

MICHIGAN DEPARTMENT OF CONSERVATION
Research and Development Report No. 74*

August 1, 1966

THE MICHIGAN GENERAL CREEL CENSUS FOR 1963¹

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The Michigan General Creel Census has been conducted by conservation officers since 1927 as a part of their regular duties (1963 was the thirty-seventh consecutive year). The object 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 Research and Development Division are not included.

During 1963 the officers obtained records for 63,047 angler trips, divided into three major categories--trout, nontrout, and Great Lakes waters; each category was further subdivided into lakes and streams. It is believed that this division of the data gives the best available indication of the fishing quality in the different types of waters administered by the state. The number of anglers interviewed from different types of waters were as follows: (1) trout waters, 7,557 (12% of all anglers contacted), of whom 1,893 fished in designated trout lakes and special trout ponds and 5,664 fished in streams; (2) nontrout waters, 49,696 (79%), of whom 44,346 fished in lakes and 5,350 fished in streams; (3) Great Lakes waters, 5,794 (9%), of whom 3,380 fished in the Great Lakes and 2,414 fished in the connecting waters.

* Institute for Fisheries Research Report No. 1726.

¹ Contribution from Dingell-Johnson Project F-27-R, Michigan

Of the 63,047 anglers interviewed, 7,873 (12%) were non-residents; 9,729 (15%) were women.

Officers contacted anglers either while an angler was fishing or at the end of a fishing trip. Thus, this census is a partial rather than a complete record for these fishing trips. Only legal-size fish caught by sport fishermen are considered. In this report the various types of waters are grouped by Conservation Department Regions.

Detailed analysis

The 63,047 anglers contacted by conservation officers during 1963 (9% fewer than in 1962) had fished 133,888.6 hours and caught 141,943 fish (Table 1). The average catch per hour for all fishing was 1.1 which is the same as that recorded in 1962.

Angling records were collected in 80 counties (Table 2). The lack of fishing records from three counties (Berrien, Hillsdale, and Saginaw) and the paucity of records from a few others tend to bias the state-wide sample of fishing.

Fishing in trout, nontrout, and

Great Lakes waters

The numbers and percentages of anglers interviewed while fishing in various waters are given in Table 3. Regions I and II combined furnished 87% of all the records on trout fishing; trout-fishing reports made up 16% of the total angler trips. Thirteen per cent of the

records on trout fishing were from Region III, where trout-fishing reports comprised only 4% of the total fishing censused.

Nontrout fishing records constituted the largest percentage from Region II (86% of 30, 829 anglers) and the smallest percentage from Region I (53% of 9, 609 anglers).

Almost a sixth of the anglers interviewed in Region III (16% of 22, 609 anglers) were fishing Great Lakes waters.

Number of trout caught in

trout waters

Of the 8, 780 trout recorded during 1963, brook trout constituted 58%; rainbow trout, 28%; and brown trout, 14% of the catch (Table 4). In 1962 these percentages were 61, 26, and 13, respectively.

The 5, 131 brook trout taken in 1963 were divided as follows: Region I, 2, 813 (55%); Region II, 1, 782 (35%); and Region III, 536 (10%). Of 2, 452 rainbow trout reported, Region II contributed 1, 494 (61%); Region III, 597 (24%); Region I, 361 (15%). Of 1, 197 brown trout recorded, 883 (74%) were caught in Region II; 257 (21%) in Region III; and 57 (5%) in Region I.

Of the 8, 780 brook, brown, and rainbow trout reported from trout waters, 84% were caught in northern Michigan (Regions I and II combined).

Other species caught in trout waters

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

Suckers	255	Pumpkinseed	12
Round whitefish	138	Walleye	8
Yellow perch	71	Bluegill	5
Splake	31	Redhorse	5
Rock bass	29	Smallmouth bass	5
American smelt	24	Chubs	3
Northern pike	18	Black crappie	1
		Total	<u>605</u>

Catch per hour--trout waters

Trout fishermen had the same fishing success (0.5 fish per hour) as they did in 1962 (Table 5). The fishing quality index (trout only) was 0.5 trout per hour for trout streams and 0.4 trout for the designated trout lakes and special trout ponds. The highest trout per hour for trout lakes (0.5 trout) was recorded in Region II and for trout streams (0.6 trout), in Region III. Most of the trout fishermen (75%) fished the streams.

