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A report of the Lake Claire goldeye fishery
for 1949

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INTRODUCTION

A small commercial fishery was opened to local Treaty Indians at Lake Claire, Wood Buffalo Park, Alberta in the spring of 1948. A license was issued to McInnes Products Corporation Limited by the Minister of Mines and Resources, permitting the removal of 250,000 pounds (round weight) of goldeye, Amphiodon alosoides, and "such other numbers and species of fish as may be taken during these fishing operations", from Lake Claire and its adjacent waters during the 1948 season. The terms of the license were based on recommendations embodied in a report of a fishery investigation of the area which was conducted during the summer of 1947 (Sprules, W. M., Manuscript Research Report, December 1947).

Fishing was carried on from June 5 to 29 in 1948 with an average of 12.5 skiffs each operating an average of 566 yards of gill net per night. A total of 119,000 pounds of fish was removed from the area including 76,900 pounds of goldeye (Sprules, W. M., Manuscript Research Report, January 1949). Although the goldeye production realized, constituted only 31 per cent of the quota set for the lake, the fishery showed considerable promise and all parties concerned expressed interest in its continuance.

A license, similar to that granted in 1948, was drawn up with a few minor revisions based on experience gained during the first season and issued to the same Licensee for the 1949 season.

METHODS AND EQUIPMENT

A floating camp, consisting of two barges, was established on June 9 by McInnes Products Corporation Limited on the east side of Willow Island which is situated about midway along the north shore of Lake Claire. This site proved unsatisfactory early in the operation because of poor harborage, and the camp was moved on June 21 to the mouth of the Prairie River, at the eastern entrance to Lake Claire, where suitable shelter could be obtained. One barge contained a small commissary, quarters for the Company personnel and dock space where the catch was received and handled. The second barge was refrigerated and was used to quick-freeze and store the catch. Mr. G. McInnes represented the Licensee and was in charge of the operation at the lake.

The fishermen, many of whom had participated in the 1948 fishery, were Treaty Indians selected by the Indian Agent at Fort Chipewyan, Alberta. They established shore camps in the vicinity of the barges and fished from Chipewyan skiffs powered by an assortment of outboard motors. Mr. R. Fraser represented the Indian Agent at the lake and acted as mediator and interpreter.

The nets were run each day when weather permitted and the catch was returned to the barges as rapidly as possible. The fish were cleaned on the lake for the most part, lightly iced and protected from the direct rays of the sun during transit to the barges. The individual catches were weighed on arrival at the dock, rinsed, and the fish placed on flat, metal trays which held

an average of 19 pounds of goldeye. These trays were placed in the freezer compartment immediately and exposed to a temperature of -10 degrees Fahrenheit for approximately 12 hours. The trays were removed from the freezer and the frozen block of fish tapped from the trays and glazed as a unit. The contents of 4 or 5 trays were packed in wax-lined, cardboard cartons and stored in a second compartment at 8 degrees Fahrenheit. The complete goldeye catch was transported by barge from Lake Claire to the town of Waterways, Alberta, which is located on the Athabasca River at the termination of the Northern Alberta Railway system. From here the catch was sent by rail to Winnipeg, Manitoba where the final product was prepared for marketing.

Goldeye and yellow pike-perch, Stizostedion vitreum of first quality were bought from the fishermen and the remainder of the catch, consisting of soft or drowned specimens of the marketable species, northern pike, Esox lucius, whitefish, Coregonus clupeaformis, suckers, Catostomus catostomus and C. commersonii, burbot, Lota maculosa, yellow perch, Perca flavescens, flathead chub, Platygobio gracilis and grayling, Thymallus signifer was used by the fishermen for food and dog feed or discarded. A few hundred pounds of waste fish were supplied to the Government dog camp at Quatre Fourche during the season. The entrails only were removed from the marketable goldeye while the pike-perch were headed in addition. An allowance of 5 per cent of the dressed weight was claimed by the buyer to compensate for anticipated shrinkage during the storage period.

