No. 33

February 1, 1957

FISH AND WILDLIFE MANAGEMENT REPORT

PROVINCE OF ONTARIO

DEPARTMENT OF LANDS AND FORESTS

Division of Fish and Wildlife

Hon. Clare E. Mapledoram
Minister

F. A. MacDougall
Deputy Minister

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WILDLIFE NOTES FROM JAMES BAY

by
A. Gagnon and H. G. Lumsden

Between 12 and 25 June, 1956, Mr. Alec Hunter and the writers attended trapline meetings at Albany and Attawapiskat, and collected information from the Indians on wildlife in the area.

The itinerary was as follows:

12 June. Left Moosonee by air for Albany.

13-16 June. At Albany.

17 June. Left Albany by canoe and reached an island at the mouth of the river where Len Hughes has his camp.

18 June. Left this island and arrived at Attawapiskat.

19-21 June. At Attawapiskat.

21 June. Field trip to Thomas Kataquabet's trapline north of Attawapiskat on the coast.

22 June. Attawapiskat to Albany by canoe.

23 June. At Albany.

24 June. Albany to Nomansland Point by canoe.

24-25 June. Nomansland Point to Moosonee by canoe.

Limited field work was done on an island in the mouth of the Albany, on Thomas Kataquabet's trapline, and at Nomansland Point.

Waterfowl Observations

On 12 June, while flying from Moosonee to Fort Albany a count of the waterfowl was carried out from Big Piskwanish Point to the mouth of the Albany river. The tract of the aircraft passed over the salting and a quarter mile wide transect about 60 miles long was covered.

The following waterfowl were seen:

Black Duck	145	Mallard	1 pair, 11 males.
Pintail	17	Golden-eye	78
Canada Goose	6	Blue Goose	1

of the Albany, on Thursday afternoon.
Point.

Waterfowl Observations

On 12 June, while [illegible]
count of the waterfowl was made
to the mouth of the Albany
over the salting and a quarter
long was covered.

The following waterfowl

Black Duck	145
Pintail	17
Canada Goose	6

[illegible] collected [illegible]

12 June. [illegible]

13-16 June. [illegible]

17 June. [illegible]
of the [illegible]

18 June. [illegible]

19-21 June. [illegible]

21 June. [illegible]
Astragalus [illegible]

22 June. Abstemplcal [illegible]

23 June. At Albany.

24 June. Albany [illegible]

24-25 June. [illegible]

Part of 17 June was spent on an island at the mouth of the Albany River. The following waterfowl were seen while walking about three miles of shore.

Black Duck	30	Mallard	1 pair, 3 males
Pintail	6	Baldpate	8
Golden-eye	4	Scaup sp.	5
American Merganser	15	Canada Goose	4
Red-breasted Merganser	1 pair	Brant	16

Wilson Snipe were also heard winnowing during the evening. When a short visit was made to an adjacent marsh on the mainland, the following were noted:

Black Duck, Mallard, Pintail	300 plus
Canada Goose	50
Blue and Snow Goose	15

On the 18 June counts of water birds were made at various times during the canoe trip from the mouth of the Albany to Attawapiskat. The following were seen during the first 30 miles of the trip, from 6.30 to 10.30 a.m.. Some were flushed from the saltings as the boat passed but most were seen at sea.

Black Duck 8 Pintail 11 Mallard 2

Two large flocks of these species 500.

Golden-eye	10	American Merganser	41
Red-breasted Merganser	7	Scaup sp.	2
Surf Scoter	6	American Scoter	76
Canada Goose	13	Common Loon	3
Caspian Tern	1	Unidentified (probably Scoter sp)	294

The following were seen on the last eight miles on entering the mouth of the Attawapiskat to the post.

Black Duck	28	Mallard	1 male
Green-winged Teal	22	Baldpate	1 pair
American Merganser	33	Canada Goose	6
Unidentified ducks	26		

Black Duck 2

Golden-eye

Red-breasted Merganser

Surf Scoter

Canada Goose

Caspian Tern

Black Duck 24

Green-winged Teal 24

American Merganser 24

Unidentified ducks 24

The Kill of Waterfowl By Indians

Information was collected by individual interview on the kill of Canada and Snow Geese and ducks in the fall of 1955 and the spring of 1956. These Indians are normally very truthful in providing wildlife harvest information to the Department. However, it was suggested soon after we began the work that some might be reluctant to give the correct figures of their take, because they thought the kill of geese might be restricted by quota. The Chief and Councillors at both settlements were told that we had no intention of limiting the harvest of geese by Indians who needed them for food. This was also repeated at the open trapline meetings.

An assessment of the reliability of the figures was given later at various times by the Chief and some of the older hunters. They were satisfied that accurate estimates were being given for geese but because the duck kill is spread through the year and hunting is on a more casual basis, there might be some error in these figures.

Not all the Indians at Albany and Attawapiskat take part in the fall and spring Snow Goose hunts. Some like Thomas Toomagatic who has a trapline lying away from the coast leave the settlements in August and do not return until after breakup when most of the Snows have left for the north. Few of these inland Indians delay their departure for their traplines as late as 10 September. Most of their waterfowl kill consists of Canada Geese taken in the spring.

Indians having traplines bordering on the coast usually make the most of their opportunities to take Snow Geese. The highest kill reported was that of John Spence P E 216, who killed 90 in the fall, and 400 in the spring. He still had many of these smoked and dried for use during the summer.

The total and average kills of waterfowl for 82 treaty Indians living at Attawapiskat and for 115 living at Albany who were interviewed are given in the following tables:

Total Waterfowl Kill for Fall and Spring 1955 and 1956

	Albany		Attawapiskat		Total
	Fall	Spring	Fall	Spring	
Canada Geese	184	1,218	226	1,437	3,065
Snow Geese	4,379	2,274	3,840	2,134	12,627
Ducks	865	207	1,364	423	2,859
TOTAL	5,428	3,699	5,430	3,994	18,551

Canada Geese

Snow Geese

Ducks

TOTAL

Average Kill of Waterfowl Per Hunter

	Albany		Attawapiskat		Fall and Spring
	Fall	Spring	Fall	Spring	(195 Hunters)
Canada Geese	2	11	3	18	16
Snow Geese	39	20	47	26	65
Ducks	8	2	17	5	15

The Indians reported that the spring hunt of Snow Geese was a good one this year particularily in the Lake River area. They suggested that the slow breakup this spring delayed the birds on the coast for longer than usual.

Ducks are not hunted heavily by the Indians. Ammunition costs are high and they prefer to use their supply on geese and other large species.

When the opportunity presents itself they will kill flightless moulting ducks. James Sutherland, the Chief at Albany gave his total kill of waterfowl at 159 and reported using 100 shells. When asked about this inconsistency he said he had killed about 80 moulting ducks with a stick.

Thomas Toomagatic also used to return to his trapline on the Attawapiskat River to hunt flightless geese in late summer with dogs.

In order to reduce ammunition costs many Indians use 16 or 20 gauge shot guns and also load their own shells. They use each shell case about three times and reduce the charge they load to a minimum. Since they are very good shots and do not fire at long range their efficiency is high.

Figures supplied by the Hudson Bay Co., the free traders and the Mission on ammunition sold during the current year are presented below.

	Powder	Loaded Shells
Albany	426 pounds	820 boxes of 25
Attawapiskat	392 pounds	286 boxes of 25
TOTAL	818 pounds	1,106 boxes of 25

Since between 60 and 80 shells can be loaded with one pound of powder these totals probably represent about 85,000 shots. The Indians interviewed reported using far less ammunition than this. Their figures are as follows:

	Powder	Loaded Shells
Albany	88 pounds	390 boxes of 25
Attawapiskat	219 pounds	79 boxes of 25
TOTAL	307 pounds	469 boxes of 25

This probably represents about 33,200 shots. It is not possible at this time to use ammunition expenditures to compute kill of waterfowl because an unknown amount is used at ptarmigan, sharp-tailed grouse, loons and other birds. The quantity of unused ammunition still retained by the Indians is also unknown and may account for the disparity in the figures obtained from the traders and those reported by the Indians.