Composition of catch--nontrout waters

Conservation officers recorded 31 kinds of fish from nontrout waters. Bluegills and yellow perch together made up 62% of the total (68% in Region I, 54% in Region II, and 69% in Region III--see Table 6). The black crappie and walleye were the only other species that made up at least 10% of the total catch in any one region (black crappie comprised 13% in Region III and walleye, 11% in Region I). Other important species recorded were pumpkinseed, rock bass, northern pike,

largemouth bass, rainbow trout, and smallmouth bass. The 10 species mentioned have retained approximately the same rank in importance during the 10-year period 1954-1963 (Table 7). In 1963 these 10 species comprised 92% of the total recorded catch and at least 85% of the catch in every region. The remaining 21 kinds made up 8% of the catch and are listed below:

American smelt	3,220	Redhorse	30
Suckers	3,033	Warmouth	12
Bullheads	1,125	Lake whitefish	8
Carp	371	Bowfin	7
Brook trout	256	Gars	7
Cisco	222	Muskellunge	6
Lake trout	208	White bass	4
Brown trout	127	Chubs	3
Freshwater drum	74	Sturgeon	2
Sauger	71	Burbot	<u>1</u>
Catfishes	42	Total	8,829

The species composition of the catch is summarized in Table 8 by conservation regions in terms of the percentage of the total state catch for each species recorded in each region. The bluegill outranked all other species in the whole state (42,432 reported). Most of the bluegills (70% of the state total), black crappie, pumpkinseed, and largemouth bass recorded were caught in Region III. Region II showed the highest catches of yellow perch (55% of total for the state), rock bass, northern pike, rainbow trout, and smallmouth bass. The greatest number of walleyes (57% of 2,237) recorded were caught in Region I. Regions II

and III combined produced 96% of all bluegills recorded in the census. Brook, brown, and rainbow trout made up 2% of the total catch from nontrout waters.

Catch per hour--nontrout waters

In 1963 the catch per hour from nontrout waters for the entire state was 1.1 fish (Table 9), the same as in 1962. The highest catch per hour (1.4 fish) was recorded in Region III. Fishing quality was best in the nontrout lakes (1.4 fish per hour) and nontrout streams (1.0 fish per hour) of Region III.

Composition of catch--Great Lakes waters

Of the 24,705 fish recorded from Great Lakes waters in 1963, yellow perch made up 91% of the catch; walleyes, rock bass, northern pike, and smallmouth bass together contributed 6% (Table 10). The remaining 3% were made up of 16 other kinds of fish as follows:

Pumpkinseed	201	White bass	35
Round whitefish	88	Catfishes	16
Freshwater drum	79	Muskellunge	15
Bullheads	53	Rainbow trout	15
Bluegill	38	Carp	4
Crappies	38	Brook trout	2
American smelt	37	Mooneye	1
Largemouth bass	36	Sucker	<u>1</u>
		Total	659

Catch per hour--Great Lakes waters

As in recent years, the data for Great Lakes waters were tabulated separately for each lake and each connecting water. Table 11 shows the influence of the high catch per hour from Lake Huron (2.1 fish) on the fishing quality index for the Great Lakes waters. The average catch per hour for all Great Lakes and connecting waters was 1.6 fish (2.0 for the Great Lakes and 0.9 for the connecting waters).

Residence of anglers--all waters

In the 1963 general creel census, 55,174 anglers (88%) were residents of Michigan and 7,873 anglers (12%) were nonresidents (Table 12). The greatest number of nonresident anglers (3,170) was recorded in Region II where they constituted 10% of the total, but nonresident anglers constituted 18% of the anglers interviewed in Region I.

Anglers residing in all 83 Michigan counties were reported in the census (Table 13). Residents of four counties comprised 30% of the total; Wayne, 14%; Kent, 6%; Genesee, 6%; and Oakland, 4%.

Nonresident anglers came from 32 states, the District of Columbia, Ontario, Australia, Germany, Netherlands, New Zealand and Switzerland (Table 13a). Ohio contributed 46% of all nonresidents; Indiana, 34%; Illinois, 13%; and Wisconsin, 3% (total for the four states bordering Michigan, 96%).

Resident anglers caught fish at an average rate of 1.0 per hour (all waters combined); nonresident, 1.2 (Table 14).

Sex of anglers

Of 63,047 anglers interviewed in 1963, 9,729 (15%) were women. They constituted 8% of the trout anglers, 17% of the nontrout anglers, and 13% of the fishermen on the Great Lakes (Table 15).

