1.0	1.2	1.4	1.1
Trout waters	0.6	0.8	0.7	0.6	0.8	0.8	0.8	0.8	0.6	0.6	0.7
Residents	0.6	0.8	0.7	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.7
Nonresidents	0.6	0.7	0.7	0.6	0.8	0.8	0.7	0.8	0.7	0.7	0.7
Nontrout waters	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.3
Residents	1.7	1.6	1.5	1.4	1.3	1.3	1.2	1.3	1.2	1.2	1.4
Nonresidents	1.2	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.3	1.1
Great Lakes waters	4.8	3.2	2.6	3.0	3.3	2.8	1.9	1.3	1.9	2.9	2.8
Residents	4.9	3.4	2.6	3.1	3.3	2.8	2.0	1.4	2.0	3.0	2.9
Nonresidents	2.7	1.3	2.8	1.3	2.3	2.1	0.8	0.8	1.3	2.6	1.8
Percentage of all anglers represented by:											
Nonresidents	10	11	10	15	14	13	14	14	13	13	13
Females	16	17	16	16	16	16	16	15	15	16	16
Percentage of trout anglers represented by:											
Nonresidents	7	6	5	8	6	8	9	9	7	7	7
Females	10	10	10	9	8	10	10	10	10	9	10
Percentage of nontrout anglers represented by:											
Nonresidents	12	13	12	17	16	16	17	15	14	14	15
Females	18	19	18	18	17	17	18	17	16	17	18
Percentage of Great Lakes anglers represented by:											
Nonresidents	4	8	5	5	4	4	5	9	9	11	6
Females	13	18	14	16	15	17	15	13	12	13	15

Table 16.--Catch per hour all waters by conservation regions, 1950-1959

Region	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Mean, 1950- 1959
I	1.1	1.0	1.1	1.0	1.0	1.2	1.1	1.1	1.2	1.3	1.1
II	1.5	1.4	1.3	1.3	1.3	1.4	1.1	1.1	1.0	1.3	1.3
III	2.1	1.6	1.7	1.4	1.9	1.6	1.5	1.4	1.6	1.4	1.6
Entire state	1.6	1.4	1.4	1.3	1.5	1.5	1.3	1.2	1.2	1.3	1.4

Table 17.--Catch of trout per hour in trout waters by conservation regions,
1950-1959

Region	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Mean, 1950- 1959
I	0.8	1.0	0.8	0.7	1.0	0.9	0.9	0.8	0.8	0.8	0.9
II	0.5	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.5	0.5	0.6
III	0.6	0.4	0.5	0.6	0.8	0.7	0.5	0.7	0.6	0.7	0.6
Entire state	0.6	0.7	0.7	0.6	0.8	0.8	0.7	0.7	0.6	0.6	0.7

Table 18. --Catch per hour for nontrout waters by conservation regions,

1950-1959

Region	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Mean, 1950- 1959
I	1.2	0.9	1.2	1.2	1.0	1.3	1.3	1.1	1.2	1.2	1.2
II	1.7	1.5	1.4	1.4	1.2	1.3	1.1	1.2	1.1	1.2	1.3
III	1.7	1.7	1.5	1.4	1.5	1.2	1.4	1.4	1.4	1.3	1.5
Entire state	1.6	1.5	1.4	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.3

Table 19. --Catch per hour for Great Lakes waters by conservation regions,

1950-1959

Region	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	Mean, 1950- 1959
I	4.2	0.9	2.3	1.3	0.7	0.9	1.0	1.2	1.3	2.1	1.6
II	5.1	4.7	3.7	4.9	6.9	4.7	4.6	3.3	2.4	9.2	5.0
III	4.8	2.3	2.4	2.9	3.2	2.5	1.8	1.3	2.2	2.2	2.6
Entire state	4.8	3.2	2.6	3.0	3.3	2.8	1.9	1.3	1.9	2.9	2.8

Table 20. -- Total fishing time reported (thousands of hours) and catch per hour for various waters, 1928-1959

Year	Thousands of hours reported	Catch per hour			
		All waters	Trout waters	Nontrout waters	Great Lakes waters ¹
1928	48	1.1	1.2	1.1	...
1929	52	1.0	1.2	0.9	...
1930	74	0.9	0.9	0.9	...
1931	63	0.9	1.0	0.9	...
1932	38	1.3	1.1	1.3	...
1933	47	1.0	0.7	1.3	...
1934	53	1.7	0.8	1.8	...
1935	59	1.6	0.8	1.9	...
1936	67	1.4	0.8	1.7	...
1937	62	1.5	0.8	1.7	...
1938	82	1.3	0.9	1.4	...
1939	109	1.1	0.8	1.1	...
1940	98	1.0	0.8	1.0	...
1941	118	1.0	0.8	1.1	...
1942	151	1.1	0.9	1.1	1.7
1943	103	1.2	0.9	1.2	1.6
1944	152	1.2	0.8	1.1	1.8
1945	144	1.1	0.8	1.1	2.2
1946	145	1.3	0.8	1.4	1.6
1947	96	1.4	0.8	1.4	2.7
1948	161	1.1	0.8	1.1	2.9
1949	168	1.3	0.7	1.3	3.1
1950	130	1.6	0.6	1.6	4.8
1951	123	1.4	0.8	1.5	3.2
1952	123	1.4	0.7	1.4	2.6
1953	148	1.3	0.6	1.4	3.0
1954	169	1.5	0.8	1.3	3.3
1955	147	1.5	0.8	1.3	2.8
1956	175	1.3	0.8	1.2	1.9
1957	209	1.2	0.8	1.2	1.3
1958	194	1.2	0.6	1.2	1.9
1959	167	1.3	0.6	1.2	2.9
Unweighted mean	115	1.3	0.8	1.3	2.5

¹Data for the Great Lakes were included with "nontrout waters" prior to 1942.