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A study of the commercial fishery on Great Slave Lake,
N.W.T. during the summer season of 1951"

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A STUDY OF THE COMMERCIAL FISHERY OF GREAT SLAVE LAKE, N.W.T. DURING THE SUMMER SEASON OF 1951

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Fisheries Research Board personnel studied the commercial fishery of Great Slave Lake during the summer of 1951, as has been done in previous years. Besides the senior author, members of the field party included R. M. Hanson, R. H. D. Harris and J. A. Dick. Most of the data was analysed by the junior author.

Lake trout, Cristivomer namaycush, and lake whitefish, Coregonus clupeaformis, were the principle species involved in this study. Inconnu, Stenodus leucichthys mackenzii; pike, Esox lucius and yellow pikeperch, Stizostedion vitreum were caught in much smaller numbers but were also marketed.

Methods of collecting data, statistical subdivisions and conversion factors were the same as those employed in previous studies.

GROS CAP FISHERY

McInnes Products Corporation Limited started the summer fishery on June 25th and finished on September 15th. There were 21 boats in operation. Four of these boats were three-man boats while the remainder were two-man boats. Most of the fish landed at Gros Cap were filleted, frozen and shipped by refrigerator barge to the railhead. A large freight boat made regular trips to Hay River with fresh fish shipments, which were then trucked out over the Mackenzie highway. Standard 5½-inch mesh nets ranging from 30 to 60 meshes deep

were used. They varied in thread size from 20/6 to 36/6 with most of them the larger size. Only one boat used nylon nets to any extent. A rough estimate of the amount of nylons used would be about 5 per cent.

HAY RIVER FISHERY

All the fish landed at Hay River were fresh shipments which were trucked out to the railhead over the Mackenzie highway.

W. R. Menzies Company

Twelve boats were in operation during the summer although two of them were used sporadically. The first load of fish was landed on June 21st and operations ceased on September 15th.

Most of the fishermen landed their fish at a barge located at some convenient harbour, from which the catch was taken by freight boats into Hay River. Some fishermen freighted their own fish. The barge was located at Moraine Bay until the second week in July when it was moved to Long Island. Near the beginning of August it was towed to Windy Bay where it remained for three weeks, finally being located at Hardisty Island for the remainder of the season.

Two-thirds of the nets used were nylon; one-quarter were cotton and the remainder were linen nets. Half the nets were 40 meshes deep while the rest varied from 20 to 80 meshes. Fishing in Area E in September was accompanied by windy weather which resulted in quite extensive culling of fish.

Kucher and Trefiak Fisheries

On June 29th, Kucher and Trefiak Fisheries started fishing. Six large boats fished regularily while three small two-man boats fished very sporadically. Their barge was located in the same place as Menzies barge, except that during August it was left at Long Island and the fishermen freighted their own fish. Sixty per cent of the nets used were nylon, the remainder were cotton.

Gateway Fisheries

Fishing operations at Gateway Fisheries commenced the first week in July and continued until the end of the season. Ten boats were in use, three three-man boats and seven two-man boats. The barge was located near Fort Resolution for most of July, after which it was moved in stages to Long Island. Only nylon nets were sold to the fishermen although some old cotton nets were used. Approximately 80 per cent of the nets were 40 meshes deep.

Alaska Fisheries

Alaska Fisheries started fishing on June 27th and finished on September 15th. The company operated nine boats of which four were three-man and five were two-man boats. The barge to which most of the fish were brought was first located in the east end of Area H, then at Moraine Bay and finally in the Rae Arm. Seventy-five per cent of the nets used were nylons, most of them 40 meshes deep.

SIZE COMPOSITION OF THE CATCH

Samples were taken from the commercial catch to determine the average size of individual fish caught. Inconnu were never taken in quantity but some samples of the catch were recorded.

Lake Trout

A total of 9,405 lake trout were included in the samples. The average weight in each sample and its standard error is shown in Table I. The frequency distribution of weights in various samples are shown in Table II.

There was no consistent difference between average size in 1945 through to 1951 at comparable times and places. The average size of lake trout in Area E, during the last part of August and the first part of September, showed a marked decrease compared with the previous year. This may be partially explained in that the samples during 1951 were all from the northern part of Area E. The 1950 samples were from the southern half of the area, where the large bull trout are known to come to spawn.

Whitefish

A total of 13,505 whitefish were included in the samples. The average weight in each sample, and its standard error, is shown in Table III. The frequency distribution of individual weights in the various samples are shown in Table IV.

The average size of whitefish was observed as in previous years to be higher in the east arm of the lake. Quite noticeable was the marked increase in average size as the season progressed. There was no consistent differences in average size from previous years.