Comparison of 1963 data with those

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 1.0 fish in 1961 to 1.5 in 1954 and 1955 (Table 16). The 1963 catch rate for all waters was 1.1 fish per hour which is 0.1 fish below the simple average for the 10-year period.

During 1954-1963 the catch per hour of trout in trout waters has ranged between 0.5 and 0.8 trout per hour (Table 17). The high catches during this period were in 1954 and 1955, and the low catches were in 1962 and 1963.

For nontrout waters the highest catch per hour was recorded in 1954, 1955, and 1960 (1.3 fish); the lowest in 1961, 1.0 fish (Table 18). The 1963 catch for nontrout waters was 1.1 fish per hour which is 0.1 fish below the simple 10-year average.

Between 1942 and 1963 the catch per hour has been consistently higher for the Great Lakes waters than for either trout or other inland waters (Table 20). During the 1954-1963 period, anglers fishing the Great Lakes waters averaged 2.1 fish per hour as compared to an average of 1.2 fish per hour in nontrout waters. In Great Lakes waters

the catch per hour has varied from 1.3 in 1957 to 3.3 in 1954. The 1963 catch per hour was 0.4 fish below the average for the 10-year period.

Acknowledgments

Mr. Gerald Kennedy and his staff in Administrative Services tabulated the data with IBM equipment. Mrs. Grace G. Hubbell assisted in the coding and analysis of the data.

INSTITUTE FOR FISHERIES RESEARCH

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Report approved by M. H. Patriarche

Typed by M. S. McClure

Table 1. --Total number of anglers interviewed, hours fished, number of fish caught, and catch per hour for each conservation region, all waters, 1963

Region	Male anglers	Female anglers	Total anglers	Hours fished	Fish caught	Fish per hour
I	8,387	1,222	9,609	22,516.0	18,374	0.8
II	25,755	5,074	30,829	61,776.4	57,613	0.9
III	19,176	3,433	22,609	49,596.2	65,956	1.3
State totals	53,318	9,729	63,047	133,888.6	141,943	1.1

Table 2. --Number of anglers interviewed by conservation officers during
1962 and 1963, by counties

County	1962	1963	County	1962	1963
Alcona	406	1,069	Lake	626	363
Alger	979	1,131	Lapeer	771	827
Allegan	1,359	918	Leelanau	493	522
Alpena	1,445	2,131	Lenawee	431	546
Antrim	664	812	Livingston	1,263	1,447
Arenac	895	941	Luce	856	919
Baraga	139	230	Mackinac	1,106	930
Barry	2,238	940	Macomb	1,698	1,017
Bay	354	209	Manistee	1,579	1,163
Benzie	1,045	664	Marquette	1,955	1,403
Berrien	401	-	Mason	774	1,078
Branch	1,848	1,955	Mecosta	1,604	1,706
Calhoun	95	175	Menominee	390	87
Cass	1,527	979	Midland	367	153
Charlevoix	1,399	1,219	Missaukee	1,174	484
Cheboygan	2,507	2,164	Monroe	347	175
Chippewa	1,296	1,293	Montcalm	378	310
Clare	388	358	Montmorency	2,069	1,698
Clinton	170	60	Muskegon	2,899	1,530
Crawford	497	535	Newaygo	964	1,656
Delta	298	212	Oakland	1,937	1,987
Dickinson	621	262	Oceana	618	885
Eaton	-	35	Ogemaw	172	257
Emmet	1,405	1,220	Ontonagon	973	270
Genesee	517	906	Osceola	244	922
Gladwin	1,247	588	Oscoda	444	508
Gogebic	966	527	Otsego	763	564
Grand Traverse	648	351	Ottawa	428	432
Gratiot	138	134	Presque Isle	806	933
Hillsdale	307	-	Roscommon	890	1,553
Houghton	710	757	Saginaw	131	-
Huron	1,137	1,302	St. Clair	943	914
Ingham	132	298	St. Joseph	375	788
Ionia	212	207	Sanilac	720	717
Iosco	925	1,870	Schoolcraft	1,098	834
Iron	856	744	Shiawassee	86	219
Isabella	210	237	Tuscola	1,248	595
Jackson	1,143	1,602	Van Buren	256	122
Kalamazoo	491	269	Washtenaw	1,717	2,039
Kalkaska	682	412	Wayne	631	493
Kent	398	201	Wexford	348	74
Keweenaw	118	10			
			Total	69,385	63,047