A daily record of the catch of each skiff was maintained throughout the fishing season by representatives of the Central Fisheries Research Station. The landed dressed weight of the marketable catch and the number of discarded specimens of each species obtained, were recorded. Factors for the conversion of numbers into round weight were obtained for each species through analyses of random samples of the catch taken at intervals during the fishery. Information relative to the locality fished, number of nets set, type of set used and general remark was obtained from the fishermen through the interpreter. In addition, a random sample of 100 pounds (round weight) of goldeye was taken from the commercial catch at approximately two-week intervals and the average fork length, average weight, state of maturity, sex and age of the specimens determined in order to follow the effect of the fishery on the population.

CATCH STATISTICS

Fishing began in the evening of June 9 when a few nets were set after the arrival of the barges at Willow Island. The first lifts were made on June 10 and the last on July 31 when all nets were removed from the area. Fifteen skiffs participated in the fishery for periods ranging from 6 to 52 days. From 1 to 14 skiffs were in operation on any one day with an average of 10.8 operating each day throughout the 52-day season. A skiff is considered to be operating provided nets fished from the skiff are in the water regardless of whether or not the nets are visited that day.

Nets were set for 560 skiff-days where a skiff-day re-

presents the operation of one skiff for a 24-hour period. This total includes 516 separate skiff-lifts comprised of 473 one-day lifts where the nets were in the water for approximately 24 hours prior to being lifted, 42 two-day lifts where the nets were set for 72 hours prior to a lift being made. The discrepancy between the number of skiff-days for which nets were set and the number of lifts made is accounted for by the multiple-day lifts where nets were in the water for more than 24 hours before a lift was made. Thus the 42 two-day lifts represent 84 skiff-days of fishing and the 1 three-day lift represents 3 skiff-days.

A total of 408,360 yard-net-days, composed of 408,060 yard-net-days of $3\frac{1}{4}$ - inch mesh and 300 yard-net-days of 4 - inch mesh, was fished during the season where a yard-net-day represents 1 yard of net set for a 24-hour interval. Thus an average of 7,853 yards was fished each day or 729 yards per skiff per day. A total of 350,260 yards was lifted after having been set for approximately 24 hours, 28,300 yards were set for 48 hours and 500 yards were set for 72 hours prior to being cleared of the catch.

The fishery produced a marketable catch of 118,535 pounds (dressed weight with no shrinkage allowance deducted) which was composed of 115,599 pounds of goldeye and 2,936 pounds of pike-perch. It was found that the dressing operation accounted for 9.7 per cent of the round weight of goldeye and approximately 30 per cent of the pike-perch. Thus the dressed weights listed above represent a round weight of 128,017 pounds of goldeye and 4,194 pounds of pike-perch. In addition 18,063 pounds of goldeye and 3,664 pounds of pike-perch

were culled and discarded during the fishery so that a total of approximately 146,100 pounds of goldeye and 7,900 pounds of pike-perch were removed from the lake during the 1949 fishing season.

The estimated poundage of unmarketable species caught, based on the number of specimens and the average weight of individuals belonging to each species, amounted to 50,400 pounds of pike, 16,400 pounds of whitefish, 19,400 pounds of suckers and less than 100 pounds of all other species combined.

The production of all species amounted to 240,231 pounds round weight in 1949 and the average availability was 58.8 pounds per 100 yards of net per day. Goldeye comprised 60.8 per cent by weight of the production, pike-perch 3.3 per cent, pike 21.0 per cent, whitefish 6.8 per cent, suckers 8.1 per cent and the total of the remaining species caught, less than 0.1 per cent.

The availability of goldeye, based on the marketable dressed weight prior to shrinkage allowance, ranged from 13.2 to 49.9 pounds per 100 yards per day and averaged 28.3 pounds for the season. The best catch was made by Mr. A. Benoit on June 15 when 800 yards of net set in the northwest corner of the lake produced 937 pounds or 117 pounds per 100 yards per day. He also obtained the largest total catch of goldeye for the season, a total of 13,668 pounds, and had the best sustained yield amounting to 45.1 pounds per 100 yards per day for 43 skiff-days.