CATCH

Commercial Fish

Complete coverage of fishing operations at Gros Cap was accomplished in 1951. This included weight of fish landed

by fishermen daily; location and number of nets; depths of water fished; number of nights the nets were in the water and an estimate made of the rough and culled fish. This same information was received for forty per cent of the Hay River fishery. A larger percentage of the Hay River fishery would have been covered had not unforeseen accidents occurred. One member of the field party was burned when the Limnos, Research Board boat on the lake, burned and sank. Another field member acquired typhoid fever.

Table V shows that sixty per cent of the total summer operations were recorded in this manner. Fish not landed amounted to over one per cent of the total catch. Tables VI, VII and VIII show the respective total catches of lake trout, whitefish and the two combined at various times and places. These values are estimated total quantities of the fish removed from the lake whether they were marketed or not.

Rough Fish

Estimated totals of rough fish are shown in Table IX, these totals have been adjusted to allow for the fact that not all the fishermen were interviewed. Rough fish are as follows: inconnu, Stenodus leucichthys mackenzii; cisco, Leucichthys spp. burbot, Lota lota; pike Esox lucius; suckers, Catostomus catostomus and C. commersonii; yellow pikeperch, Stizostedion vitreum; American grayling, Thymallus signifer, and round whitefish Prosopium cylindraceum.

The number of rough fish caught in 1951 was considerable although less than in 1950. Area A information was obtained mostly from the west half of the area where less rough

fish are encountered. Rough fish information was received from the East part of Area A during 1950. Area D showed a marked increase in rough fish over 1950. These were mostly suckers and were caught just north of Slave Point. However, fishing different grounds each year has resulted in catches of rough fish varying to a great degree.

EFFORT

The unit of fishing effort used for the analysis of Great Slave Lake data is the effort exerted by one gill-net which is lifted daily. Factors given in the 1948 report adjust net sets extending over more than one night in such a way that fishing effort for various lengths of time can be compared. The term used is "equivalent net-nights" which is defined in the 1948 report. Table X shows the fishing effort actually exerted by the fishermen who were interviewed. The total effort exerted in Areas A, B, D. E and F was about twice as great as the table indicates.

AVAILABILITY

Availability used here is the round weight in pounds produced per unit of fishing effort in equivalent net nights. It is based entirely on the catch and effort of fishermen who were actually interviewed. These data on the summer of 1951 are found in Tables XI, XII and XIII.

The availability of whitefish for Area B showed a marked drop over the previous year's data. This was not observed for whitefish in any other statistical area. Lake trout availability, however, showed a marked drop in Areas E, K and M. The data for Area E may be misleading in that the

figures were obtained from the north end of the area. Reliable reports indicate the availability was much higher in the southern half of the area towards the end of the season. Very little fishing was done in Area K and the value may not be too trustworthy.

Tables XIV, XV and XVI show the availability that was calculated where the fishermen lifted their nets daily.

DEPTHS FISHED

Ranges in depths fished are shown in Table XVIII. It would appear that in general fishermen fished about the same depth as the previous summer.

RELATED DATA

Scale samples, tag collections, along with meteorological and limnological data were recorded for the summer operation. These studies will be reported elsewhere.

DISCUSSION

The overall decrease in availability during the years of fishing on Great Slave Lake is 25 per cent. This decrease by itself might indicate a decrease in standing crop, but since there has been no overall change in average size or in mortality rate of the fish, it seems unlikely that it represents a real decrease in standing crop.

The general relationship between availability and standing crop is not fully understood. The data so far accumulated on the fishery at Great Slave Lake do not indicate the specific relationship between standing crop and availability there. The collection of data on availability will be continued in the hope that it will sometime furnish a tool to use in the measurement of standing crop.

Table I. The average size of lake trout in pounds round weight and its standard error in representative samples of fish landed by Great Slave Lake commercial fishermen during the summer of 1951. The number of fish in each sample is shown in parentheses.