Table 3. --Number and percentage of fishermen interviewed on trout, nontrout, and Great Lakes waters, by conservation regions, 1963

Region	Trout waters		Nontrout waters		Great Lakes waters		Total anglers
	Number	Per cent	Number	Per cent	Number	Per cent	
I	3,194	33	5,072	53	1,343	14	9,609
II	3,352	11	26,611	86	866	3	30,829
III	1,011	4	18,013	80	3,585	16	22,609
State totals	7,557	12	49,696	79	5,794	9	63,047

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, 1963

Region	Brook trout		Brown trout		Rainbow trout		Total trout
	Number	Per cent	Number	Per cent	Number	Per cent	
I	2,813	87	57	2	361	11	3,231
II	1,782	43	883	21	1,494	36	4,159
III	536	39	257	18	597	43	1,390
State totals	5,131	58	1,197	14	2,452	28	8,780

Table 5. --General creel census data for trout lakes, trout streams,
and all trout waters by conservation regions, 1963

	Number of anglers	Hours fished	Fish caught	Fish per hour	Trout caught	Trout per hour
<u>Trout lakes</u>						
Region I	1,316	2,997.5	1,234	0.4	1,182	0.4
Region II	385	860.6	442	0.5	442	0.5
Region III	192	332.0	138	0.4	138	0.4
State totals	1,893	4,190.1	1,814	0.4	1,762	0.4
<u>Trout streams</u>						
Region I	1,878	4,400.5	2,395	0.5	2,049	0.5
Region II	2,967	7,271.1	3,909	0.5	3,717	0.5
Region III	819	2,177.5	1,267	0.6	1,252	0.6
State totals	5,664	13,849.1	7,571	0.5	7,018	0.5
<u>All trout waters</u>						
Region I	3,194	7,398.0	3,629	0.5	3,231	0.4
Region II	3,352	8,131.7	4,351	0.5	4,159	0.5
Region III	1,011	2,509.5	1,405	0.6	1,390	0.6
State totals	7,557	18,039.2	9,385	0.5	8,780	0.5

Table 6. --Percentage of the total catch of all species in each region contributed by each of the 10 most important species caught in nontrout waters, 1963

Species	Region I		Region II		Region III	
	Number	Per cent	Number	Per cent	Number	Per cent
Bluegill	1, 630	14	11, 227	25	29, 575	59
Yellow perch	6, 445	54	13, 437	29	4, 748	10
Black crappie	110	1	3, 962	9	6, 606	13
Pumpkinseed	365	3	1, 993	4	3, 522	7
Rock bass	541	4	2, 423	5	1, 331	3
Northern pike	716	6	2, 924	6	260	1
Walleye	1, 269	11	958	2	10	- ^a
Largemouth bass	150	1	494	1	1, 220	2
Rainbow trout	84	1	937	2	578	1
Smallmouth bass	117	1	881	2	511	1
Miscellaneous	441	4	6, 941	15	1, 447	3
Totals	11, 868	100	46, 177	100	49, 808	100

^a Less than 0. 5%.

Table 7. --Percentage of the total catch contributed by the 10 most important species taken in nontrout waters, 1954-1963

Species	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
Bluegill	37	35	36	38	40	36	39	37	35	39	37
Yellow perch	31	32	31	27	29	28	32	25	31	23	29
Black crappie	8	11	7	8	9	11	9	10	9	10	9
Pumpkinseed	5	4	5	5	4	6	5	6	6	5	5
Northern pike	5	4	6	4	4	4	2	3	2	4	4
Rock bass	3	3	3	4	3	4	3	4	3	4	3
Largemouth bass	2	2	2	2	1	2	1	2	2	2	2
Walleye	1	2	2	1	2	1	1	2	2	2	2
Rainbow trout	2	2	2	2	1	1	1	2	1	2	2
Smallmouth bass	1	1	1	1	1	1	1	1	1	1	1
Totals	95	96	95	92	94	94	94	92	92	92	94

Table 8. --Percentage of the total state catch of each of the 10 most important species caught in nontrout waters, contributed by each region, 1963