The use of loaded shells is far more widespread at Albany than at Attawapiskat. It was noticed that Indians working on the radar site seldom bought powder, using only manufactured shells.

Recovery of Waterfowl Bands

All Indians were asked if they had shot any banded waterfowl and if they did to bring the bands in for checking. The result is the recovery of the following:

Canada Geese	50 bands and 3 neck bands
Snow Geese	30 bands
Ducks	18 bands
TOTAL	98 bands and 3 neck bands

In addition the following lost bands were reported:

	Albany	Attawapiskat	Total
Canada Geese	13	7	20
Snow Geese	1	3	4
Ducks	1	1	1
TOTALS	15	11	26

Sandhill Cranes

Thomas Toomagatic reported that he occasionally caught flightless young cranes when hunting moulting geese with dogs on his trapline, about 60 miles up the Attawapiskat River. He reported them common there every summer.

Jacob Sutherland P E 142, and Jacob Koostachin 142 P E, reported seeing cranes dancing on their traplines just before they left for the settlements in the spring.

Polar Bears

Abraham Paulmarten who traps on Cape Henrietta Maria killed one female polar bear in the fall of 1955. Bear tracks seen on the coast earlier he thought belonged to this same animal. He did not think there were others on his ground.

Mr. Cahill of the Carter Construction Company reported seeing 8 polar bears while flying over Bear Island, NWT. late in the fall of 1955. He said that so far none of his men have been able to land on Bear Island, and to his knowledge no bears have been shot there.

Walrus

Stan Louttit reported seeing walrus regularly around Walrus Island when he worked on the Hudson Bay Co., boats. In August 1939 he saw about a 100 there. The boat crews used to see them regularly well out in the bay north from Ekwan Point. He reported an attack by a walrus on a canoe some years ago which luckily did not result in the destruction of the boat.

Howling or Walking Seal

On two occasions Indians described a species of seal they called Muktao akik, giving the above English names for it. David Spence who shot one some 10 years ago described it as being reddish brown in colour with hind flippers turned in under its body and canine teeth about two inches long. Alex Wesley, the Chief at Attawapiskat, reported finding a pup about 18 inches long when he was a young man. It was a dirty white in colour.

Spence's description suggests a seal of the family Otariidae but he did not mention the presence of ears on his specimen, confirmation must await further evidence.

Wolverine

A single wolverine was killed at Moose Factory during the winter of 1955-56. A number of tracks reports were received for the last two winters. They are as follows:

Mathew Lazarus P E 131 - Winter 1955-56, 15 miles east of the Ghost River Post.

Simeon Friday P E 145 - December 1955 at Job Lake.

James Sutherland P E 142 - Winter 1954-55 on his trapline.

Mathew Okimow P E 225 - Winter 1954-55 close to Attawapiskat.

Xavier Metat P E 206 - Winter 1954-55 on his trapline.

Fisher

This species was reported to have been abundant 20 years ago around Attawapiskat. About the last one to be killed in that area was taken by Xavier Iahtail five miles west of the Post some 10 years ago.

Some reports of fisher litter sizes were received. Simeon Metat found two dens about 15 years ago containing four and two young, at the headwaters of the Ghost River. The snow was still on the ground at the time. Jacob Koostachin also found two dens containing two young each. He said they were found "before goose time" about 20 years ago on the Ekwan River.

Simeon Friday's father was reported to have killed a pregnant fisher about 20 years ago containing six young. Thus 10 young fisher were reported in four litters given an average of 2.25 young per litter. One pregnancy involving six young was also recorded.

Marten

Twenty years ago marten were abundant in the Albany and Attawapiskat watersheds. They rapidly disappeared and virtually none were reported in this area prior to the initiation of the planting program in 1951.

Since then plantings have been made at four sites in Patricia East as follows:

1951, 35 miles north of the junction of the Albany and Kenogami rivers.

1952 and 1953 at Sutton Lake.

1952 and 1954, 40 miles northeast of the Ghost River Post.

1955 on the Attawapiskat, 15 miles west of the post.

Tracks of marten were reported from the following traplines in the Albany and Attawapiskat band areas in the winter of 1954-55 and 1955-56.

P E 126, 129, 142, 150, 206, 212, 215, 218, 222, 223, 230, 232 and 238.

Most of these reports come from points within 40 miles of a planting site. Abraham Mattinas P E 238, reported releasing a marten caught accidentally in a squirrel trap.

Suspected Rabies Cases

At the trapline meetings numerous reports were received of sick foxes, a number of which attacked dogs which later died.

The general feeling was that foxes were scarcer in the 1955-56 winter than previously, coincident with a decline in mouse and rabbit populations.

Isiah Sutherland reported a red fox biting two of his dogs at Albany in February, 1956. One died in a week, and the other in about a month.

Simeon Metat reported seeing foxes that he thought were sick. They came right into his camp and showed no fear.

Mathew Ogimow said a sick fox was seen climbing on his tepee. It later fought with one of his dogs which went mad and died about two weeks later.

Abraham Paulmarten found two dead foxes during the winter and Ernie Metat found one.

Xavier Metat reported a sick fox blundering into trees as it ran.

In the absence of laboratory confirmation it is not possible to say that rabies is still present in this area. However, some of the reports are highly suggestive.

White-tailed Deer

The only reports of deer from the two band areas under consideration were of one killed at the junction of the Ghost and Albany rivers in 1953, by Simeon Metat, and of tracks seen near the same place in 1954.

INVESTIGATION OF THE WATERFOWL BROOD PRODUCTION OF LUTHER MARSH, ONTARIO, 1956.

by
H. Gray Merriam[1] and D. I. Gillespie[2]

Waterfowl brood production of Luther Marsh, Ontario was investigated July 1 to 3, 1956. This work was carried out by the Ontario Department of Lands and Forests, Fish and Wildlife Division and the Ontario Agricultural College, Department of Entomology and Zoology.

Luther Marsh is a flood control impoundment managed by the Grand Valley Conservation Commission. Day (1) described the area in 1955.

Water levels, during this investigation, were an estimated 12 to 24 inches above the October normal.

Ducks

Nests

Limited amounts of time during mid-day were used in nest hunting. Two uncut hay fields, one pasture and one small, weed-covered island were searched on foot, with a dog.

No waterfowl nests were located. Possible reasons were the brief time available and the lush condition of the vegetation.

One blue-winged teal (Anas discors) nest was located by questioning local residents. This nest contained 5 eggs on June 29; 3 more had been laid by July 3. Local residents stated that many incubating blue-winged teal have been discovered during haying operations of previous years, 5 on a 20-acre field in one instance. Females that escaped the mowers hatched their clutches during the week following haying. Haying operations in this area begin about the week of July 12.

Broods

Brood hunting was confined to early morning and late evening. Sample areas of each vegetative type in the marsh (except Wylde Lake) were searched by boat. Shoreline was investigated on foot where visibility was limited by vegetation.

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No waterfowl broods or "broody" females were seen. Local residents reported no broods.

Mallards and Blacks

Mallards and black ducks may have hatched some broods or may have been in late stages of incubation. Ten adult mallards were observed (Table 1), 1 pair and 8 lone males. Only 2 of 26 adult blacks were paired; many of the remaining 24 could have been males. No flightless males of either species were seen. A few broods of these 2 species may have been present in the flooded timber and ericaceous shrubbery. Observation in these habitats is difficult.

Teal and Ruddy Ducks

Several observations suggested that few, if any, blue-winged teal, green-winged teal (A. carolinensis) or ruddy ducks (Erismatura jamaicensis) had completed incubation by this date.

TABLE I - Adult Waterfowl Observations, Luther Marsh, Ontario July 2-3, 1956 (114 ducks).