Area	June 16-30	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15
A	-	-	8.9 ± 0.3 (344)	7.7 ± 0.3 (295)	-	-
B	-	13.9 ± 0.6 (197)	-	-	-	-
D	10.1 ± 0.4 (169)	8.0 ± 0.4 (189)	8.4 ± 0.5 (187)	9.3 ± 0.8 (52)	-	-
E	9.1 ± 0.4 (184)	9.1 ± 0.5 (121)	-	10.1 ± 0.5 (82)	7.5 ± 0.2 (530)	6.0 ± 0.2 (291)
F	-	6.3 ± 0.3 (96)	7.0 ± 0.3 (205)	6.8 ± 0.3 (214)	5.5 ± 0.2 (129)	4.9 ± 0.1 (91)
G	-	8.2 ± 0.4 (214)	6.5 ± 0.2 (204)	6.6 ± 0.2 (390)	5.7 ± 0.1 (487)	4.8 ± 0.1 (258)
H	-	7.9 ± 0.4 (218)	6.9 ± 0.2 (151)	7.3 ± 0.2 (526)	7.2 ± 0.3 (175)	6.1 ± 0.1 (437)
K	19.4 ± 1.4 (36)	10.1 ± 0.4 (266)	9.6 ± 0.4 (133)	10.7 ± 1.5 (10)	-	7.2 ± 0.4 (36)
L	-	6.4 ± 0.1 (223)	6.9 ± 0.2 (469)	7.1 ± 0.4 (69)	6.9 ± 0.3 (141)	6.0 ± 0.1 (281)
M	-	10.9 ± 0.9 (47)	8.2 ± 0.4 (136)	8.4 ± 0.2 (314)	7.6 ± 0.2 (413)	7.3 ± 0.2 (395)

Table II. (Cont'd.)

Wt. in lbs.	Area F					Area G				
	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15
2	3	-	1	-	-	1	1	1	4	3
3	3	8	7	4	15	11	13	14	38	25
4	24	46	40	38	21	48	28	63	121	101
5	18	45	64	40	25	35	59	120	153	68
6	16	33	35	27	17	21	34	50	75	32
7	9	26	18	10	10	22	24	40	29	14
8	8	15	26	3	3	17	16	35	26	8
9	2	9	4	2	-	10	9	18	14	4
10	5	3	3	1	-	5	4	15	4	2
11	4	0	1	0	-	2	3	14	1	0
12	0	2	0	0	-	0	2	6	5	0
13	1	1	1	3	-	5	1	1	3	1
14	1	0	0	0	-	3	3	2	2	-
15	0	1	0	0	-	6	1	3	2	-
16	0	0	1	0	-	3	0	1	2	-
17	0	3	0	1	-	8	1	0	2	-
18	0	2	3	-	-	5	0	0	2	-
19	0	3	1	-	-	1	1	1	0	-
20	0	0	2	-	-	0	1	1	1	-
21	1	0	1	-	-	1	0	1	2	-
22	1	2	1	-	-	2	1	0	0	-
23	-	1	1	-	-	1	1	1	0	-
24	-	2	1	-	-	1	1	1	0	-
25	-	0	1	-	-	1	-	0	0	-
26	-	1	0	-	-	1	-	0	0	-
27	-	1	0	-	-	1	-	0	0	-
28	-	0	0	-	-	0	-	1	0	-
29	-	0	0	-	-	1	-	0	0	-
30	-	0	0	-	-	1	-	1	1	-
31	-	0	1	-	-	1	-	-	-	-
33	-	1	0	-	-	-	-	-	-	-
35	-	-	1	-	-	-	-	-	-	-

Table II.(Cont'd.)

Wt. in lbs.	Area H					Area K				
	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	June 16-30	July 1-15	July 16-31	Aug. 1-15	Sept. 1-15
2	4	1	3	2	8	-	1	-	-	-
3	5	5	12	10	37	-	1	-	-	-
4	45	16	64	27	66	-	28	6	-	2
5	49	36	111	27	103	1	29	14	-	6
6	19	33	90	29	79	3	41	22	1	9
7	14	16	64	24	60	1	29	15	1	6
8	22	14	41	19	39	1	22	17	2	6
9	10	7	45	10	16	0	23	13	1	3
10	7	6	35	7	5	1	13	6	0	1
11	8	5	18	1	6	0	9	7	3	1
12	7	2	9	4	3	0	6	8	0	0
13	3	1	6	2	3	3	7	1	1	0
14	2	3	3	2	0	1	6	3	0	1
15	4	2	2	2	5	1	4	4	0	0
16	3	0	3	2	0	0	7	3	0	0
17	2	3	7	2	2	2	5	3	0	1
18	2	1	3	1	0	0	2	1	0	-
19	1	-	2	0	3	2	4	0	0	-
20	3	-	2	0	1	2	3	2	0	-
21	1	-	0	1	0	2	3	2	0	-
22	0	-	1	1	0	1	2	0	0	-
23	1	-	2	0	0	4	2	2	1	-
24	0	-	1	0	0	0	4	2	-	-
25	1	-	0	0	0	1	0	0	-	-
26	2	-	0	0	1	2	5	0	-	-
27	0	-	0	1	-	2	1	2	-	-
28	0	-	0	0	-	1	2	-	-	-
29	0	-	0	1	-	1	0	-	-	-
30	0	-	1	-	-	0	1	-	-	-
31	1	-	0	-	-	3	1	-	-	-
32	1	-	0	-	-	0	0	-	-	-
33	0	-	0	-	-	0	4	-	-	-
34	0	-	0	-	-	1	0	-	-	-
36	0	-	0	-	-	-	1	-	-	-
38	1	-	0	-	-	-	-	-	-	-
39	-	-	1	-	-	-	-	-	-	-

Table II. (Cont'd.)