Species	Region I		Region II		Region III		Total
	Number	Per cent	Number	Per cent	Number	Per cent	
Bluegill	1,630	4	11,227	26	29,575	70	42,432
Yellow perch	6,445	26	13,437	55	4,748	19	24,630
Black crappie	110	1	3,962	37	6,606	62	10,678
Pumpkinseed	365	6	1,993	34	3,522	60	5,880
Rock bass	541	13	2,423	56	1,331	31	4,295
Northern pike	716	18	2,924	75	260	7	3,900
Walleye	1,269	57	958	43	10	- ^a	2,237
Largemouth bass	150	8	494	27	1,220	65	1,864
Rainbow trout	84	5	937	59	578	36	1,599
Smallmouth bass	117	8	881	58	511	34	1,509
Miscellaneous	441	5	6,941	79	1,447	16	8,829
Totals	11,868	11	46,177	43	49,808	46	107,853

^a Less than 0.5%.

Table 9. --General creel census data for nontrout lakes, nontrout streams, and all nontrout waters combined, by conservation regions, 1963

	Number of anglers interviewed	Hours fished	Fish caught	Fish per hour
<u>Nontrout lakes</u>				
Region I	4, 616	10, 884. 6	11, 119	1. 0
Region II	24, 687	47, 744. 5	42, 035	0. 9
Region III	15, 043	30, 301. 0	43, 914	1. 4
State totals	44, 346	88, 930. 1	97, 068	1. 1
<u>Nontrout streams</u>				
Region I	456	1, 236. 5	749	0. 6
Region II	1, 924	4, 022. 2	4, 142	1. 0
Region III	2, 970	5, 813. 4	5, 894	1. 0
State totals	5, 350	11, 072. 1	10, 785	1. 0
<u>All nontrout waters</u>				
Region I	5, 072	12, 121. 1	11, 868	1. 0
Region II	26, 611	51, 766. 7	46, 177	0. 9
Region III	18, 013	36, 114. 4	49, 808	1. 4
State totals	49, 696	100, 002. 2	107, 853	1. 1

Table 10. --Percentage of the total catch contributed by the five species taken most frequently in Great Lakes waters, 1954-1963

Species	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
Yellow perch	90	91	86	81	93	93	86	74	78	91	86
Walleye	1	2	3	7	4	3	3	11	10	1	5
Rock bass	2	2	3	4	1	1	4	4	4	2	3
Northern pike	1	- ^a	- ^a	2	1	1	1	2	1	1	1
Smallmouth bass	1	1	2	1	- ^a	1	3	2	1	2	1
Totals	95	96	94	95	99	99	97	93	94	97	96

^a Less than 0.5.

Table 11. --General creel census data for Great Lakes and connecting waters,
1963

Lake or waters	Number of anglers	Hours fished	Fish caught	Fish per hour
Lake Superior	79	160.0	114	0.7
Lake Michigan	223	804.0	225	0.3
Lake Huron	2,999	8,486.8	18,171	2.1
Lake Erie	79	159.5	640	4.0
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Totals, Great Lakes	3,380	9,610.3	19,150	2.0
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Waters between Lake Superior and Lake Huron	837	1,692.9	1,107	0.7
Waters between Lake Huron and Lake Erie	1,577	4,544.0	4,448	1.0
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Totals, connecting waters	2,414	6,236.9	5,555	0.9
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All Great Lakes and connecting waters	5,794	15,847.2	24,705	1.6
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Table 12. --Number of resident and nonresident anglers interviewed,
and percentage of nonresident anglers in each conservation region,
all waters, 1963

Region	Total anglers	Resident anglers	Nonresident anglers	Per cent nonresident anglers
I	9,609	7,908	1,701	18
II	30,829	27,659	3,170	10
III	22,609	19,607	3,002	13
State totals	63,047	55,174	7,873	12

Table 13. --Residence of Michigan fishermen interviewed in the general creel census, 1963^a

