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#### **INSTITUTE FOR FISHERIES RESEARCH**

DIVISION OF FISHERIES MICHIGAN DEPARTMENT OF CONSERVATION COOPERATING WITH THE UNIVERSITY OF MICHIGAN

GERALD R COOPER PH.D. DIRECTOR

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THE MICHIGAN GENERAL CREEL CENSUS FOR 1962

By K. G. Fukano

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

During 1962, the officers secured records on 69,385 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, 8,629 (12% of all anglers interviewed), of whom 2,200 fished in designated trout lakes and special trout ponds and 6,429 fished in streams; (2) nontrout waters, 54,035 (78%), of whom 47,478 fished in lakes and 6,557 fished in streams; (3) Great Lakes waters, 6,721 (10%), of whom 3,394 fished in the Great Lakes and 3,327 fished in the connecting waters.

Of the 69, 385 anglers interviewed 9, 555 (14%) were nonresidents; 10,585 (15%) were women.

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 69,385 angling trips. It represents fewer than 69,385 individual anglers, for some may have been interviewed on more than one trip. Only legal-size fish are included in the summary, and the census is restricted to sport fishing.

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

### Detailed Analysis

The 69, 385 anglers (6% fewer than in 1961) contacted by conservation officers during 1962 had fished 145, 987 hours and had caught 164, 351 fish. The average catch per hour of all fishing was 1.1 or 0.1 higher than in 1961 (Table 1).

Records were obtained in 82 counties (Table 2). Some bias in the state-wide sample results from the fact that no records were obtained from Eaton County and that fewer than 200 were secured from certain other counties (Baraga, Calhoun, Clinton, Gratiot, Ingham, Keweenaw, Ogemaw, Saginaw and Shiawassee).

# Fishing in Trout, Nontrout and Great Lakes Waters

The numbers and percentages of anglers interviewed while fishing in the various waters are given in Table 3. Regions I and II

furnished 92 percent of all records of trout fishing; Region III, 8 percent. In Regions I and II, 18 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 (87% of 31,577 anglers) and the smallest percentage from Region I (53% of 12,361 anglers).

Over a sixth of the anglers interviewed in Region III (18% of 25,447 anglers) were fishing Great Lakes waters.

### Number of Trout Caught in Trout Waters

Of the 9,460 trout recorded during 1962, brook trout comprised 61 percent; rainbow trout, 26 percent; and brown trout, 13 percent (Table 4). In 1961 these percentages were 62, 26 and 12, respectively.

The 5,789 brook trout taken in 1962 were divided as follows:
Region I, 3,953 (68%); Region II, 1,377 (24%); and Region III, 459 (8%).
Of 2,436 rainbow trout reported, Region II contributed 1,486 (61%);
Region I, 707 (29%); Region III, 243 (10%). Of 1,235 brown trout recorded, 854 (69%) were caught in Region II; 212 (17%), in Region I; and 169 (14%), in Region III.

From Regions I and II came 91 percent of the 9,460 trout reported from the trout waters.

# Other Species Caught in Trout Waters

Brook, brown and rainbow trout constituted 91 percent of all fish taken in trout waters. The number of each of 15 other kinds of fish reported were as follows:

Suckers	550	Bluegill	10
Walleye	94	Smallmouth bass	10
Splake	93	Lake trout	7
American smelt	66	Black crappie	2
Yellow perch	53	Pumpkinseed	2
Rock bass	40	Largemouth bass	1
Northern pike	26	Chub	1_
Round whitefish	19	Total	974

### Catch per Hour--Trout Waters

As shown in Table 5 trout fishermen caught 0.5 fish per hour, 0.1 fish below the catch in 1961. The fishing quality index (trout only) was 0.5 trout per hour for both trout streams and for the designated trout lakes and special trout ponds. The highest catch per hour for trout streams (0.5 trout) was reported from Regions I and III, whereas the highest catch per hour for trout lakes (0.7) was recorded in Region II.

Most (75%) of the trout fishermen contacted fished on streams.