Date 1956	Mallard			Black		Blue-winged Teal		
	pr.	♂	♀	pr.	lone	pr.	♂	♀
July 2 a.m.		8			14	7	11	
July 2 p.m.					5	3	21	
July 3 a.m.	1			1	5			
Total Paired Birds	2			2		20		
Total All Birds	10			26		52		

Date 1956	Green-winged Teal				Ruddy			Ring-necked			Unidentified
	pr.	♂	♀	?	pr.	♂	♀	pr.	♂	♀	
July 2 a.m.											1
July 2 p.m.	1				2	4					1
July 3 a.m.	1	4		3		2	1	1			1
Total Paired Birds	4				4			2			
Total All Birds	11				11			2			3

Table 1 shows 14 pairs and 45 lone birds of these 3 species. No counts were made during mid-day hours but a lack of pairs and a preponderance of lone males were evident at this time. No flightless males were observed. Information given above on nesting and hatching supplements these indications.

Adults

Observations on adult waterfowl were subordinate to the brood census. Table 1 shows data gathered during nest and brood investigations.

Other Marsh Birds

Incidental information on other marsh birds was gathered during nest and brood investigations.

TABLE II - Incidental Observations of Marsh Birds

Date	American Coots		Pied-billed Grebes		Common Loons	Virginia Rails
	Ad.	Juv.	Ad.	Juv.	Ad.	Ad.
July 2 a.m.			2			
July 2 p.m.	♀	4	♀	2		1
			♀	4		
July 3			♀	5		
			♀	5	3	
Totals	1	4	6	16	3	1

Summary

An investigation of waterfowl brood production of Luther Marsh, Ontario was carried out July 1 to 3, 1956. One blue-winged teal nest was located. No waterfowl broods were seen but 114 adult ducks were observed. Observations made during this investigation and information given by local residents suggest that few, if any, blue-winged and green-winged teal clutches had hatched by this date. Some black duck and mallard broods may have been present on the area; none was observed.

Literature Cited

(1) Day, J. H: An Investigation of Luther Marsh, Ontario. Canadian Wildlife Service. 1955.

WATERFOWL BANDING - GOGAMA DISTRICT, 1956

by
W. R. Catton

Purpose of Project

To get some idea of the number of Black Ducks hatched in Ontario's vast pond region; in particular the area known as Grassy River in the Townships of Sothman and Haliday. Waterfowl banding has been done for years although never before in this part of Ontario. Besides furnishing information on numbers of locally raised birds the project will also furnish information on migration routes taken by birds raised in this region.

Preliminary Work Leading Up To the Establishment of the Banding Station.

In early September 1955 a trip was authorized to look over the Grassy River area with a view to future establishment of a banding station. The trip was made by members of the District Staff and Mr. Alex Dzubin of the Canadian Wildlife Service. This trip was covered in an earlier report by Mr. Dzubin (Fish and Wildlife Management Report #27, February, 1956) whose conclusions were that a banding station should be set up in the area.

On August 2nd, 1956 Mr. Edward Baker, United States Game Management Agent arrived in Gogama to take charge of the project. Following two days preparations Mr. Baker accompanied by W. R. Catton flew into Washagami Lake.

The following is a record of time spent on the project during its six weeks of operation:

Aug. 5-9th During this period we were without grain with which to bait. However, time was well spent making repairs to the trappers' cabin in which we found lodging for the duration of the project, constructing a dock for the aircraft and clearing brush to make room for grain storage and clearing a site on which rolls of wire might be unrolled and cut into traps, etc. Several trips were made by canoe to enable Mr. Baker to see the area and pick out and mark possible trapsites. On August 9th the grain arrived, consisting of cracked corn, wheat and barley. The cracked corn proved to be most popular with the birds.

Aug. 9-15th It should be mentioned that during this period not more than 10-15 birds were counted in any single day. This caused some concern for the success of the project. Having located as many sites as deemed necessary, time was now spent clearing these sites of vegetation, usually wild rice or hard stemmed bulrush. A scythe was used for this. After clearing the site bait was put out and stakes driven into the bottom. The stakes were merely to get the birds accustomed to signs of activity about the bait. About one dozen sites were prepared in this manner. It was difficult to

locate sites having a firm bottom and in many instances where sand bottoms were found, the water was too deep for a trap. Sites picked had either sand or mucky bottoms; however on the mucky sites the hard bottom was not more than eight inches beneath. Lengths of burlap were stapled together where proposed sites were picked but the muck proved too deep. In such instances the burlap was stretched out, submerged and the grain scattered over the cloth. In that there was no acceptance of bait on such a setup we did not operate any traps having burlap bottoms. All traps were set in from 8 to 10 inches of water.

Traps used were the portable welded wire type having either one or three funnel entrances, roofed with cotton netting and having a catching box at the back. The wire was supported on poles driven into the bottom. Once baited, sites were checked daily to watch for any acceptance of the bait. Time was also spent cutting the 300 ft. rolls of 1" x 2" mesh, 4 foot wide wire to the desired size for traps.

On the evening of the 15th the first sign of bait acceptance was noticed at "Able" site located on Washagami Lake. As acceptance was light, it was decided to wait rather than go ahead and construct a trap. The next few days were spent constructing traps and catching boxes at the cabin, and checking baited sites. On the 18th, Officer Catton was replaced by Ranger Paul Endress and Mr. Wm. Goldie. On this date also the bait had been removed at "Dog" site on Grassy River. However, we still had not noticed more than 15 to 20 trappable ducks in the area.

Aug. 20th First trap constructed at "Able" site but not yet closed so as to trap birds. Upon checking bait at "Dog" site, from 35 to 40 birds were flushed from the grain, and an unclosed trap was constructed. Up until this time Mr. Baker had not been optimistic about the success of the project, believing that we would do well to band 100 birds.

Aug. 23rd First birds taken in "Able". Two more traps closed in and made ready to catch birds. On the 30th the last trap was put into operation, bringing the total in use to five.

When trapping operations ceased after 25 days actual trapping the following birds had been banded:

448 Blacks	2 Green-winged Teal
11 Mallards	2 Hooded Mergansers

Counting repeats, a total of 1,547 birds were handled. There were 10 casualties, attributed to trap damage and predators. One Great Horned Owl was caught in the catching box and destroyed. It is assumed that most casualties resulted from the presence of hawks or owls about the traps, causing the birds to panic.

Sept. 1st Mr. Goldie departed for Sault Ste. Marie. On Sept. 10th Officer Catton arrived at Washagami Lake remaining until the project was finished.

Sept. 15th All traps were dismantled and stored in the bush for possible future use.

Results of Each Days Actual Trapping - 25 Days

Date	Number	Repeats	Casualties
August 23	8	-	-
August 24	24	-	1
August 25	39	4	-
August 26	41	10	1
August 27	20	22	-
August 28	13	17	-
August 29	20	23	-
August 30	16	26	-
August 31	13	29	1
September 1	16	27	-
September 2	6	29	-
September 3	10	24	1
September 4	24	30	-
September 5	21	39	-
September 6	21	44	-
September 7	30	76	3
September 8	15	42	-
September 9	31	81	-
September 10	27	97	1
September 11	14	103	-
September 12	13	79	-
September 13	17	81	-
September 14	10	111	1
September 15	13	81	1
TOTALS	462	1075	10

Conclusions

While no flightless birds were banded it was felt by Mr. Baker that all the birds banded up to September 3rd were hatched or had spent the summer in the Grassy River area. From the record of daily catches it is apparent that there were two peak periods indicating that the last influx was the result of birds not hatched in the immediate vicinity.

It should be mentioned that at no time were ducks seen in such large flocks as in previous years. This might be attributed to the activity in the area caused by the project itself; however, aircraft flights over the vicinity revealed no large flocks. It is possible that the late summer and early fall were in some way responsible.

Mr. Baker's conclusions were that the project was successful and should be carried on one more year, at least. Judging from the area, it was his opinion that in a season of normal weather the number of birds banded could be doubled.