A random sample of 100 pounds, round weight, of goldeye was analyzed from one fisherman's catch on June 11 and 25, and July 9, 23, and 31 to determine if there was a significant dif-

ference in the size or age composition of the catch at different times during the fishery. The respective samples contained 111, 119, 111, 99 and 103 specimens with an average fork length of 12.8, 12.6, 12.9, 13.3 and 13.2 inches and an average weight of 14.5, 13.4, 14.6, 16.1, and 15.3 ounces. The lack of regular decline in the average length and weight of the specimens throughout the fishing season indicates that the lake was not being over-exploited. The general increase in size observed from the data obtained on July 23 and 31 may be accounted for by seasonal growth.

DISCUSSION

The total production of 146,100 pounds of goldeye taken during the 1949 fishery represented 58.4 per cent of the quota set for Lake Claire. The catch in 1949 was almost double that obtained in 1948 when 76,900 pounds were obtained or 31.0 per cent of the quota. This difference may be accounted for by the increased fishing effort applied in 1949 when the season comprised more than twice as many fishing days as in 1948 and more than twice as many yard-net-days were realized.

The availability of goldeye was greater by 7.7 pounds per 100 yards of net per day in 1948 than in 1949. It is not felt that this truly represents a decrease in the availability of goldeye in the lake in 1949 but rather a decreased efficiency of capture which may be accounted for in several ways. The longer period fished in 1949 contributed to greater deterioration of the nets and thus these fished at reduced efficiencies for a longer time. This suggestion

was substantiated by the daily availability records since the catch per unit effort increased considerably near the end of July when several new nets were put into operation by a few of the fishermen. In addition the removal of the barges from Willow Island to the mouth of the Prairie River was followed by a reduction in the average daily catch and the uncertainty and concomitant lack of interest which prevailed around the middle of July, when a reply to a request for a two-week extension of the fishing season was awaited, was accompanied by a period of low availability.

The failure to produce the quota seemed to be directly related to the small number of skiffs employed in the fishery. A minimum of 15 skiffs had been expected but even this number was not reached on any day of the fishing season. A successful trapping season preceded the fishing season and the consequent feeling of security seemed to be responsible for the general lack of interest displayed by many of the Fort Chipewyan residents who had previously expressed their intention to fish. If the fishery is to be manned by Treaty Indians in the future, the Indian Agent at Fort Chipewyan should be responsible for supplying an adequate number of personnel to assure the success of the enterprise. Fishermen from other areas should be permitted to participate in the fishery if sufficient crews can not be mustered from local Indians. It is possible that the presence of several, experienced white fishermen on the lake would incite the native crews and prove an asset further, since the accepted commercial fishing methods could be observed by the inexperienced fishermen.

The Prairie River camp site is not satisfactory since the distances to many of the best fishing grounds make these relatively inaccessible to the fishermen who are dependent on rather unreliable means of transportation. An effort should be made to discover a suitable harbour in a central location in order to overcome this difficulty and thus increase the average catch of the skiffs.

Once the catch was landed at the barges it was handled rapidly and the marketable product produced in 1949 was of fine quality. The presence of the freezing equipment on the lake and the availability of chopped ice for use in the skiffs were improvements in the handling facilities of 1948. A much higher percentage of the goldeye catch was rejected at the barge in 1949 than in 1948. This resulted from a more rigorous inspection of the landed catch. A reduction in the number of culled fish could be brought about by establishment of a more central base which would shorten the haul from the fishing grounds to the freezer and thus decrease the time the catch is exposed. Further, the fishermen should visit the nets early in the morning so that the catch is not transported on the lake during the heat of the afternoon.