# Composition of Catch--Nontrout Waters

Conservation officers recorded 29 kinds of fish from nontrout waters. Bluegill and yellow perch together made up 66 percent of the catch (67% in Region I, 52% in Region II and 77% in Region III--see Table 6). The black crappie and walleye were the only other species that made up as much as 10 percent of the total catch in a region (black crappie comprised 12% in Region II and walleye, 11% in Region I). Other species important in the catch were: pumpkinseed, rock bass,

northern pike, largemouth bass, rainbow trout and smallmouth bass. The 10 species mentioned above have retained approximately the same rank in importance during the 10-year period 1953-1962 (Table 7). In 1962 these 10 species made up 92 percent of the total recorded catch and at least 84 percent of the catch in every region. The remaining 19 kinds of fish made up 8 percent and are listed below.

American smelt	4,225	Whitefish	13
Suckers	3,742	Freshwater drum	10
Bullheads	638	Gar	10
Cisco	490	Green sunfish	10
Brook trout	294	Sauger	7
Carp	231	Muskellunge	6
Lake trout	180	Warmouth	6
Catfishes	121	Redhorse	6
Brown trout	52	White bass	3_
Bowfin	16	Total 10,	060

In Table 8 is presented the state-wide catch (as recorded in the census) of the 10 important species and the number and percentage contributed by each region. The bluegill was the dominant species (42,781 reported) in the state as a whole. Most bluegill (67% of the state total), yellow perch and largemouth bass were recorded in Region III (from which almost half of the total nontrout catch recorded for 1962 was taken). Region II yielded the highest catches of black crappie, pumpkinseed, rock bass, northern pike, rainbow trout and smallmouth bass. The largest number of walleye was reported from Region I. Regions II and III together produced 94 percent of all bluegill recorded in the census.

### Catch per Hour--Nontrout Waters

The catch per hour for nontrout waters in 1962 was 1.1 fish

(Table 9) as compared to 1.0 fish in 1961. The highest catch per hour

(1.5) was recorded in Region III. Fishing quality was best in the nontrout lakes (1.2 fish per hour) and nontrout streams (3.0 fish per hour) of Region III. The high catch per hour for nontrout streams in Region III is due to the large number of yellow perch reported taken in Tuscola County.

# Composition of Catch--Great Lakes Waters

The yellow perch composed 78 percent of 31, 237 fish reported from Great Lakes waters in 1962 (Table 10). Walleye, rock bass, smallmouth bass and northern pike contributed another 16 percent. The numbers of each of the 16 other kinds that made up the remaining 6 percent were as follows:

White bass	523	Bullheads	48
American smelt	323	Muskellunge	43
Pumpkinseed	238	Rainbow trout	24
Catfishes	158	Shad	10
Freshwater drum	141	Suckers	9
Crappies	126	Whitefish	5
Bluegill	107	Carp	1
Round whitefish	102	Total 1,	949
Largemouth bass	91		

### Catch per Hour--Great Lakes Waters

As in recent years 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 (2.2 fish) on the fishing quality index for the Great Lakes waters. The average catch per hour for all Great Lakes and connecting waters was 1.7 fish (2.2 for the Great Lakes and 1.1 for the connecting waters).

# Residence of Anglers--All Waters

Of the 69, 385 anglers contacted in the 1962 general creel census, 59,830 anglers (86%) were residents of Michigan and 9,555 anglers (14%) were nonresidents (Table 12). The greatest number of nonresident fishermen (3,578) was recorded in Region II, where they comprised 11 percent of the total, but nonresident anglers constituted 20 percent of the anglers interviewed in Region I.

Anglers residing in all 83 counties of Michigan were reported in the census (Table 13). Residents of Wayne County made up 13 percent of all residents; Kent County, 6; Genesee, 5; and Muskegon, 5 (total for the four counties, 29%).

Nonresident anglers came from 38 states, the District of Columbia, the Provinces of Ontario and Quebec, and Tanganyika (Table 13a). Ohio contributed 41 percent of all nonresidents; Indiana, 34; Illinois, 14; and Wisconsin, 7 (total for these bordering states, 96%).

Resident anglers caught 1.1 fish per hour whereas nonresident anglers caught 1.0 fish per hour (all waters combined, see Table 14).

### Sex of Anglers

Of the total anglers interviewed in 1962, 10,585 (15%) were women. They comprised 7 percent of the trout anglers, 17 percent of the nontrout anglers and 12 percent of fishermen on the Great Lakes (Table 15).