DUCK HUNTING IN THE LAKE ERIE DISTRICT

(compiled by)
L. J. Stock

Some statistics and comments collected by Lake Erie District staff on hunter success and species composition of the bag on October 1, 1955 (opening day - a full day's shoot; October 6, 1956 (opening day - a half-day's shoot) and October 8, 1956 (a full day's shoot).

Contents

TABLE I - Hunter Success on opening day, Saturday, October 6, 1956.
Season open at 12 o'clock noon.

	Long Point	Rondeau		Lower Grand R.	Haldimand County	Welland County
	Field Checks	Field Checks	Gate Checks	Field Checks	Field Checks	Field Checks
No. of hunters checked	54	71	261	79	26	47
Total hours hunted	258	301	1188	397	90	116
Total ducks bagged	254	178	394	418	44	62
Ducks bagged per hunter	4.7	2.5	1.52	5.3	1.7	1.3
Ducks bagged per hunter hour	0.98	0.59	0.33	1.05	0.49	0.54
Ducks unretrieved - per cent	7.3	-	4.6	-	-	4.6

TABLE II - Hunter Success on opening day Saturday, October 6, 1956 (one-half day's shoot) compared to the following Monday, October 8, 1956 (a full day's shoot).

	Long Point		Rondeau			Haldimand County	
	Oct. 6 Field Check	Oct. 8 Field Check	Oct. 6 Field Check	Oct. 6 Gate Check	Oct. 8 Gate Check	Oct. 6 Field Check	Oct. 8 Field Check
No. of hunters checked	54	67	71	261	282	26	25
Total hours hunted	258	255	301	1188	1562	90	60
Total ducks bagged	254	211	178	394	190	44	5
Ducks bagged per hunter	4.7	3.15	2.5	1.52	0.67	1.7	0.2
Ducks bagged per hunter hour	0.98	0.83	0.59	0.33	0.12	0.49	0.08
Ducks unretrieved - per cent	7.3	8.3	-	4.6	33.3	-	-

TABLE III - Hunter Success on opening days compared: October 1, 1955 - a full day's shoot, October 6, 1956 - a half day's shoot.

	Long Point		Rondeau			Haldimand County		Mitchell's Bay
	Field Checks 1955	Field Checks 1956	Field Checks 1955	Gate Checks 1955	Gate Checks 1956	Field Checks 1955	Field Checks 1956	Field Checks 1955
Number of hunters checked	55	54	71	213	261	37	26	29
Total hunter hours	154	258	301	-	1188	150	90	93
Total ducks bagged	203	254	178	421	394	44	44	189
Ducks bagged per hunter	3.6	4.7	2.5	1.98	1.52	1.2	1.7	5.5
Ducks per hunter hour	1.3	0.98	0.59		-	0.33	0.29	2.0
Ducks unretrieved - %	22	7.3	-	30	4.6	4.3	-	14

TABLE III - Monthly rainfall, October 1, 1952 - September 30, 1953

Station	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
Bwana Mkubwa - A	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Bwana Mkubwa - B	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Bwana Mkubwa Mine	2.03	4.06	5.08	7.62	6.60	5.33	1.78	0.00	0.00	0.00	0.00	0.00	32.50
Bwana Mkubwa Post Office	2.03	4.06	5.08	7.62	6.60	5.33	1.78	0.00	0.00	0.00	0.00	0.00	32.50
Bwana passed for 11 years	2.03	4.06	5.08	7.62	6.60	5.33	1.78	0.00	0.00	0.00	0.00	0.00	32.50
Total Bwana passed	2.03	4.06	5.08	7.62	6.60	5.33	1.78	0.00	0.00	0.00	0.00	0.00	32.50
Total Bwana months	11	11	11	11	11	11	11	11	11	11	11	11	11
Number of Bwana records	22	22	22	22	22	22	22	22	22	22	22	22	22

Station	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Total
Kafue Lodge	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Kafue Lodge Upper	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Kafue Lodge Lower	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Total Kafue months	11	11	11	11	11	11	11	11	11	11	11	11	11
Total Kafue passed	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Kafue passed for 11 years	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Kafue Lodge Post Office	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Kafue Lodge Mine	1.52	3.68	4.72	7.16	6.32	5.08	1.52	0.00	0.00	0.00	0.00	0.00	29.50
Number of Kafue records	22	22	22	22	22	22	22	22	22	22	22	22	22

TABLE IV - Species Composition of the Hunters Bag on Opening Day 1955 and 1956, Compared.

Species	Long Point				Rondeau Park					
	Field Check 1955		Field Check 1956		Gate Check 1955		Gate Check 1956		Field Check 1956	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Mallard	2				98	23	81	21	66	37
Pintail	1		1				12			
Baldpate	4		3				4		1	
Black Duck	6		25	10	31	7	35	9	55	31
Blue-winged Teal	120	60	219	86	224	53	156	40	51	29
Green-winged Teal	70	35	6		43	10	72	18	3	
Wood Duck					17	4	33	8		
Redhead										
Canvas-back					1					
Scaup					6					
Ringneck							1		2	
Ruddy					1					
TOTAL DUCKS	203		254		421		394		178	
Coots			5				2		8	
Unretrieved Ducks	58	22	20	7.3	184	30	19	4.6		

TABLE IV - continued

	Haldimand County				Lower Grand River		Welland County		Mitchell's Bay	
	Field Check 1955		Field Check 1956		Field Check 1956		Field Check 1956		Field Check 1956	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Mallard	7	16			95	23	3		121	64
Pintail									7	
Baldpate									17	9
Black Duck	12	27	1		159	38	41	66	26	14
Blue-winged Teal	16	36			162	39	15	24	18	10
Green-winged Teal	9	20	43	99						
Wood Duck					2		3			
Redhead										
Canvas-back										
Scaup										
Ringneck										
Ruddy										
TOTAL DUCKS	44		44		418		62		189	
Coots							1			
Unretrieved Ducks	2	4.3					3	4.6	31	14

TABLE V - Species composition of the hunters' bag.
Saturday October 6, 1956, a half day's shoot compared to Monday, October 8, 1956 a full day's shoot.

Species	Long Point Field Checks				Rondeau Gate Checks				Haldimand County Field Checks			
	October 6		October 8		October 6		October 8		October 6		October 8	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Mallard			3		81	21	6					
Pintail	1				12		5					
Baldpate	3		6		4							
Black Duck	25	10	4		35	9	88	46	1		1	
B. W. Teal	219	86	179	85	156	40	50	26				
G. W. Teal	6		19	9	72	18	25	13	43	99	4	80
Wood Duck					33	8	16	8				
TOTAL DUCKS	254		211		394		190		44		5	
Coots	5		2		2							
Unretrieved ducks	20	7.3	19		19	4.6	95	33.3				

TABLE VI - Species composition of the bag for the entire Lake Erie District on opening day 1955 and 1956.

	1955		1956	
	Number Shot	Percent of Bag	Number Shot	Percent of Bag
Mallard	228	27	245	18
Pintail	8		13	
Baldpate	21	2.5	8	.06
Black Duck	75	8.7	316	23
B. W. Teal	378	44	603	45
G. W. Teal	122	14	124	9
Wood Duck	17	2	38	3
Canvas-back	1			
Scaup	6		2	
Ringneck			1	
Ruddy	1			
TOTAL	857		1350	
Coots			16	
Unretrieved	275	24	42	3.0

TABLE VII - Hunter success for the entire Lake Erie District on opening day 1955 and 1956.

	1955	1956
No. of hunters checked	334	534
Total hours hunted		2350
Total ducks bagged	857	1350
Ducks bagged per hunter	2.6	2.5
Ducks bagged per hunter hour		0.57
Unretrieved ducks - percent	24.0	3.0

Discussions and Comments

The material in this report may be used to compare hunter success and species composition of the bag for the days shown, and the quality of duck hunting in different types of habitat. Better shooting occurs at Long Point, Rondeau, Lower Grand River and Mitchell's Bay. These are all extensive marsh areas, and with the exception of Rondeau, consist largely of privately owned or operated marshes with controlled shooting. Inland ponds and streams are largely unimproved habitat and provide inferior shooting. They are represented by the Upper Grand River, Dry Lake and vicinity, both included in Haldimand County, and Mud Lake and vicinity in Welland County.