There has been no indication obtained throughout the period of commercial fishing at Lake Claire that the area is being over-exploited. In fact a comparison of statistics of a random sample of goldeye taken from 3 $\frac{1}{2}$ -inch mesh nets on June 8, 1948 and July 31, 1949 shows a remarkable similarity in the catch composition of the commercial nets on these dates. The sample taken on June 8, 1948 consisted of 101 specimens which averaged 13.2 inches in fork length,

15.9 ounces in weight and ranged from 7 to 13 years in age. The dominant year class was 9 and 40.6 per cent of the catch was composed of the dominant year class. The 8.9 and the 10 year old fish made up 81.2 per cent of the catch. A total of 103 fish was sampled on July 31, 1949 and the specimens averaged 13.2 inches in fork length, 15.3 ounces in weight and ranged from 7 to 12 years in age. The dominant year class was 9 and 39.2 per cent of the catch was composed of this year class. The 8,9 and 10 year old fish contributed 84.3 per cent of the catch. When seasonal growth in any year is considered along with the above data it is apparent that there is a slight decrease in the average size of the catch taken in 1949 in comparison with that recorded for 1948 since the 1948 data represent fish taken before new growth for the year had begun. This minor change would be expected following exploitation of a virgin population and is not considered to be indicative of over-exploitation.

The species-composition of the catch at Lake Claire, based on percentage of the round weight caught, showed only minor differences in the three years for which data are available. The results can not be compared directly since 4-inch mesh was used during the commercial fishery of 1948 and 3 $\frac{3}{4}$ -inch mesh was used almost exclusively in the 1949 fishery. In 1947 goldeye comprised 55.7 per cent of the total catch, pike-perch 8.1 per cent, pike 19.8 per cent, whitefish 6.9 per cent, suckers 9.5 per cent and miscellaneous species less than 0.1 per cent. In 1948 the same species comprised 64.6, 15.2, 10.4, 2.7, 7.0 and 0.1 per cent of the total catch respectively and in 1949, 60.8, 3.3, 21.0, 6.8, 8.1 and less than 0.1 per cent.

The percentage composition of the catch by species should be determined each year since a significant change in catch composition would probably precede a deterioration in the goldeye fishery in this area based on a knowledge of the predator-prey relationship of gold-eye and pike in Lake Claire and other regions.

It is to be hoped that the Lake Claire goldeye fishery will continue and that the experience gained by the fishermen and Licensee during the 1948 and 1949 fishery will provide the means whereby the quota may be realized in subsequent years. The future of the fishery does not appear bright based on casual observation of the various dissensions that existed on occasion in 1949. Few of the fishermen were able to show a profit at the end of the season and most incurred an appreciable debt. The reasons for this are not fully understood but the anticipated result is that little interest in the fishery will be shown by these men another year. They will be held responsible for the debt if they participate in a future fishery, naturally, and they will realize that little is to be gained financially for another summer's work.

The Lake Claire fishery, based on the production realized rather than on the quota set, already has established itself as the mainstay of the present Dominion production of goldeye. It would be unfortunate if this resource could not be exploited in the future because of difficulties arising from geographical boundaries, personal prejudices and administration complications. The fishery is unique from the scientific standpoint since it is the only area where goldeye is fished that a biological survey preceded exploit-

ation. The data obtained from the survey and from subsequent annual analysis of the population will prove invaluable in establishing sound management policies applicable to goldeye in other areas. Thus every effort should be made by all those directly concerned to assure the successful continuation of this fishery.

RECOMMENDATIONS

Many of the recommendations embodied in the original report of the Lake Claire survey and in the report of the 1948 fishery have been accepted and are now in practice. The following recommendations are repetitions of former recommendations for the most part which have not been followed for various reasons.

- (1) The base camp should be established in a central location, along the north shore of Lake Claire preferably, so that the better fishing grounds will be accessible to the fishermen and that the time of exposure of the catch, while in transit to the freezer, may be minimized.
- (2) A minimum of 15 skiffs should be in operation each day of the fishing season, each operating approximately 1000 yards of net. At least 20 skiffs would be required on the lake to assure the operation of 15 each day.
- (3) The Indian Agent at Fort Chipewyan should be responsible for supplying the required number of crews if Treaty Indian fishermen are to fish exclusively. It is suggested that if sufficient interest is not shown by this group other fishermen should be given permission to enter the fishery.
- (4) Supplies of chopped ice and suitable covered containers should be carried by each skiff whenever a lift is made.