# Comparison of 1962 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 1.0 fish in 1961 to 1.5 in 1954 and 1955 (Table 16). For 1961 the catch for all waters was 0.2 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 (0.5) in 1962.

During the 1953-1962 period the catch per hour in nontrout waters has ranged from 1.4 fish in 1953 to 1.0 in 1961. The simple 10-year average was 1.2 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 1953-1962 anglers fishing the Great Lakes waters averaged 2.2 fish per hour as compared to an average of 1.2 fish per hour in nontrout

waters. The catch in Great Lakes waters has varied from 1.3 fish per hour in 1957 to 3.3 in 1954. The 1962 catch per hour was 0.5 fish below 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.

#### 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 records.

INSTITUTE FOR FISHERIES RESEARCH
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Report approved by G. P. Cooper

Typed by M. S. McClure

Table 1. -- Total number of anglers, hours fished, number of fish caught and catch per hour for each conservation region, all waters, 1962

Region	Number of male anglers	Number of female anglers	Total anglers	Total hours fished	Total fish caught	Catch per hour
I	10,742	1,619	12, 361	28, 543.4	22, 199	0.8
II	26,504	5,073	31,577	62,373.2	63,064	1.0
III	21,554	3,893	25, 447	55,070.1	79,088	1.4
State total	58,800	10,585	69, 385	145,986.7	164, 351	1.1

Table 2.--Number of anglers interviewed by conservation officers during 1962 and 1961, by counties

County	1962	1961	County	1962	1961
Alcona	406	784	Lake	626	437
Alger	979	1,076	76 Lapeer		916
Allegan	1,359	778	Leelanau	493	705
Alpena	1,445	1,945	Lenawee	431	
Antrim	664	584	Livingston	1,263	2,863
Arenac	895	938	Luce	856	1,735
Baraga	139	160	Mackinac	1,106	1,052
Barry	2,238	1,905	Macomb	1,698	1,519
Bay	354	297	Manistee	1,579	1,436
Benzie	1,045	1,128	Marquette	1,955	1,355
Berrien	401	116	Mason	774	795
Branch	1,848	2,261	Mecosta	1,604	2,059
Calhoun	95	268	Menominee	390	895
Cass	1,527	1,068	Midland	367	319
Charlevoix	1,399	1,622	Missaukee	1,174	1,387
Cheboygan	2,507	3,442	Monroe	347	268
Chippewa	1,296	886	Montcalm	378	1,324
Clare	388	503	Montmorency	2,069	2, 290
Clinton	170	166	Muskegon	2,899	3, 140
Crawford	497	714	Newaygo	964	927
Delta	298	537	Oakland	1,937	1,679
Dickinson	621	911	Oceana	618	711
Eaton		123	Ogemaw	172	536
Emmet	1,405	648	Ontonagon	973	786
Genesee	517	673	Osceola	244	223
Gladwin	1,247	1,360	Oscoda	444	428
Gogebic	966	897	Otsego	763	420
Grand Traverse	648	520	Ottawa	428	532
Gratiot	138	57	Presque Isle	806	438
Hillsdale	307		Roscommon	890	1,560
Houghton	710	376	Saginaw	131	225
Huron	1,137	1,378	St. Clair	943	1, 311
Ingham	132	68	St. Joseph	375	633
Ionia	212		Sanilac	720	577
Iosco	925	1,482	Schoolcraft	1,098	999
Iron	856	1,082	Shiawassee	86	290
Isabella	210	306	Tuscola	1,248	956
Jackson	1,143	247	Van Buren	256	364
Kalamazoo	491	• • •	Washtenaw	1,717	2, 257
Kalkaska	682	574	Wayne	631	739
Kent	398	556	Wexford	348	435
Keweenaw	118	91			
			Total	69,385	74,048

Table 3.--Number and percentage of fishermen interviewed on trout, nontrout and Great Lakes waters, by conservation regions, 1962

	Trout waters Number Per-		Nontrout w		. <del></del>	Great Lakes waters Number Per-		
Region		cent-		cent-		cent-	of	
		age		age		age	anglers	
I	4,294	35	6,510	53	1,557	12	12, 361	
II	3,657	11	27,341	87	579	2	31,577	
Ш	678	3	20,184	79	4, 585	18	25, 447	
State total	8,629	12	54,035	78	6,721	10	69,385	