Wt. in lbs.	Area L					Area M				
	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15
2	-	6	-	-	-	-	1	1	1	0
3	2	7	1	2	6	-	5	6	4	8
4	16	37	8	11	48	-	12	18	33	33
5	69	129	12	43	88	4	18	47	67	69
6	60	105	26	37	62	6	25	56	111	70
7	37	63	8	16	36	8	20	28	51	74
8	14	47	2	6	19	3	10	48	46	54
9	9	17	0	7	6	5	14	33	27	41
10	6	13	3	4	4	3	3	17	18	10
11	3	9	4	3	3	3	2	17	7	8
12	1	4	1	2	2	2	2	7	10	5
13	2	7	0	2	3	1	3	3	7	6
14	2	7	0	3	3	3	6	7	4	3
15	1	4	0	0	0	1	3	7	5	4
16	0	5	1	2	0	0	4	2	7	1
17	1	2	0	0	0	1	3	2	2	3
18	-	0	1	1	0	1	0	3	1	0
19	-	2	1	0	0	2	1	1	4	2
20	-	1	0	1	0	0	0	2	2	0
21	-	0	0	0	0	1	0	2	0	0
22	-	1	0	0	0	1	2	1	1	0
23	-	0	0	0	0	0	1	0	0	2
24	-	0	0	0	0	0	0	1	1	0
25	-	1	1	0	0	0	1	1	1	0
26	-	0	-	0	0	0	-	0	2	0
27	-	0	-	0	1	0	-	2	1	0
28	-	0	-	1	-	1	-	1	-	1
29	-	0	-	-	-	1	-	0	-	1
31	-	1	-	-	-	-	-	0	-	-
32	-	0	-	-	-	-	-	1	-	-
48	-	1	-	-	-	-	-	-	-	-

Table III. The average size of whitefish in pounds round weight and its standard error in representative samples of fish landed by Great Slave Lake commercial fishermen during the summer of 1951. The number of fish in each sample is shown in parentheses.

Area	June 16-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15
A	-	-	-	2.8±0.04 (551)	2.8±0.05 (249)	-
B	3.4±0.05 (243)	3.5±0.04 (679)	3.8±0.16 (70)	-	-	-
D	2.4±0.04 (228)	2.5±0.03 (432)	2.5±0.03 (596)	3.1±0.05 (371)	-	-
E	2.7±0.02 (425)	2.8±0.04 (260)	2.9±0.03 (574)	3.4±0.08 (142)	3.1±0.04 (483)	2.5±0.03 (313)
F	2.5±0.06 (50)	-	2.4±0.06 (414)	2.5±0.02 (260)	2.5±0.05 (117)	2.6±0.05 (99)
G	-	2.5±0.04 (188)	3.1±0.04 (314)	2.9±0.04 (375)	2.8±0.04 (374)	2.7±0.04 (239)
H	2.9±0.06 (128)	2.5±0.02 (404)	3.1±0.06 (184)	3.0±0.04 (463)	2.8±0.05 (224)	3.0±0.04 (503)
K	3.8±0.09 (84)	3.2±0.04 (479)	3.4±0.05 (279)	3.4±0.12 (42)	-	3.2±0.11 (50)
L	-	3.3±0.04 (428)	3.3±0.03 (705)	3.4±0.08 (70)	3.4±0.05 (145)	3.2±0.04 (252)
M	-	3.2±0.11 (41)	3.2±0.09 (158)	4.3±0.08 (247)	4.9±0.10 (258)	4.4±0.09 (315)

Table IV. The frequency distribution of round weights of whitefish from samples taken at random from the fish landed by Great Slave Lake commercial fishermen during the summer of 1951.