Weather for the three days concerned was briefly as follows - October 1, 1955 was sunny and warm, October 6, 1956, cloudy and warm with scattered showers. Hunters at Rondeau were rained out before official closing time for the shoot on October 6. October 8, 1956 was sunny and warm with a southwest wind at 20 m.p.h.

All bags were checked by officers in the field, except at Rondeau where the Parks staff checked the hunters who left the marshes through the Park. The latter are shown as gate checks. Rondeau field checks were made outside the Park and did not include those checked by the Parks staff.

On opening day 1956, hunters were more successful on the Lower Grand River. Other areas in order of success were: Long Point, Rondeau, Welland County and Haldimand County, (Table I). In every case hunters bagged more birds per hour on Saturday October 6, 1956 in one-half day than on the following Monday in a full day, (Table II).

The percentage of unretrieved ducks increased from October 6 to 8, 1956 - at Rondeau from 4.6 to 33.3 (Table II.) When opening days for 1955 and 1956 are compared, the percentage of unretrieved ducks dropped sharply from 22 to 7.3 at Long Point and 30 to 4.6 at Rondeau, (Table III).

Comparing opening days in 1955 and 1956 ducks per hunter increased at Long Point and Haldimand County and decreased at Rondeau. However, ducks per hunter hour decreased at Long Point and increased in Haldimand County. Mitchell's Bay in 1955 showed the greatest success of any area - birds per hunter 6.5 and birds per hunter hour 2.0, (Table III). Mallards constituted 64% of the bag at Mitchell's Bay (the highest in any area). They were prominent at Rondeau and the Lower Grand River and scarce in other areas, (Table IV).

The highest percentage of Blacks was taken in Welland County (66%) in 1956. In other areas they constituted about one-third of the bag or less, (Table IV).

More Teal were shot than any other species on opening days in 1955 and 1956. At Long Point they provided 95% or more of the bag: at Rondeau over 60%. Teal were also prominent in Haldimand County and the Lower Grand River but relatively scarce at Mitchell's Bay, (Table IV).

Comparing the species taken on October 6 and 8, 1956. The percentage of Teal taken remained approximately the same at Long Point but dropped sharply at Rondeau. Mallards were very scarce at Rondeau on the second day but Blacks increased from 9 to 46 percent, (Table V). In Haldimand County hunting was very poor on October 8, (Table V).

Wood Ducks were reported only from Rondeau on the first two days of the open season and constituted 8% of the bag on each day, (Table V).

We have a reliable report that some hunters refrain from shooting Wood Ducks, hence the hunters' bag may not be a true indication of the availability of this species. However, there is no doubt that some are shot due to an error in identification and some of these may not be revealed due to bag restrictions, hence the kill is probably higher than shown in the actual bag.

Over the entire district on opening day Blue-winged Teal provide almost one-half the shooting. Blacks, Mallards and Green-winged Teal are next in importance and then order of importance changes from year to year. From 1955 and 1956 Mallards dropped 9%, Blacks increased 14.3%, Green-winged Teal dropped 5%, Wood Duck increased 1%. The scattering of other species is insignificant in any year, (Table VI). The percentage of unretrieved birds dropped from 24 to 3 from 1955 to 1956, (Table VI). The small number of Coots reported indicates the unpopularity of that species.

Hunter success for the entire District remained practically the same for 1955 and 1956 at two and a half birds per hunter on opening day. Considering the weather and the fact that opening day in 1956 was only a half-days shoot, the hunters lost nothing by being deprived of the opening morning, (Table VII).

Hunters and Department personnel are generally in favor of the noon opening of the waterfowl season.

Acknowledgments

Credit is given to the following personnel who contributed to this report. Conservation Officers, J. W. Allan, A. H. McIntyre, D. C. Martin, R. W. Finch, C. R. McKeown, A. R. Muma, E. A. Roberts and to Keith Cameron and members of the Rondeau Park Staff. Compilation by L. J. Stock.

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...buted to this report. ... McIntyre, D. ... Macrae, ... E. A. Roberts and to ... Staff. Compilation by ...

REPORT OF PHEASANT SEASON, 1956, LAKE HURON DISTRICT

by
W. H. Cantelon

The overall success of the 1956 pheasant shoot in the Lake Huron District was not good. The wet, cold weather during the first part of the nesting period could possibly be a factor in the reduction in birds. Several young pheasants were bagged which were not fully feathered.

A number of hunters attributed their poor success to the difficulty in flushing pheasants from the great amount of corn unharvested in the fields at the time of the shoot.

A special effort was made by Department Officers to assess the results of the additional four days pheasant season with respect to hunting pressure. See Tables II and III.

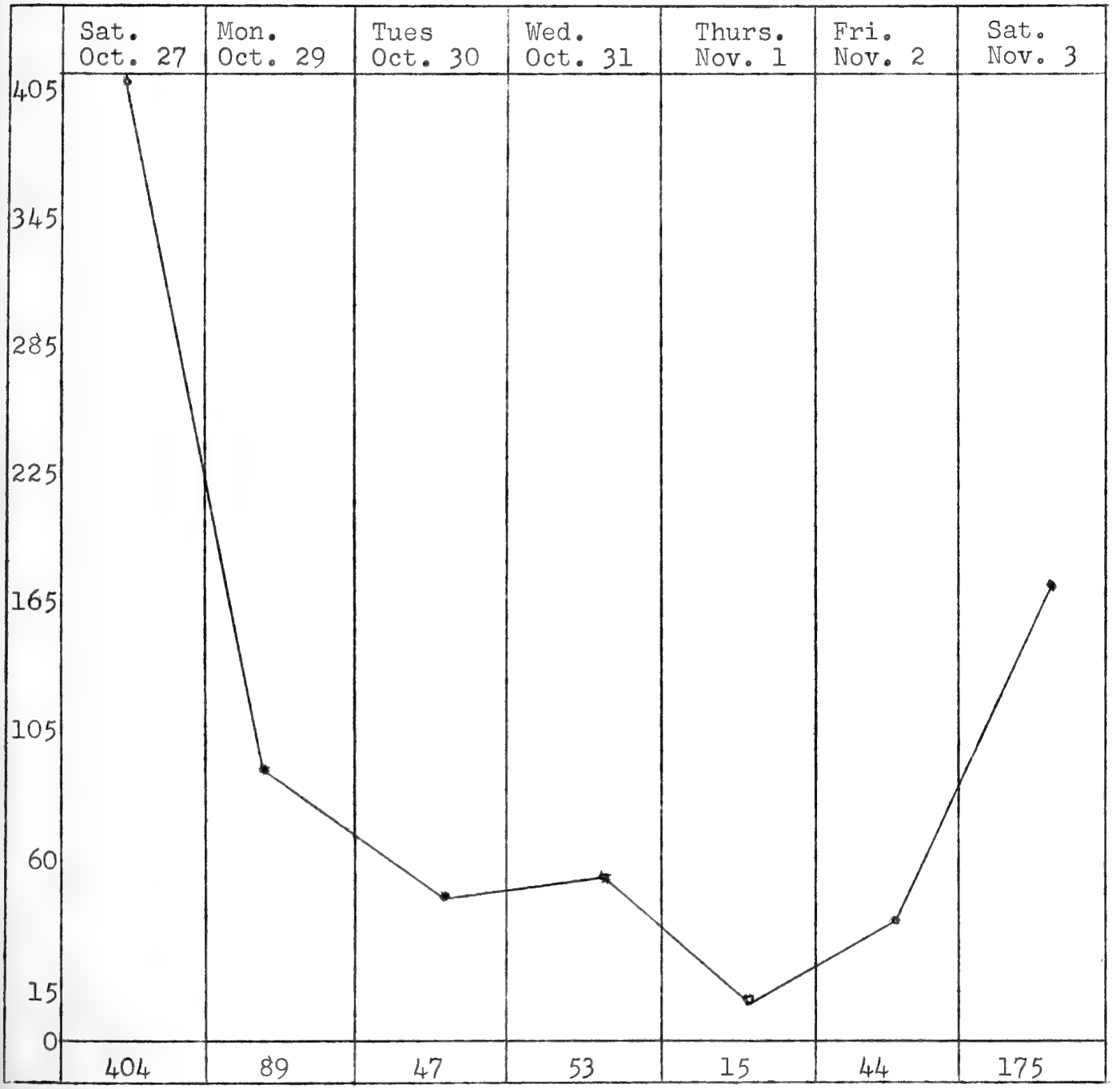
TABLE I - Showing by Townships the Number of Hunters Interviewed and Hunter Success.