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,

1962

Region	Brook Number		Brown		Rainbow Number		Total number of trout
I	3, 953	81	212	4	707	15	4,872
II	1,377	37	854	23	1,486	40	3,717
ш	459	53	169	19	243	28	871
State	5,789	61	1, 235	13	2,436	26	9,460

Table 5.--General creel census data for trout lakes, trout streams and all trout waters by conservation regions, 1962

	Number of anglers	Hours fished	Fish caught	Catch per hour	Trout caught	Trout per hour
Trout lakes						
Region I	1,632	4,162.3	1,775	0.4	1,671	0.4
Region II	464	1,064.8	790	0.7	789	0.7
Region III	104	241.5	79	0.3	79	0.3
State total	2, 200	5,468.6	2,644	0.5	2,539	0.5
Trout streams						
Region I	2,662	5,881.7	3,508	0.6	3, 201	0.5
Region II	3, 193	7,235.0	3,485	0.5	2,928	0.4
Region III	574	1,560.5	797	0.5	792	0.5
State total	6,429	14,677.2	7,790	0.5	6,921	0.5
All trout waters						
Region I	4, 294	10,044.0	5, 283	0.5	4,872	0.5
Region II	3,657	8,299.8	4, 275	0.5	3,717	0.4
Region III	678	1,802.0	876	0.5	871	0.5
State total	8,629	20, 145.8	10,434	0.5	9,460	0.5

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

by conservation regions, 1962

Species	Regio Num- ber		Regio Num- ber		Regio Num- ber	
Bluegill	2,520	20	11,435	22	28, 826	49
Yellow perch	5,995	47	15,584	30	16,236	28
Black crappie	343	3	5,977	12	4,638	8
Pumpkinseed	258	2	3, 313	7	3, 310	5
Rock bass	282	2	2, 366	5	1,059	2
Northern pike	959	8	1, 231	2	509	1
Largemouth bass	102	1	585	1	1,794	3
Walleye	1,368	11	856	2	93	$\frac{1}{\sqrt{0}}$
Rainbow trout	248	2	1,083	2	328	1
Smallmouth bass	113	1	711	1	498	1
Miscellaneous	450	3	8, 257	16	1,353	2
Total	12,638	100	51,398	100	58,644	100

 $<sup>\</sup>psi$  Less than 0.5

Table 7.--Percentage of the total catch contributed by the 10 most important species taken in nontrout waters, 1953-1962

Species	1053	1954	1955	1956		ear	1959	1960	1961	1962	Mean, 1953-
		1004							1501	1002	1962
Bluegill	43	37	35	36	38	40	36	39	37	35	38
Yellow perch	27	31	32	31	27	29	28	32	25	31	29
Black crappie	9	8	11	7	8	9	11	9	10	9	9
Pumpkinseed	5	5	4	5	5	4	6	5	6	6	5
Rock bass	4	3	3	3	4	3	4	3	4	3	3
Northern pike	4	5	4	6	4	4	4	2	3	2	4
Largemouth bas	ss 2	2	2	2	2	1	2	1	2	2	2
Walleye	1	1	2	2	1	2	1	1	2	2	2
Rainbow trout	$\sqrt[4]{0}$	2	2	2	2	1	1	1	2	1	1
Smallmouth bas	s 1	1	1	1	1	1	1	1	1	1	1
Total	96	95	96	95	92	94	94	94	92	92	94

 $<sup>\</sup>stackrel{1}{\checkmark}$  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,

by conservation regions, 1962

Species	Regio		Regio Num- ber		Region Num- ber		Total
Bluegill	2,520	6	11,435	27	28,826	67	42,781
Yellow perch	5,995	16	15,584	41	16, 236	43	37,815
Black crappie	343	3	5,977	55	4,638	42	10,958
Pumpkinseed	258	4	3, 313	48	3, 310	48	6,881
Rock bass	282	8	2, 366	64	1,059	28	3,707
Northern pike	959	35	1,231	46	509	19	2,699
Largemouth bass	102	4	585	24	1,794	72	2,481
Walleye	1,368	59	856	37	93	4	2, 317
Rainbow trout	248	15	1,083	65	328	20	1,659
Smallmouth bass	113	8	711	54	498	38	1, 322
Miscellaneous	450	5	8, 257	82	1,353	13	10,060
Total	12,638	10	51,398	42	58,644	48	122,680