- (5) The nets should be visited daily, weather permitting, and the catch returned to the base camp before noon each day.
- (6) The native fishermen should be educated regarding the proper care of nets and supplied with nets of coarse twine in order to reduce deterioration and consequent loss.

ACKNOWLEDGMENTS

Permission to carry out field investigations within the boundaries of Wood Buffalo Park was granted by the National Parks Bureau of the Department of Mines and Resources.

Thanks are expressed to Mr. G. McInnes of McInnes Products Corporation Limited and Mr. R. Fraser of Fort Chipewyan for their various assistances in the field.

Mr. W. S. Haynes and Mr. A. MacDonald assisted in the early-season survey in 1949 and capably took charge of the collection of statistics after the opening of the fishing season.

SUMMARY

- (1) A commercial goldeye fishery was operated at Lake Claire, Wood Buffalo Park, Alberta, from June 9 to July 31, 1949. A license to take 250,000 pounds, round weight, was issued to McInnes Products Corporation Limited.
- (2) An average of 10.8 skiffs operated each day and fished an average of 729 yards of $3\frac{3}{4}$ -inch mesh nets per skiff per day.
- (3) The total round weight production amounted to a little over 240,200 pounds and comprised 146,100 pounds of goldeye, 7,900 pounds of pike-perch, 50,400 pounds of pike, 16,400 pounds

of whitefish, 19,400 pounds of suckers and less than 100 pounds of miscellaneous species including burbot, perch, chub, and grayling.

- (4) There was no indication obtained that the fishery was being over-exploited. Failure to reach the quota set for the lake appeared to result from too few skiffs participating in the fishery.
- (5) The catch was handled quickly and efficiently and a product of first quality was produced.
- (6) Reasons for the continuation of the fishery in the future are expressed.
- (7) A list of recommendations based on experience gained during the 1948 and 1949 fishery is included.

Table 1. Analysis of the marketable catch taken in the 1949 Lake Claire fishery showing the fishing effort, landed dressed weight of marketable goldeye and pike-perch and the availability of goldeye for each day.

Date	No. of skiff-days	No. of yard-net-days	No. of pounds marketed (dressed weight) Goldeye	Pike-perch	Total	Availability of goldeye. Marketed pounds per 100 yards per day.
June 10	5	2,600	344	24	368	13.2
June 11	10	5,900	1,082	206	1,288	18.3
June 12	10	5,000	2,264	118	2,382	45.3
June 13	10	4,900	2,012	246	2,258	41.1
June 14	11	8,600	2,653	144	2,797	30.8
June 15	10	7,300	3,642	184	3,826	49.9
June 16	9	2,200	660	-	660	30.0
June 17	10	7,500	1,395	49	1,444	18.6
June 18	10	8,000	2,150	73	2,223	26.9
June 19	10	7,500	3,278	123	3,401	43.7
June 20	9	5,400	2,257	120	2,377	41.8
June 21	12	8,100	2,519	86	2,605	31.1
June 22	13	10,800	3,671	207	4,078	35.8
June 23	13	10,000	2,308	179	2,487	23.1
June 24	11	600	253	3	256	42.2
June 25	12	13,400	1,943	58	2,001	14.5
June 26	10	7,300	1,508	84	1,592	20.7
June 27	11	7,900	2,269	84	2,353	28.7
June 28	12	9,100	2,667	145	3,012	31.5
June 29	13	10,400	2,865	164	3,029	27.5
June 30	13	10,000	2,944	104	3,048	29.4
July 1	12	8,800	2,366	85	2,451	26.9
July 2	11	9,300	2,578	71	2,649	27.7
July 3	11	6,300	2,559	15	2,574	30.8
July 4	10	8,300	2,257	90	2,347	27.2
July 5	13	10,700	2,687	58	2,745	25.1
July 6	11	7,250	1,968	50	2,018	27.1

Table 1. (continued)