Wt. in lbs.	Area A August		Area B June	Area B July		Area D June	Area D July		Area D Aug.
	1-15	16-31	16-30	1-15	16-31	16-30	1-15	16-31	1-15
1¼	2	-	-	-	-	4	-	-	-
1½	10	3	-	-	-	4	8	19	4
1¾	23	4	5	8	-	19	25	48	8
2	69	13	5	26	5	45	68	110	29
2¼	86	51	14	51	3	47	84	117	39
2½	86	63	26	71	9	50	106	104	58
2¾	70	40	27	70	6	23	70	57	48
3	58	28	18	54	5	21	26	47	41
3¼	33	9	28	67	3	6	10	22	34
3½	34	10	24	66	2	4	12	28	28
3¾	20	8	22	53	1	0	8	13	29
4	17	6	22	44	6	2	2	11	11
4¼	10	3	15	49	6	1	2	7	8
4½	11	5	17	43	6	1	4	4	7
4¾	7	3	6	25	1	0	1	3	7
5	5	0	4	13	5	1	3	2	4
5¼	3	0	10	18	6	-	1	1	10
5½	3	1	-	7	0	-	1	1	3
5¾	2	1	-	5	0	-	0	1	1
6	0	0	-	2	2	-	0	1	1
6¼	0	0	-	2	1	-	0	-	0
6½	0	0	-	0	1	-	0	-	1
6¾	0	0	-	1	1	-	0	-	-
7	1	0	-	0	0	-	0	-	-
7¼	0	0	-	0	1	-	0	-	-
7½	0	0	-	1	-	-	0	-	-
7¾	0	0	-	1	-	-	0	-	-
8	0	0	-	1	-	-	0	-	-
8¼	0	0	-	0	-	-	0	-	-
8½	0	0	-	0	-	-	0	-	-
8¾	0	0	-	0	-	-	0	-	-
9	0	0	-	0	-	-	1	-	-
9¼	1	0	-	1	-	-	-	-	-
10	-	1	-	-	-	-	-	-	-

Table IV. (Cont'd.)

Wt. in lbs.	Area E						Area F				
	June 16-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	June 16-30	July 16-31	August 1-15	August 16-31	Sept. 1-15
½	-	-	-	-	-	-	-	1	-	-	-
¾	-	-	-	-	-	-	-	1	-	-	-
1	-	-	-	-	-	1	-	1	-	-	-
1¼	-	-	-	-	1	2	-	3	-	-	-
1½	1	2	-	-	6	4	1	7	4	-	-
1¾	7	4	13	1	18	17	2	14	7	2	1
2	44	19	44	3	25	47	10	56	33	16	9
2¼	60	41	71	2	39	71	9	106	70	34	15
2½	127	60	133	9	62	69	10	114	72	30	28
2¾	76	35	97	18	80	46	10	68	43	15	27
3	41	33	61	30	61	28	3	33	14	13	8
3¼	30	25	54	23	48	12	4	6	12	4	6
3½	20	15	36	16	37	8	0	3	2	0	2
3¾	7	12	18	10	32	0	1	0	2	0	1
4	7	11	13	14	18	3	-	0	0	1	1
4¼	2	2	10	5	17	0	-	0	1	0	0
4½	0	0	5	5	10	2	-	1	-	1	0
4¾	2	0	5	2	9	1	-	-	-	0	0
5	0	0	3	0	4	0	-	-	-	0	0
5¼	1	1	2	0	3	2	-	-	-	0	0
5½	-	-	5	1	4	-	-	-	-	1	0
6	-	-	1	0	3	-	-	-	-	-	1
6½	-	-	0	0	1	-	-	-	-	-	-
6¾	-	-	0	0	2	-	-	-	-	-	-
7	-	-	0	1	0	-	-	-	-	-	-
7¼	-	-	1	1	0	-	-	-	-	-	-
7¾	-	-	0	0	1	-	-	-	-	-	-
8	-	-	1	0	0	-	-	-	-	-	-
8¼	-	-	0	0	1	-	-	-	-	-	-
8½	-	-	0	0	1	-	-	-	-	-	-
9	-	-	0	1	-	-	-	-	-	-	-
9¼	-	-	1	-	-	-	-	-	-	-	-

Table IV. (Cont'd.)