Table 9.--General creel census data for nontrout lakes, nontrout streams and all nontrout waters combined, by conservation regions, 1962

	Number of anglers	Hours fished	Fish caught	Catch per hour
Nontrout lakes				
Region I	5,435	11,920.0	10,977	0.9
Region II	24,929	48,315.3	45,233	0.9
Region III	17,114	34,306.8	42,555	1.2
State total	47,478	94, 542.1	98,765	1.0
Nontrout streams				
Region I	1,075	2,599.0	1,661	0.6
Region II	2,412	4,466.1	6,165	1.4
Region III	3,070	5,425.0	16,089	3.0
State total	6,557	12,490.1	23,915	1.9
All nontrout waters	_			
Region I	6,510	14,519.0	12,638	0.9
Region II	27,341	52,781.4	51,398	1.0
Region III	20,184	39,731.8	58,644	1.5
State total	54,035	107,032.2	122,680	1.1

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

Species	1953	1954	1955	1956	Y 1957	ear 1958	1959	1960	1961	1962	Mean, 1953- 1962
Yellow perch	85	90	91	86	81	93	93	86	74	78	86
Walleye	1	1	2	3	7	4	3	3	11	10	5
Rock bass	4	2	2	3	4	1	1	4	4	4	3
Smallmouth bas	ss 1	1	1	2	1	<del>1</del> 0	1	3	2	1	1
Northern pike	2	1	<del>1</del> 0	\$0	2	1	1	1	. 2	1	1
Total	93	95	96	94	95	99	99	97	93	94	96

 $V_{\mathrm{Less\ than\ 0.5}}$ 

Table 11.--General creel census data for Great Lakes and connecting waters, 1962

Lake or waters	Number of anglers	Hours fished	Fish caught	Catch per hour
Lake Superior	127	309.5	273	0.9
Lake Michigan	235	801.0	506	0.6
Lake Huron	2,531	6,795.9	14,698	2.2
Lake Erie	501	1,325.0	5,028	3.8
Total, Great Lakes	3, 394	9,231.4	20,505	2.2
Waters between Lake Super and Lake Huron	ior 850	2,259.0	1,403	0.6
Waters between Lake Huror and Lake Erie	a 2,477	7,318.3	9,329	1.3
Total, connecting waters	3, 327	9,577.3	10,732	1.1
All Great Lakes waters	6,721	18, 808.7	31, 237	1.7

Table 12. -→Number of resident and nonresident anglers and percentage of nonresident anglers in each conservation region, all waters, 1962

Region	Total anglers	Resident anglers	Nonresident anglers	Percentage nonresident anglers
I	12,361	9,936	2,425	20
II	31,577	27,999	3,578	11
Ш	25, 447	21,895	3,552	14
State total	69,385	59,830	9,555	14

Table 13.--Residence of Michigan fishermen interviewed in the general creel census,  $1962\sqrt[4]{}$ 