July 7	12	10,750	3,288	22	3,310	30.6	
July 8	11	8,610	2,908	19	2,927	33.8	
July 9	11	8,710	2,900	2	2,902	33.3	
July 10	14	11,090	2,773	20	2,793	25.0	
July 11	11	7,180	2,457	1	2,458	34.2	
July 12	13	11,180	2,173	18	2,191	19.4	
July 13	13	10,720	2,242	6	2,248	20.9	
July 14	10	7,300	1,456	9	1,465	19.9	
July 15	10	7,100	1,010	2	1,012	14.2	
July 16	3	1,600	450	2	452	28.1	
July 17	1	400	56	-	56	14.0	
July 18	7	4,400	818	-	818	18.6	
July 19	12	8,900	1,921	3	1,924	21.6	
July 20	12	8,450	3,102	15	3,117	36.7	
July 21	11	8,150	2,065	-	2,065	25.3	
July 22	12	10,000	2,482	2	2,484	24.8	
July 23	12	10,400	4,018	8	4,026	38.6	
July 24	13	9,420	3,540	6	3,546	37.6	
July 25	13	10,820	2,903	4	2,907	26.8	
July 26	13	10,220	3,821	2	3,823	37.4	
July 27	13	7,320	2,522	11	2,533	34.5	
July 28	12	9,120	2,719	5	2,724	29.8	
July 29	11	7,770	2,100	9	2,109	27.0	
July 30	9	1,800	376	-	376	20.9	
July 31	9	11,800	2,000	-	2,000	16.9	
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Total	52	560	408,360	115,599	2,936	118,535	28.3
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Table 11. Analysis of the marketable catch taken in the 1949 Lake Claire fishery showing the fishing effort, marketed poundage and the average availability of goldeye for each fisherman.

Fisherman	No. of skiff-days	No. of yard-net-days	No. of pounds marketed (dressed weight)			Availability of goldeye. Marketed pounds per 100 yards per day.	
			Goldeye	Pike-perch	Total		
A. Benoit	43	30,300	13,668	211	13,879	45.1	
N. Bruno	34	32,200	6,672	411	7,083	20.7	
F. Gibot	51	33,500	10,116	369	10,485	30.2	
J. B. Gibot	25	13,700	2,896	205	3,101	21.1	
A. Gladue	32	21,000	4,156	106	4,262	19.8	
J. B. Gladue	24	19,900	7,599	-	7,599	38.2	
N. Martin	47	33,500	9,312	353	9,665	27.8	
P. Ratfat	42	28,300	10,179	314	10,493	36.0	
S. Sepp	49	42,500	11,735	300	12,035	27.6	
S. Shortman	48	44,800	13,455	300	13,755	30.0	
Jean Tourangeau	52	36,400	7,898	194	8,092	21.7	
Joe Tourangeau	45	29,500	7,876	63	7,939	26.7	
A. Villebrun	35	27,700	6,776	90	6,866	24.5	
A. Wittago	6	720	645	-	645	89.6	
F. Wittago	27	14,340	2,616	20	2,636	18.2	
Total	15	560	408,360	115,599	2,936	118,535	28.3

Table 111. Analysis of the unmarketable catch taken in the 1949 Lake Claire fishery.

	Goldeye	Pike-perch	Pike	Whitefish	Common sucker	Northern sucker	Mixed suckers	Burbot	Flathead chub	Yellow perch	Grayling
The number of specimens discarded at the barge (actual count)	19,337	1,593	16,861	7,908	2,346	6,134	1,300	28	28	1	1
The number of specimens discarded on the lake (fishermen's estimate)	660 (lbs.)	-	1,146	284	110	391	68	-	-	-	-
Total number of fish discarded.	19,337 + 660 (lbs.)	1,593	18,007	8,192	2,456	6,525	1,368	28	28	1	1
The average round weight per specimen in pounds	0.9	2.3	2.8	2.0	1.8	1.9	1.9	2.0	0.5	0.5	0.5
Estimated total number of pounds discarded	18,063	3,664	50,420	16,384	4,421	12,398	2,599	56	14	0.5	0.5

Table IV. Analysis of the goldeye catch from 3½- and 4-inch mesh survey nets set prior to the fishing season at Lake Claire in 1949 and from 3½-inch commercial nets set during the fishing season showing the length, weight and age composition of the various samples.