Wt. in lbs.	Area G					Area H					
	July		August		Sept.	June	July		August		Sept.
	1-15	16-31	1-15	16-31	1-15	16-30	1-15	16-31	1-15	16-31	1-15
1¼	-	1	-	2	-	-	3	-	-	3	-
1½	2	1	1	0	1	1	5	-	4	2	4
1¾	4	1	9	6	2	0	29	1	10	1	4
2	25	12	16	24	21	3	47	7	19	12	27
2¼	53	19	39	57	37	20	96	22	53	39	67
2½	50	44	64	78	51	30	79	25	75	47	90
2¾	27	63	69	86	48	24	82	35	76	48	75
3	14	52	53	41	39	15	21	17	66	24	77
3¼	3	41	55	31	18	8	18	20	53	16	46
3½	5	33	27	21	6	8	8	16	29	12	31
3¾	1	10	17	7	5	7	6	9	28	5	22
4	1	16	5	6	6	3	4	3	16	4	11
4¼	0	5	11	5	1	5	1	10	10	5	11
4½	1	5	4	3	2	2	3	7	3	1	10
4¾	1	6	3	6	1	1	0	5	2	1	8
5	0	2	0	1	0	1	0	2	4	0	5
5¼	0	2	0	-	0	-	0	2	4	1	4
5½	0	1	0	-	0	-	2	1	2	0	4
5¾	0	-	0	-	0	-	-	0	1	1	1
6	0	-	0	-	0	-	-	1	3	0	2
6¼	0	-	0	-	0	-	-	1	0	0	0
6½	0	-	0	-	0	-	-	-	0	1	3
6¾	1	-	0	-	0	-	-	-	0	1	0
7	-	-	1	-	1	-	-	-	0	-	0
7¼	-	-	0	-	-	-	-	-	0	-	1
8½	-	-	0	-	-	-	-	-	2	-	-
9	-	-	1	-	-	-	-	-	2	-	-
9¾	-	-	-	-	-	-	-	-	1	-	-

Table IV. (Cont'd.)

Wt. in lbs.	Area K					Area L				
	June 15-30	July 1-15	July 16-31	Aug. 1-15	Sept. 1-15	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15
1¼	-	-	-	-	-	-	1	-	-	-
1½	-	3	-	-	-	-	0	-	-	-
1¾	-	9	1	-	-	2	2	-	-	-
2	2	17	9	1	3	6	18	-	1	5
2¼	1	62	17	0	2	24	46	1	0	13
2½	3	60	29	5	9	46	86	3	13	25
2¾	3	76	36	5	7	65	103	9	20	35
3	8	25	33	4	3	58	88	11	17	39
3¼	8	50	37	7	7	49	74	16	28	41
3½	14	29	27	4	4	45	87	8	20	36
3¾	8	38	21	4	7	40	54	9	19	32
4	5	26	20	4	2	29	41	4	9	9
4¼	6	16	11	2	3	20	39	4	11	5
4½	6	19	12	5	1	15	27	0	4	6
4¾	12	30	6	0	0	14	13	1	3	3
5	2	6	8	0	1	7	8	3	-	1
5¼	1	6	5	0	0	4	10	1	-	0
5½	4	3	2	0	1	4	2	-	-	1
5¾	1	2	2	1	-	-	2	-	-	1
6	-	2	0	-	-	-	1	-	-	-
6½	-	-	2	-	-	-	1	-	-	-
6¾	-	-	0	-	-	-	1	-	-	-
7	-	-	1	-	-	-	0	-	-	-
8½	-	-	-	-	-	-	1	-	-	-

Table IV. (Cont'd.)

Wt.in lbs.	Area M				
	July 1-15	July 16-31	August 1-15	August 16-31	September 1-15
1¾	-	1	-	-	-
2	2	5	-	4	3
2¼	4	15	-	4	6
2½	4	15	13	9	19
2¾	2	29	22	11	26
3	7	31	22	10	37
3¼	5	18	20	21	18
3½	5	12	21	17	13
3¾	6	5	17	12	13
4	3	5	13	7	14
4¼	1	5	12	8	10
4½	1	4	13	6	18
4¾	1	1	17	18	11
5	-	3	13	12	20
5¼	-	0	19	20	16
5½	-	2	11	11	14
5¾	-	2	10	17	9
6	-	2	7	8	19
6¼	-	2	2	14	13
6½	-	0	2	9	12
6¾	-	0	0	5	5
7	-	0	4	8	7
7¼	-	0	1	10	2
7½	-	0	3	5	2
7¾	-	0	3	6	1
8	-	0	0	0	2
8¼	-	0	0	3	3
8½	-	0	0	0	1
8¾	-	0	0	1	0
9	-	0	1	0	1
9¼	-	0	0	1	-
9½	-	0	1	0	-
11¼	-	0	-	1	-
12	-	1	-	-	-

Table V. An analysis of estimated catches in calculated round weights taken by the Great Slave Lake commercial fishery during the summer season of 1951.