County	Township	Checking Officer	Number of Hunters Checked	Number of Pheasants Recorded	Hunting Hours Per Pheasant Bagged	Average Success Per Hunter Per Season	Percentage of Hunters Using Dogs
Huron	Hay	Bellinger, R. R.	28	9	14	.32	17%
	Stephen	Bellinger, R. R.	43	7	27	.14	7%
	Stanley	Bellinger, R. R.	2	6	1.3	3	50%
Brant	Burford	Marr, M.	46	11	17	.24	13%
	N. Dumfries	Marr, M.	12	7	7	.58	16%
	S. Dumfries	Marr, M.	46	17	7	.37	15%
Oxford	Blenheim	Marr, M.	72	15	13	.20	6%
	Blandford	Clark, H. W.	26	10		.34	26%
	E. Zorra	Clark, H. W.	9	12		1.3	55%
	E. Oxford	Clark, H. W.	38	8		.21	44%
	N. Norwich	Clark, H. W.	168	159		.94	5%
	W. Zorra	Clark, H. W.	24	10		.41	33%
	W. Oxford	Clark, H. W.	4	1		.25	25%
Wentworth	E. Flamborough	Wolfe, C. A.	61	7	85	.11	42%
	W. Flamborough	Wolfe, C. A.	20	2	79	.10	45%
	Beverly	Wolfe, C. A.	10	0	N/A	N/A	70%
	Saltfleet	Wolfe, C. A.	3	0	N/A	N/A	0
	Glandford	Wolfe, C. A.	8	0	N/A	N/A	25%
Waterloo	Wilmot	Merner, F. H.	129	57	11	.44	21%
	Waterloo	Merner, F. H.	48	21	10.9	.43	12%
Halton	Nelson	Cantelon, W.H. for Hitchcox, A. D.	11	3	13	.27	9%
	Trafalgar	" " "	12	3	15	.25	8%
Wellington	Puslinch	Cantelon, W.H. for Matthews, G. C.	7	1	15	.14	14%
		TOTALS	827	366			

TABLE II - Showing by Counties the Number of Hunters Checked by Conservation Officers During The Seven Days of the 1956 Pheasant Season.

County	Sat. Oct. 27	Mon. Oct. 29	Tues. Oct. 30	Wed. Oct. 31	Thurs. Nov. 1	Fri. Nov. 2	Sat. Nov. 3
Huron	23	3	4	10	0	0	33
Brant	61	7	27	20	0	15	46
Oxford	154	54	7	4	0	20	30
Wentworth	70	5	1	6	0	0	20
Waterloo	70	20	8	13	15	7	44
Halton	21					2	
Wellington	5						2
	404	89	47	53	15	44	175

TABLE III - Graph Showing Number of Hunters Checked Per Day By Conservation Officers in the Regulated Areas in the Counties of Huron, Brant, Oxford, Wentworth, Waterloo, Halton and Wellington During the 1956 Pheasant Season in the Huron District.



WINTER MORTALITY OF DEER, KENORA DISTRICT, 1955 - 1956.

by
P. A. Thompson

Snow depths recorded at three snow stations in the Kenora District indicate that the deer herd probably had a tough time during the past winter. From December 26th, 1955 to March 26th, 1956 snow depths on the ground ranged from a minimum of 22 inches to a maximum of 38 inches with an over-all average of 30.6 inches for the fourteen weeks.

Conditions of this nature prompted Fish and Wildlife staff to make preliminary investigations in four deer wintering areas of the Kenora District. Surveys were made between May 20th, 1956 and June 3rd, 1956. One purpose of the investigation was to check on winter mortality on deer.

1) Granite Lake, May 20th, 1956

This area is approximately 20 miles west of Kenora, north of #17 highway. Two cruise lines, 1 chain by 160 chains with an offset of 20 chains were run north of the highway. No dead deer were found. Although a considerable amount of the available browse, mainly hazel and mountain maple, was utilized, this area was not considered to be deer browsed.

2) North Side of Long Bay, May 21st, 1956

This area is approximately seven miles north of Sioux Narrows on the west side of Highway #70. Two cruise lines, one chain wide and 240 chains long with an offset of 20 chains running parallel to Highway #70 were run. No dead deer were found. Although heavy browsing was observed, the available food of this area was not considered to be overexploited.

3) Indian Lake, May 26th, North of Grassy Narrows Indian Reserve

This investigation resulted from information given by Indian trappers of this area. It was reported that many dead deer were seen in the lake. The shore line of Indian Lake was patrolled by boat and one dead deer was found. This animal was almost completely decomposed, however, examination of the remains revealed that it was a fawn of the previous year. The sex could not be determined. A small island in the southwest part of the lake, with an area of approximately 600 acres, was covered quite extensively. It was quite evident that deer had wintered on this island. An abundance of browse was available but the area was lacking in suitable cover. On the southeast side of the lake two cruise lines, 80 chains long and one chain wide with an offset of 20 chains were run. This area showed heavy usage of available browse and perhaps could be considered as an overbrowsed area. No dead deer were found.

On May 27th the shoreline of Big Fox Lake was patrolled by boat for reported dead deer. No dead deer were found.

4) Cygnet Lake, Northeast of Minaki

On June 3rd deer wintering areas east and west of Cygnet Lake were travelled. The findings on each will be dealt with separately.

Cygnet Lake East

This area is situated east of the north end of the lake. Two cruise lines, 200 chains long and one chain wide with an offset of 20 chains were run. Four dead deer, consisting of one five year old male, one four year old male, one eight year old female, and one one year old female were found.

The lower jaw of each deer found was collected. As femur bones were broken on a previous inspection, thigh bones were taken from all except the one year old female. All animals found were in a decomposed condition.

There were no indications that death was caused by predation.

All available browse in this area was completely utilized, and thus gave reason to believe that the cause of death was from starvation.

Cygnet Lake West

This area is situated on the west side of Cygnet Lake. Two cruise lines 80 chains long by one chain wide with an offset of 20 chains were run due west. One five year old male deer was found dead. This animal when found was complete with no indication of utilization by scavangers. The lower jaw and femur bone was collected. As in the area east of the lake, all available browse was completely utilized.

The total area of sample by Fish and Wildlife Staff was 160 acres or .25 of a square mile. On this sample area, six dead deer were found. See attached table.

During June, July and August a timber cruising party operated in the following areas: Granite Lake south, Simpson Lake, Trout Lake and Locke Bay on the Winnipeg River. This party was asked to be on the lookout for dead deer. Their method of sampling was a continuous strip 22 feet or 1/3 of a chain wide. The area of sample was 150 acres or .23 of a square mile. Only dead deer that fell on the strip were counted. On the four areas the skeletons of 12 deer and one moose were found. (See attached table).

With conditions of this nature appearing, Fish and Wildlife Staff of the District feel quite safe in predicting a decrease in the hunters' success this coming deer hunting season. Figures from the deer checking stations this fall should show the age classes hit hardest by the past winter's extreme weather conditions.