County of	Male	Female	Total	County of	Male	Female	Total
residence	anglers	anglers	anglers	•	anglers	anglers	anglers
Alcona	123	18	141	Lake	41	8	49
Alger	406	22	428	Lapeer	364	32	396
Allegan	736	129	865	Leelanau	59	7	66
Alpena	795	136	931	Lenawee	171	39	210
Antrim	228	67	295	Livingston	215	49	264
Arenac	184	15	199	Luce	540	20	560
Baraga	69	4	73	Mackinac	282	28	310
Barry	627	109	736	Macomb	1,270	177	1,447
Bay	1,471	286	1,757	Manistee	690	42	732
Benzie	338	32	370	Marquette	1,651	221	1,872
Berrien	762	153	915	Mason	310	37	347
Branch	359	79	438	Mecosta	387	79	466
Calhoun	543	132	675	Menominee	237	16	253
Cass	244	54	298	Midland	736	110	846
Charlevoix	654	96	750	Missaukee	153	16	169
Cheboygan	473	66	539	Monroe	309	47	356
Chippewa	693	86	779	Montcalm	317	68	
Clare	203	41	244	Montmorency		46	486
Clinton	237	54	291	Muskegon	2, 329	396	2,725
Crawford	120	7	127	Newaygo	244	33	
Delta	272	28	300	Oakland	1,801	267	2,068
Dickinson	704	48	752	Oceana	164		184
Eaton	196	38	234	Ogemaw	95	10	105
Emmet	779	111	890	Ontonagon	495	51	546
Genesee	2,273	463	2,736	Osceola	190	8	
Gladwin	198	17	215	Oscoda	119	11	130
Gogebic	618	50	668	Otsego	306	55 74	
Grand Traver	se 397 267	64 39	$\frac{461}{306}$	Ottawa	543 352	74 43	617 395
Gratiot Hillsdale	151	50	201	Presque Isle	$\frac{332}{144}$		
Houghton	430	48	478	Roscommon Saginaw	1,778		
Huron	317	26	343	St. Clair	542		-
Ingham	1,507	345	1,852	St. Joseph	$\frac{342}{217}$		264
Ionia	230	32	262	Sanilac	247	41	288
Iosco	163	20	183	Schoolcraft	401	54	
Iron	419	50	469	Shiawassee	205	39	244
Isabella	324	43	367	Tuscola	453	57	510
Jackson	993	253	1,246	Van Buren	173	37	210
Kalamazoo	1,294	255	1,549	Washtenaw	992	205	
Kalkaska	127	20	147	Wayne	6,736	1,342	•
Kent	2, 882	581	3,463	Wexford	375	57	432
Keweenaw	22	4	26				
				Total	50,901	8,516	59,417

 $<sup>\</sup>stackrel{1}{\checkmark}$  The residence of 340 males and 73 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, 1962

State or province	Male	Female	Total
of residence	anglers	anglers	anglers
labama	4	2	6
Arizona	4	3	7
rkansas	1	• • •	1
alifornia	17	6	23
olorado	3	1	4
Connecticut	2	1	3
Delaware	1	• • •	1
lorida	28	9	37
Georgia	3	• • •	3
daho	3	• • •	3
llinois	1,135	233	1,368
ndiana	2,539	700	3, 239
owa	12	1	13
Cansas	5	1	6
Kentucky	33	17	50
Louisiana	1	• • •	1
Maryland	5	1	6
Massachusetts (	4		4
Minnesota	3		3
Missouri	30	. 1	31
Montana		1	1
Vebraska	4		4
lew Jersey	15	8	2 <b>3</b>
New Mexico	1	1	2
lew York	21	2	23
North Carolina	1		1
North Dakota	2		2
Ohio	3,010	912	3,922
Oklahoma	5		5
Pennsylvania	33	9	42
Rhode Island	2		2
outh Carolina	2	2	4
outh Dakota	2		2
Texas	1	2	3
/irginia	10		10
Vashington	1		1
Vest Virginia	15	6	21
Visconsin	592	75	667
Vashington D. C.	2	1	3
Ontario	3		3
Quebec	2	1	3
Canada	1		1
Гаnganyika	1	• • •	1
Γotal	7,559	1,996	9,555
	,	•	,

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, 1962

	Number of anglers	Hours fished	Fish caught	Catch per hour
Resident anglers				
Region I	9,936	23, 186.2	18,080	0.8
Region II	27,999	56,104.7	58,982	1.1
Region III	21, 895	48,346.8	68,906	1.4
State total	59,830	127,637.7	145,968	1.1
Nonresident anglers	<u> </u>			
Region I	2, 425	5,357.2	4,119	0.8
Region II	3,578	6,268.5	4,082	0.7
Region III	3, 552	6,723.3	10,182	1.5
State total	9,555	18,349.0	18, 383	1.0