	Trout	Whitefish	Combined
Estimated total catch in thousands of pounds	2,267	2,169	4,436
Percentage landed by fishermen, the location and number of whose nets were known	62.5	58.8	60.7
Percentage landed by other fishermen	36.0	40.5	38.2
Percentage caught but not landed	1.5	0.7	1.1

Table VI. The estimated catches of lake trout in thousands of pounds round weight taken by the commercial fishery in Great Slave Lake during the summer season of 1951. Any discrepancies in totals are the result of rounding off.

Area	June 15-30	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	All summer
A	7	12	12	98	146	0	276
B	7	19	8	0	0	0	33
D	30	92	71	94	0	0	287
E	18	65	80	83	166	262	673
F	4	4	17	27	62	74	188
G	0	23	18	50	69	26	186
H	7	16	16	79	33	29	180
K	11	19	15	2	0	4	51
L	0	15	55	34	25	35	165
M	0	1	10	86	71	62	230
Whole lake	85	265	302	553	570	493	2,267

Table VII. The estimated catches of whitefish in thousands of pounds round weight taken by the Great Slave Lake fishery during the summer season 1951. Any discrepancies in totals are the result of rounding off.

Area	June 15-30	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	All summer
A	11	40	33	165	74	0	323
B	18	82	39	0	0	0	139
D	27	129	136	165	0	0	457
E	18	88	191	80	104	128	609
F	4	5	24	29	30	27	120
G	0	11	32	52	51	15	161
H	4	10	14	28	12	17	85
K	18	33	63	4	1	4	123
L	0	11	50	13	8	13	94
M	0	4	9	13	16	15	57
Whole lake	100	414	591	548	297	219	2,169

Table VIII. The estimated catches of lake trout and whitefish combined in thousands of pounds round weight taken by the Great Slave Lake commercial fishery during the summer of 1951. Any discrepancies in totals are the result of rounding off.

Area	June 15-30	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	All summer
A	18	52	46	263	220	0	599
B	25	101	47	0	0	0	172
D	57	222	207	259	0	0	744
E	36	153	271	163	269	391	1282
F	8	9	42	56	92	102	308
G	0	34	50	101	120	41	347
H	11	26	30	107	45	46	265
K	29	52	78	6	1	7	174
L	0	27	105	47	33	48	259
M	0	5	18	99	87	77	287
Whole lake	185	680	892	1101	867	712	4436

Table IX. The estimated catches of rough fish in thousands of pounds round weight, taken by the Great Slave Lake commercial fishery during the summer of 1951. The "others" consist of 91 per cent yellow pike-perch, 3 per cent grayling and 6 per cent round whitefish. Any discrepancies in totals are the result of rounding off.

Area	Inconnu	Pike	Cisco	Burbot	Suckers	Others	All species
A	20	1	2	36	197	+	257
B	6	4	1	31	5	+	47
D	8	7	48	47	93	1	202
E	3	2	84	21	7	1	117
F	1	+	13	5	+	1	20
G	8	7	7	11	+	+	33
H	14	2	18	17	1	+	52
K	14	11	5	19	1	+	51
L	3	2	+	1	+	+	6
M	1	+	+	1	+	+	2
Whole lake	78	35	178	188	305	3	787

Table X. The fishing effort in equivalent net-nights (see 1948 report for definition) exerted by Great Slave Lake fishermen who were interviewed during the summer season of 1951.

Area	June 15-30	July 1-15	July 16-31	Aug. 1-15	Aug. 16-31	Sept. 1-15	All summer
A	0	106	0	2521	794	0	3421
B	286	1183	834	0	0	0	2303
D	1024	2211	1459	1522	0	0	6216
E	333	1250	3019	499	1261	292	6654
F	69	120	629	570	123	177	1688
G	0	621	706	1217	1764	648	4956
H	105	431	523	1312	665	1116	4152
K	301	1110	1443	147	24	210	3235
L	0	303	1222	630	153	318	2626
M	0	86	461	1328	1095	1066	4036
Whole lake	2118	7421	10296	9746	5879	3827	39287

Table XI. The availability of lake trout in pounds round weight caught per equivalent net-night (see 1948 report for definition) to the Great Slave Lake fishermen who were interviewed during the summer season of 1951. An asterisk indicates a value based on less than 200 equivalent net-nights.

Area	June 15-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	All summer
A	-	23*	-	20	55	-	28
B	23	16	9	-	-	-	14
D	29	22	13	21	-	-	21
E	54	33	16	91	73	116	40
F	61*	30*	28	47	262*	41*	54
G	-	37	25	41	38	41	37
H	71*	37	30	60	50	26	43
K	37	17	11	10*	0*	18	16
L	-	51	45	55	160*	110	63
M	-	12*	21	65	65	58	57
Whole lake	36	25	20	41	62	51	37

Table XII. The availability of whitefish in pounds round weight caught per equivalent net-night (see 1948 report for definition) to the Great Slave Lake fishermen who were interviewed during the summer season of 1951. An asterisk indicates a value based on less than 200 equivalent net-nights.