County of residence	Male anglers	Female anglers	Total	County of residence	Male anglers	Female anglers	Total
Alcona	179	35	214	Lake	38	15	53
Alger	518	38	556	Lapeer	389	84	473
Allegan	432	68	500	Leelanau	142	15	157
Alpena	982	143	1,125	Lenawee	131	42	173
Antrim	322	61	383	Livingston	158	37	195
Arenac	172	27	199	Luce	615	42	657
Baraga	88	7	95	Mackinac	177	26	203
Barry	384	70	454	Macomb	1,153	206	1,359
Bay	1,159	194	1,353	Manistee	606	50	656
Benzie	233	15	248	Marquette	1,298	151	1,449
Berrien	431	102	533	Mason	276	44	320
Branch	426	98	524	Mecosta	390	63	453
Calhoun	454	106	560	Menominee	112	1	113
Cass	127	18	145	Midland	550	120	670
Charlevoix	642	87	729	Missaukee	147	11	158
Cheboygan	379	64	443	Monroe	322	64	386
Chippewa	446	72	518	Montcalm	250	50	300
Clare	139	29	168	Montmorency	326	55	381
Clinton	158	36	194	Muskegon	1,590	277	1,867
Crawford	173	24	197	Newaygo	189	41	230
Delta	247	23	270	Oakland	1,769	302	2,071
Dickinson	444	20	464	Oceana	168	31	199
Eaton	202	37	239	Ogemaw	99	13	112
Emmet	623	108	731	Ontonagon	245	11	256
Genesee	2,825	485	3,310	Osceola	362	49	411
Gladwin	237	49	286	Oscoda	131	16	147
Gogebic	490	34	524	Otsego	183	40	223
Grand Traverse	219	33	252	Ottawa	412	52	464
Gratiot	256	42	298	Presque Isle	420	37	457
Hillsdale	67	11	78	Roscommon	248	54	302
Houghton	334	32	366	Saginaw	1,548	302	1,850
Huron	478	22	500	St. Clair	517	44	561
Ingham	1,556	425	1,981	St. Joseph	439	67	506
Ionia	185	24	209	Sanilac	283	33	316
Iosco	308	27	335	Schoolcraft	394	51	445
Iron	205	19	224	Shiawassee	228	53	281
Isabella	299	42	341	Tuscola	623	44	667
Jackson	1,392	264	1,656	Van Buren	127	26	153
Kalamazoo	627	114	741	Washtenaw	1,058	223	1,281
Kalkaska	161	12	173	Wayne	6,535	1,351	7,886
Kent	2,834	581	3,415	Wexford	233	34	267
Keweenaw	8	-	8				
				Totals	46,722	7,925	54,647

^a The residence of 415 males and 112 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, 1963

State, province, or country of residence	Male anglers	Female anglers	Total
Arizona	4	2	6
Arkansas	1	-	1
California	13	4	17
Colorado	1	-	1
Connecticut	5	1	6
Delaware	1	1	2
Florida	27	5	32
Georgia	3	-	3
Illinois	814	205	1,019
Indiana	2,108	564	2,672
Iowa	2	1	3
Kansas	3	2	5
Kentucky	32	7	39
Louisiana	4	-	4
Maryland	2	1	3
Massachusetts	1	1	2
Minnesota	9	2	11
Mississippi	1	1	2
Missouri	12	4	16
Montana	2	-	2
Nebraska	3	2	5
New Jersey	6	1	7
New York	7	5	12
Ohio	2,777	840	3,617
Oklahoma	3	1	4
Oregon	2	-	2
Pennsylvania	42	7	49
Tennessee	2	2	4
Texas	11	1	12
Virginia	7	1	8
West Virginia	8	1	9
Wisconsin	255	29	284
Washington, D. C.	1	1	2
Ontario	4	-	4
Australia	1	-	1
Germany	2	-	2
Netherlands	1	-	1
New Zealand	3	-	3
Switzerland	1	-	1
Totals	6,181	1,692	7,873

Table 14. --Number of resident and nonresident anglers interviewed, hours fished, fish caught, and catch per hour for each group--all waters, by conservation regions, 1963

	Number of anglers	Hours fished	Fish caught	Catch per hour
<u>Resident anglers</u>				
Region I	7,908	18,763.3	15,433	0.8
Region II	27,659	56,640.2	53,592	0.9
Region III	19,607	43,877.4	55,520	1.3
State totals	55,174	119,280.9	124,545	1.0
<u>Nonresident anglers</u>				
Region I	1,701	3,752.7	2,941	0.8
Region II	3,170	5,136.2	4,021	0.8
Region III	3,002	5,718.8	10,436	1.8
State totals	7,873	14,607.7	17,398	1.2