Table 15.--Comparison of data from the general creel census, 1962

Item	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Mean 1953- 1962
CATCH PER HOUR											
All waters	1.3	1.5	1.5	1.3	1.2	1.2	1.3	1.3	1.0	1.1	1.3
Residents	1.3	1.5	1.5	1.3	1.2	1.2	1.3	1.3	1.0	1.1	1.3
Nonresidents	1.0	1.0	1.3	1.1	1.0	1.2	1.4	1.0	0.9	1.0	1.1
Trout waters	0.6	0.8	0.8	0.8	0.8	0.6	0.6	0.6	0.6	0.5	0.7
Residents	0.7	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.5	0.7
Nonresidents	0.6	0.8	0.8	0.7	0.8	0.7	0.7	0.5	0.5	0.3	0.6
Nontrout waters	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.0	1.1	1.2
Residents	1.4	1.3	1.3	1.2	1.3	1.2	1.2	1.3	1.0	1.2	1.2
Nonresidents	1.1	1.1	1.1	1.1	1.1	1.2	1.3	1.0	0.9	1.1	1.1
Great Lakes waters	3.0	3.3	2.8	1.9	1.3	1.9	2.9	2.2	1.5	1.7	2.2
Residents	3.1	3.3	2.8	2.0	1.4	2.0	3.0	2.4	1.6	1.7	2.3
Nonresidents	1.3	2.3	2.1	0.8	0.8	1.3	2.6	1.3	1.1	1.2	1.5
PERCENTAGE OF A		NGLE	RS								
Nonresidents	15	14	13	14	14	13	13	12	13	14	14
Females	16	16	16	16	15	15	16	14	14	15	15
PERCENTAGE OF TREPRESENTED BY		ΓANG	LERS								
Nonresidents	8	6	8	9	9	7	7	7	5	7	7
Females	9	8	10	10	10	10	9	8	7	7	9
PERCENTAGE OF IREPRESENTED BY		ROUT	ANGL	ERS							
		16	ANGL	ERS 17	15	14	14	13	15	1.6	15
REPRESENTED BY	:				15 17	14 16	14 17	13 15	15 15	16 17	15 17
REPRESENTED BY Nonresidents	: 17 18 GREA	16 17 Г LAK	16 17	17							
REPRESENTED BY Nonresidents Females PERCENTAGE OF 0	: 17 18 GREA	16 17 Г LAK	16 17	17							

Table 16.--Catch per hour for all waters, by conservation regions, 1953-1962

Region	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Mean, 1953- 1962
I	1.0	1.0	1.2	1.1	1.1	1.2	1.3	0.9	0.9	0.8	1.0
п	1.3	1.3	1.4	1.1	1.1	1.0	1.3	1.2	0.9	1.0	1.2
III	1.4	1.9	1.6	1.5	1.4	1.6	1.4	1.6	1.2	1.4	1.5
Entire state	1.3	1.5	1.5	1.3	1.2	1.2	1.3	1.3	1.0	1.1	1.3

Table 17.--Catch of trout per hour in trout waters, by conservation regions, 1953-1962

Region	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Mean, 1953- 1962
I	0.7	1.0	0.9	0.9	0.8	0.8	0.8	0.6	0.7	0.5	0.8
II	0.6	0.7	0.7	0.7	0.7	0.5	0.5	0.5	0.5	0.4	0.6
III	0.6	0.8	0.7	0.5	0.7	0.6	0.7	0.6	0.6	0.5	0.6
Entire state	0.6	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.6	0.5	0.6

Table 18.--Catch per hour for nontrout waters, by conservation regions, 1953-1962

Region	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Mean, 1953- 1962
I	1.2	1.0	1.3	1.3	1.1	1.2	1.2	0.9	0.9	0.9	1.1
II	1.4	1.2	1.3	1.1	1.2	1.1	1.2	1.3	0.9	1.0	1.2
III	1.4	1.5	1.2	1.4	1.4	1.4	1.3	1.4	1.1	1.5	1.4
Entire state	1.4	1.3	1.3	1.2	1.2	1.2	1.2	1.3	1.0	1.1	1.2

Table 19.--Catch per hour for Great Lakes waters, by conservation regions, 1953-1962

Region	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	Mean, 1953- 1962
I	1.3	0.7	0.9	1.0	1.2	1.3	2.1	1.4	1.1	1.1	1.2
II	4.9	6.9	4.7	4.6	3.3	2.4	9.2	2.2	2.4	5.7	4.6
Ш	2.9	3.2	2.5	1.8	1.3	2.2	2.2	2.6	1.5	1.4	2.2
Entire state	3.0	3.3	2.8	1.9	1.3	1.9	2.9	2.2	1.5	1.7	2.2

Table 20.--Total fishing time reported (thousands of hours) and catch per hour for various waters, 1928-1962

	Thousands		C	atch per h	
Year	of hours	A11	Trout	Nontrout	Great Lakes
	reported	waters	waters	waters	waters <b>√</b>
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
Unwei	ighted				
me	ean 119	1.2	0.8	1.3	2.4

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