Area	June 15-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	All summer
A	-	35*	-	25	22	-	26
B	63	69	49	-	-	-	60
D	25	24	31	34	-	-	28
E	55	42	35	41	55	89	44
F	58*	45*	38	50	65*	9*	43
G	-	18	45	42	28	23	32
H	37*	23	27	21	18	15	21
K	60	30	44	28*	48*	18	38
L	-	37	40	20	52*	40	36
M	-	47*	19	10	15	14	14
Whole lake	42	36	37	29	31	24	33

Table XIII. The availability of lake trout and whitefish combined, in pounds round weight caught per equivalent net-night (see 1948 report for definition), to the fishermen who were interviewed during the summer season of 1951. An asterisk indicates a value based on less than 200 equivalent net-nights.

Area	June 15-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	All summer
A	-	58*	-	45	77	-	54
B	86	85	58	-	-	-	74
D	54	46	44	55	-	-	49
E	109	75	51	132	128	205	84
F	119*	75*	66	97	327*	50*	97
G	-	55	70	83	66	64	69
H	108*	60	57	81	68	41	64
K	97	47	55	38*	48*	36	54
L	-	88	85	75	212*	150	99
M	-	59*	40	75	80	72	71
Whole lake	78	61	57	70	93	75	70

Table XIV. The availability of lake trout in pounds round weight per net-night--for nets cleared daily only--to fishermen who were interviewed during the summer season of 1951. An asterisk indicates a value based on less than 200 net-nights.

Area	June 15-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	All summer
A	-	23*	-	19	54	-	25
B	9*	28	9	-	-	-	15
D	24	20	9	21	-	-	18
E	19*	28	13	74	60	57*	27
F	40*	30*	30	60*	-	41*	35
G	-	43*	25	45	33	30*	35
H	45*	35	28	60*	48	27	44
K	24	16	11	7*	0*	15*	12
L	-	52*	46	-	-	36*	47
M	-	12*	29	53	67	58	56
Whole lake	23	25	16	35	51	36	29

Table XV. The availability of whitefish in pounds round weight per net-night--for nets cleared daily only--to fishermen who were interviewed during the summer season of 1951. An asterisk indicates a value based on less than 200 net-nights.

Area	June 15-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	All summer
A	-	35*	-	27	22	-	27
B	44*	61	41	-	-	-	47
D	25	25	32	35	-	-	29
E	32*	42	35	43	50	66*	39
F	43*	45*	37	50*	-	9*	32
G	-	18*	48	46	28	23*	38
H	28*	24	29	22*	20	21	23
K	46	28	45	48*	48*	18*	39
L	-	36*	49	-	-	21*	44
M	-	35*	16	8	18	14	14
Whole lake	31	33	38	30	29	20	32

Table XVI. The availability of lake trout and whitefish combined in pounds round weight caught per net-night--for nets cleared daily only--to fishermen who were interviewed during the summer season of 1951. An asterisk indicates a value based on less than 200 net-nights.

Area	June 15-30	July 1-15	July 16-31	August 1-15	August 16-31	Sept. 1-15	All summer
A	-	58*	-	46	76	-	52
B	53*	89	50	-	-	-	62
D	49	45	41	56	-	-	47
E	51*	70	48	117	110	123*	66
F	83*	75*	67	110*	-	50*	67
G	-	61*	73	91	61	53*	73
H	73*	59	57	82*	68	48	67
K	70	44	56	55*	48*	33*	51
L	-	88*	95	-	-	57*	91
M	-	47*	45	61	85	72	70
Whole lake	54	58	54	65	80	56	61

Table XVII. Ranges of depth in feet (extreme value eliminated) of the water in which Great Slave Lake commercial fishermen set their nets during the summer of 1951.

Area	June	July		August		Sept.
	16-30	1-15	16-31	1-15	16-31	1-15
A	-	-	-	37- 60	35- 70	-
B	50-140	20-140	40-120	-	-	-
D	21- 45	25-100	20- 90	50- 60	-	-
E	30-110	40-110	20-100	20-120	50-100	60- 80
F	-	-	60-115	60- 90	-	-
G	-	50-100	15-100	15- 70	25- 80	30-100
H	-	60-115	15-110	20-115	30-100	20-100
K	60-120	60-120	20-120	-	-	-
L	-	20-150	-	-	-	-
M	-	-	-	15- 70	15-100	15-100