Table 15. --Comparison of data from the general creel census, 1954-1963

Item	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
Catch per hour											
All waters	1.5	1.5	1.3	1.2	1.2	1.3	1.3	1.0	1.1	1.1	1.3
Residents	1.5	1.5	1.3	1.2	1.2	1.3	1.3	1.0	1.1	1.0	1.2
Nonresidents	1.0	1.3	1.1	1.0	1.2	1.4	1.0	0.9	1.0	1.2	1.1
Trout waters	0.8	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.5	0.7
Residents	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.7
Nonresidents	0.8	0.8	0.7	0.8	0.7	0.7	0.5	0.5	0.3	0.5	0.6
Nontrout waters	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.0	1.1	1.1	1.2
Residents	1.3	1.3	1.2	1.3	1.2	1.2	1.3	1.0	1.2	1.1	1.2
Nonresidents	1.1	1.1	1.1	1.1	1.2	1.3	1.0	0.9	1.1	1.3	1.1
Great Lakes waters	3.3	2.8	1.9	1.3	1.9	2.9	2.2	1.5	1.7	1.6	2.1
Residents	3.3	2.8	2.0	1.4	2.0	3.0	2.4	1.6	1.7	1.6	2.2
Nonresidents	2.3	2.1	0.8	0.8	1.3	2.6	1.3	1.1	1.2	0.7	1.4
Percentage of all anglers represented by:											
Nonresidents	14	13	14	14	13	13	12	13	14	12	13
Females	16	16	16	15	15	16	14	14	15	15	15
Percentage of trout anglers represented by:											
Nonresidents	6	8	9	9	7	7	7	5	7	4	7
Females	8	10	10	10	10	9	8	7	7	8	9
Percentage of nontrout anglers represented by:											
Nonresidents	16	16	17	15	14	14	13	15	16	14	15
Females	17	17	18	17	16	17	15	15	17	17	17
Percentage of Great Lakes anglers represented by:											
Nonresidents	4	4	5	9	9	11	11	6	8	7	7
Females	15	17	15	13	12	13	12	14	12	13	14

Table 16. --Catch per hour for all waters, by conservation regions, 1954-1963

Region	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
I	1.0	1.2	1.1	1.1	1.2	1.3	0.9	0.9	0.8	0.8	1.0
II	1.3	1.4	1.1	1.1	1.0	1.3	1.2	0.9	1.0	0.9	1.1
III	1.9	1.6	1.5	1.4	1.6	1.4	1.6	1.2	1.4	1.3	1.5
Entire state	1.5	1.5	1.3	1.2	1.2	1.3	1.3	1.0	1.1	1.1	1.2

Table 17. --Catch of trout per hour in trout waters, by conservation regions, 1954-1963

Region	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
I	1.0	0.9	0.9	0.8	0.8	0.8	0.6	0.7	0.5	0.5	0.8
II	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.4	0.5	0.6
III	0.8	0.7	0.5	0.7	0.6	0.7	0.6	0.6	0.5	0.6	0.6
Entire state	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.6

Table 18. --Catch per hour for nontrout waters, by conservation regions,
1954-1963

Region	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
I	1.0	1.3	1.3	1.1	1.2	1.2	0.9	0.9	0.9	1.0	1.1
II	1.2	1.3	1.1	1.2	1.1	1.2	1.3	0.9	1.0	0.9	1.1
III	1.5	1.2	1.4	1.4	1.4	1.3	1.4	1.1	1.5	1.4	1.4
Entire state	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.0	1.1	1.1	1.2

Table 19. --Catch per hour for Great Lakes waters, by conservation regions,
1954-1963

Region	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	Mean, 1954- 1963
I	0.7	0.9	1.0	1.2	1.3	2.1	1.4	1.1	1.1	1.0	1.2
II	6.9	4.7	4.6	3.3	2.4	9.2	2.2	2.4	5.7	3.8	4.5
III	3.2	2.5	1.8	1.3	2.2	2.2	2.6	1.5	1.4	1.3	2.0
Entire state	3.3	2.8	1.9	1.3	1.9	2.9	2.2	1.5	1.7	1.6	2.1

Table 20. --Total fishing time reported (thousands of hours) and catch per hour for various waters, 1928-1963

Year	Thousands of hours reported	Catch per hour			
		All waters	Trout waters	Nontrout waters	Great Lakes waters ^a
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
1960	187	1.3	0.6	1.3	2.2
1961	167	1.0	0.6	1.0	1.5
1962	146	1.1	0.5	1.1	1.7
1963	134	1.1	0.5	1.1	1.6
Unweighted					
mean	120	1.2	0.8	1.3	2.4

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