Table Showing Dead Animals Found on Area of Sample

Sample By	Area of Sample		Animals Found	
	Acres	Square Miles	Deer	Moose
Fish & Wildlife Staff	162	.25	6	Nil
Cruising Party	150	.23	12	1
TOTAL	312	.48	18	1

DEER MORTALITY SURVEY, 1956 - SIOUX LOOKOUT DISTRICT

by
E. H. Stone

During the past winter numerous trips were made into deer concentration areas for the purpose of determining the extent of these areas and also to collect data with regards deer movements. Snowfall was above normal and deer activity was very limited and any information that could be collected during such conditions may prove of some value in later years. Track count checks were made during the middle of the winter and early spring and this information was forwarded to Maple at an earlier date.

It was also felt that if a deer mortality check was to be made in the spring then we would have areas already mapped for this survey.

With spring being very backward it limited our time for making a mortality check. Up to May 12th snow conditions made it impossible to start the survey and by the end of the month foliage had grown so quickly that any work in this line had to be abandoned.

Perrault Falls Area

This was one of the better areas that showed up during the winter months. It was located north of Perrault Lake and extended approximately ½ mile north on highway 105 from the Perrault Falls bridge. The area ½ mile by ½ mile was split down the centre by a pulp company road. Transects were run from the northern extremities of the concentration area in a north-south direction to Perrault Lake. Lines were run at two chain intervals so that this area was given a very thorough check.

Distances were tallied with reasonable accuracy and a total of 20.5 miles was compiled for this concentration area.

Summary of Deer Found

Six dead deer were found and all were located on the strip or well within the chain width.

Number 1: Found May 16th, 1956. Male fawn. Located on high ground in heavy balsam stand. Badly decomposed - no bones broken. Femur collected.

Number 2: May 16th, 1956. Female. Located on high ground in heavy balsam stand. Carcass lying over log-- badly decomposed - no broken bones. Insides all eaten - unable to determine if carrying young or not. Femur collected.

Number 3: May 16th, 1956. Male. Located on very high ridge-jackpine stand-blowdown area. Draped over log. Top side and insides eaten - balance gave appearance of starvation - no bones broken - femur collected.

Number 4: Female fawn. May 16th, 1956. Located 100 yards from Perrault Lake - low area. Over mature cedar in this area very heavy - should provide excellent cover. Badly eaten by ravens. No. broken bones - femur collected.

Number 5: May 17th, 1956. Female 4½-5 years. Located approximately 50 yards from Number 4. Partly eaten by ravens - innards gone. No broken bones. Femur collected.

Number 6: May 17th, 1956. Male fawn. Located on rise in ground a short distance from Lake. Badly decomposed - no broken bones. Femur and other hind leg bones very brittle and were badly broken when trying to disjoint from other leg bones. Not collected.

Eleven live deer were seen during the survey at Perrault Falls. All of these appeared in fair condition. Two of the above were year olds and the balance were adult deer. Trails in this area indicated that deer traffic had been very heavy during the past year.

The available browse in the Perrault Falls concentration area was very heavily utilized. Overmature cedar is abundant but regeneration is poor or possibly not given a chance to survive. The cedar that remains is of little value to the deer as most of this is out of reach of the animals.

Beard moss is abundant in the area and no doubt was the main diet for a portion of the winter.

Mountain Maple abundant but browsed extremely heavy. Raspberry - heavily browsed. White Birch - moderately browsed.

A Department scaler working the the neighbourhood of the Red Lake highway and north of the Perrault Falls area noticed at least nine dead deer during the course of performing his scaling duties this spring. There was no indication that wolves had been present.

Sioux Lookout Area

During the winter months four concentration areas were located along highway 72. These areas were not as heavily populated as the Perrault Falls area but were considered as good survey areas. If weather conditions had permitted it would have been relatively easy to accumulate 50-75 miles at these locations. Unfortunately conditions were adverse and little was done.

At mileage 12 on highway 72 approximately five miles were run. No dead deer were found. One live animal was observed and appeared in good condition. Browse conditions in this area was not as severe as at Perrault. Deer labelled number six (6) in shipment of bones to Maple was hit by a car on the highway leading to Hudson. Date of killing: May 21st, 1956. Age: $4\frac{1}{2}$-5 year class. Sex: Female. This animal was examined and found to be dry.

AGING AND SEXING MUSKRATS, LAKE SIMCOE DISTRICT

FALL OF 1956

by
J. S. Dorland

A total of 889 muskrat pelts were examined this fall by J. S. Dorland to determine the age and sex ratio of this animal in certain areas of the District. The chart below shows the figures as to area trapped, age, sex and ratio.

Areas 1.5.7 as shown on the East and West Gwillimbury Trapper's map, consisting of 6 miles of river and ditches:

Adult		Juvenile		Total	Ratio
male	female	male	female		
44	38	205	165	452	1 female-10 juvenile

Thirty-five acres of marsh in Area 10 as shown on East and West Gwillimbury Trapper's map:

Adult		Juvenile		Total	Ratio
male	female	male	female		
18	16	59	45	138	1 female- 5 juvenile

One hundred acres of marsh in area four as shown on East and West Gwillimbury Trapper's map:

Adult		Juvenile		Total	Ratio
male	female	male	female		
27	27	71	48	173	1 female- 5 juvenile

During the fall of 1955 with the water in the river higher than in the marsh, our figures showed only a ratio of three juvenile for every adult female harvested. This fall with the water lower in the river than in the marshes, the ratio on the river was 10 juveniles per adult female caught. Old trappers in the marsh tell that the juvenile muskrat travel towards the river when water is high in the marsh and are harvested in the spring.

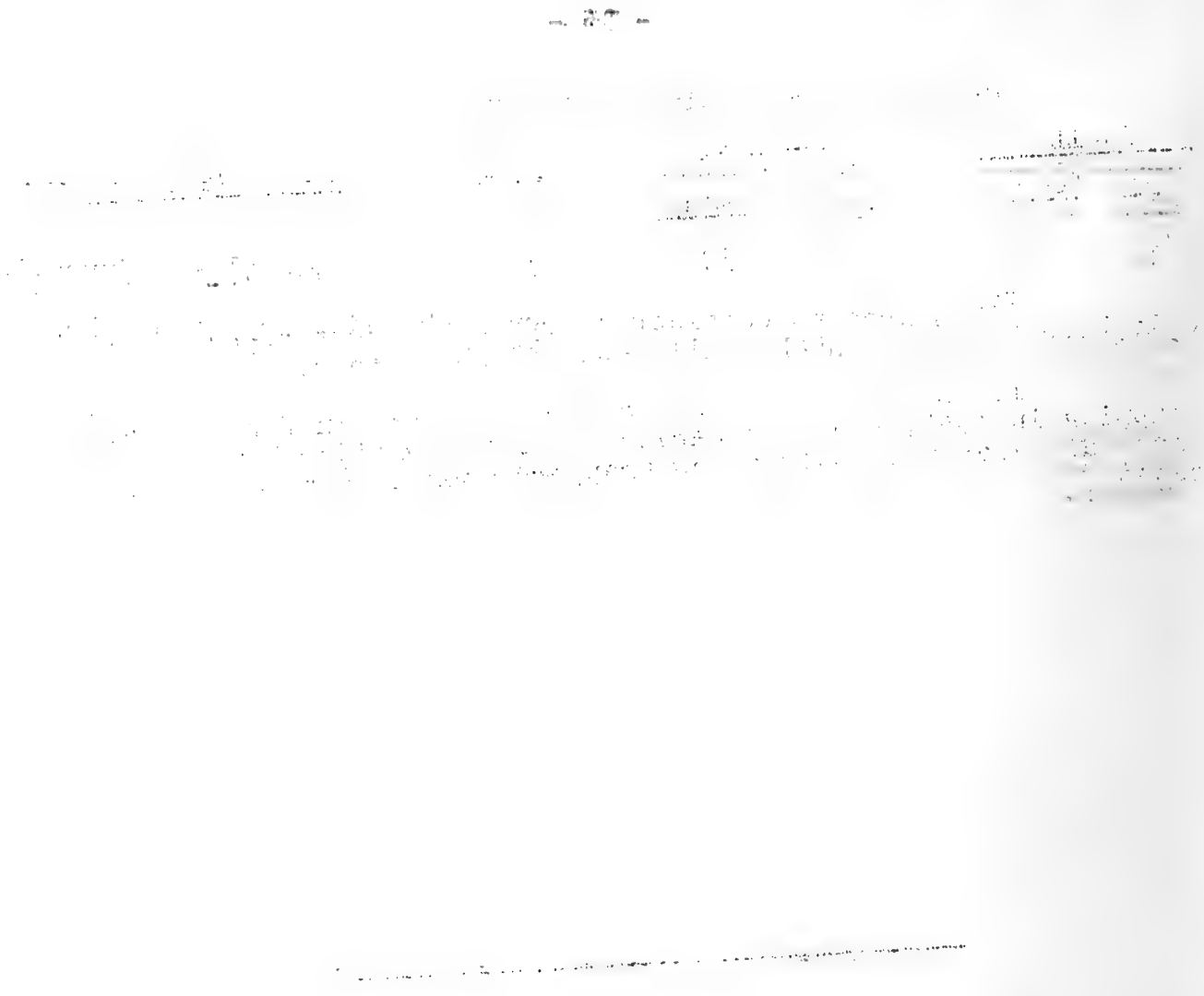
Water level here shows reason for migration from marsh to river but, density of the muskrats must also be kept in mind, and from past figures it enters into the picture considerably. As last spring with water levels low in the river, miles of the river bank were literally pulled to pieces by the muskrats for about three days. After that the muskrat moved out of the river into the marsh. This migration took place around the 1st of March last spring.