	Survey nets		Commercial nets				
	May 20 and 21	May 20 -31	June 11	June 25	July 9	July 23	July 31
Mesh size (inches)	3½	4	3½	3½	3½	3½	3½
Number of specimens	50	106	111	119	111	99	103
Average fork length (inches)	12.8	13.9	12.8	12.6	12.9	13.3	13.2
Average weight (ounces)	13.3	17.4	14.5	13.4	14.6	16.1	15.3
Percent of catch mature	100	100	?	?	?	?	?
Age range of specimens	7 to 11	8 to 14	-	-	-	-	7 to 12
Dominant age class	9	10	-	-	-	-	9
Percent of catch composed of 9-yr. old fish	44.0	16.0	-	-	-	-	39.2
Percent of catch composed of 8,9 and 10-year old fish	90.0	84.9	-	-	-	-	84.3
Locality of capture	Lousy Cr.	Lousy Cr. and Pte de Roche	Mouth of Prairie River	Mouth of Prairie River	Mouth of Prairie River	Mouth of Prairie River	Lousy Cr.
Fisherman	-	-	Jean Tourangeau	J. B. Gibot	A. Gladue	S. Sopp	S. Sopp
Total round weight (pounds)	-	-	100	100	100	100	100
Total dressed weight (pounds)	-	-	89	91	91	91.5	89
Percentage weight loss	-	-	11.0	9.0	9.0	8.5	11.0

Table V. Comparison of the species composition of the total catch taken in Lake Claire in 1947, 1948 and 1949, based on round weight.

	Lake survey 1947	Commercial fishery 1948	1949
Size of mesh (inches)	4	3 $\frac{1}{2}$ and 4	3 $\frac{1}{2}$ *
Number of yard-net-days	450	176,810	408,360
Total pounds caught	449	119,000	240,200
Percentage of total catch by weight.			
Goldeye	55.7	64.6	60.8
Pike-perch	8.1	15.2	3.3
Pike	19.8	10.4	21.0
Whitefish	6.9	2.7	6.8
Suckers (mixed)	9.5	7.0	8.1
Miscellaneous (burbot, chub, perch, and grayling)	-	0.1	-
Total	100.0	100.0	100.0

* 300 yard-net-days of 4-inch mesh.

Table VI. Summary of the Lake Claire fishery statistics for 1948 and 1949.

	1948	1949
Fishing period	June 5 - 29	June 10 - July 31
Number of days	25	52
Average No. of skiffs operating per day	12.5	10.8
Maximum No. " " " " "	17	14
Minimum No. " " " " "	7	1
Number of yard-net-days	176,810	408,360
Number of yards set for 1 day	126,610	350,260
Number of yards set for 2 days	23,750	28,300
Number of yards set for 3 days	900	500
Number of 1-day-sets lifted	229	473
Number of 2-day-sets lifted	39	42
Number of 3-day-sets lifted	2	1
Average number of yards set per day	7,072	7,853
" " " " " " skiff per day	566	729
Number of yard-net-days of 3 $\frac{1}{2}$ inch mesh	92,600	408,060
" " " " " " " " "	84,210	300
Total pounds caught (all species)	119,010	240,231
Av. availability per 100 yards per day	67.3	58.8
Total pounds caught		
Goldeye	76,889	146,080
Pike-perch	18,054	7,858
Pike	12,342	50,420
Whitefish	3,238	16,384
Suckers	8,352	19,418
Burbot	134	56
Chub	1	14
Perch	-	0.5
Grayling	-	0.5
Average availability of goldeye per 100 yards per day (pounds)	43.5	35.8
Estimated pounds of goldeye discarded	2,074	18,063
Pounds of goldeye marketed (dressed weight, no shrinkage deduction)	66,810	115,599

THE UNIVERSITY OF CHICAGO

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