Creeks in South Simcoe County:

Adult		Juvenile		Total	Ratio
male	female	male	female		
14	18	61	33	126	1 female- 5 juvenile

This area is considered very much undertrapped and has only been trapped in the fall the last two seasons.

It is hoped that when all returns are in for the fall trapping in 1956, that the harvest will be considerably greater than last year when only a few trappers took advantage of the fall season.



CHAPLEAU DISTRICT SUMMARY OF EXPERIMENTAL TRAPLINE

1955 - 1956

by
F. Johnston

The experimental trapline in the Chapleau Crown Game Preserve was in operation for its 5th consecutive year. The trapline began its operation for the current year on October 18th, 1955 and closed on March 28th, 1956.

The operation of the trapline was comparable to other seasons with two exceptions. First, all land traps were baited with canned sardines. Last year every second trap was baited with mirror. Secondly, beaver trapping was resumed after an absence of two years.

Appendix 1 shows a summary of the trapline harvest by years from 1951 to 1956.

During the current season there were 15 live beaver houses on the line, three more than at its inauguration. The following is a summary of live beaver houses during past five years of operation with take of beaver except those taken during open water in spring of 1952.

		Beaver Harvest
1951-1952	12	46
1952-1953	7	7
1953-1954	8	0
1954-1955	13	0
1955-1956	15	41

During the current season only 14 live houses were trapped. The 15th was occupied during the early part of season before freeze-up, while the shooting of beaver was carried out. It is presumed that the beaver were either shot or had moved to a new location. Two beaver were shot at this location but not recovered.

After two years of intensive trapping pressure, 1951-52 and 1952-53, in which 79 and 7 beaver respectively were taken beaver were left alone during the following two trapping seasons to watch the rate of recovery. In the spring of 1952, beaver were shot and trapped for a few weeks during open water in which 33 beaver were taken. During the regular trapping period of 1951-52 season, 46 beaver were taken and during approximately the same period during 1955-56 season, 41 taken.

The estimated number of untrapped beaver on the line at end of 1955-56 season is 5-6.

For all data relative to operations of past trapping season reference should be made to Forms G240-241-242 and 243 forwarded to the Department at Maple.

APPENDIX I - Summary of Catch on Experimental Trapline By Years, 1951-1956.

	1951-52	1952-53	1953-54	1954-55	1955-56
Beaver	79	7	0	0	41
Marten	64	67	74	25	14
Mink	15	14	10	1	4
Fisher	9	6	4	1	3
Wolves	0	0	0	0	0
Otter	14	8	6	3	3
Fox	4	9	7	0	1
Lynx	0	0	0	0	1
Weasel	5	13	22	1	0
Rabbit	15	27	27	5	5
Red Squirrel	40	36	36	11	41
Flying Squirrel	30	4	4	10	6
Canada Jay	95	0	0	1	1
Grouse	0	3	3	0	4
Muskrat	0	0	0	0	3

MARTEN LIVE TRAPPING, CHAPLEAU DISTRICT - 1956.

by
V. Crichton

Marten Live Trapping for the purpose of restocking more northerly areas of the province was carried out in the district from Aug. 1st to Sept. 10th, 1956. Three main areas were trapped during this period as follows:

1. Schewabik Lake area in the townships of Sadler and Copperfield on the easterly boundary of the Chapleau Game Preserve.

2. Lipsett Lake in the township of Lipsett.

3. Trump and Dragon (Eblow) and Abbey Lakes in the townships of Missinaibi.

Areas two and three are situated entirely within the Chapleau Game Preserve.

Bait used during this trapping was canned sardines, fresh fish and oil of rodium.

During the above mentioned period a total of 43 marten were taken, 29 males and 14 females.

Schewabik Lake

Eighteen (18) days were spent trapping at Schewabik Lake from Aug. 2-19 during which time from 20 to 34 traps were utilized. An unusually high number of traps, 74 in all, were found to be closed during the trapping period of 18 days. In 1953, 83 traps were closed but the trapping period extended for 32 days.

The number of trap-days per animal unit caught was 31.8 compared to 40.8 in 1954. Trapping was not carried on at Schewabik Lake in 1955 due to low water conditions.

Sex ratio of males to females show the range to be from 3:1 to 5:1 during the previous years trapping at Schewabik Lake. This year (1956) the ratio was 2:1, 10 males and five females being taken during this period.

During this period the weather was from cloudy to clear on 16 days with two days in which there was rain.

Lipsett Lake

Twenty-one (21) days were spent at Lipsett Lake from Aug. 22-Sept. 10 during which time from 12 to 28 traps were utilized. Thirty-three (33) traps were found to be closed during the 21 day period which was unusually high. The previous high of 46 in 1952

extended over a period of 23 days. However at both Lipsett and Schewabik Lakes, by far the greater amount of closed traps was due to the activities of bears which made a habit of travelling from trap to trap on certain sections of the traplines.

The number of trap days per animal unit taken was 97 as compared to the previous high of 46 in 1952.

Five marten were taken, three males and two females.

The poor marten take at Lipsett Lake could be laid to the following factors:

1. Eleven (11) days during this period there was heavy rain. Five of the ramaining days were foggy and wet.

2. Transportation around lake for seven days was nil due to engine failure.

3. Lack of initiative on part of trappers to use paddles to inspect traps.

Trump-Elbow Lakes

Twenty (20) days were spent at Dragon (Elbow) and Trump Lakes in township of Missinaibi from Aug. 2 to Aug. 20th during which time from 14 to 27 traps were utilized. Sixty-three (63) traps were found to be closed during this period.

The number of trap-days per animal unit harvested was 25.

Eighteen (18) marten were taken during this period, 12 males and six females.

Abbey Lake

Situated in the township of Abbey, two miles southwest of Elbow and Trump Lakes. It is three miles long and is situated in ideal marten area. Trapping around this lake was undertaken for the first time this year.

Twenty traps were employed between Aug. 24 and Sept. 7th.

Five marten were taken, four males and one female and trap-days per animal unit harvested was .47. Sixty-six (66) traps were closed during this period.

The weather during this period consisted mostly of heavy rains.

SUMMARY

Schewabik Lake

Period	No. of Trap Days Per Animal Unit Trapped	Male	Female	Total
Aug. 2 to 19	31.8	10	5	15

Number of traps closed - 83
Other animals caught - 4 squirrels, 6 mink, 1 woodchuck

Elbow - Trump Lakes

Period	No. of Trap Days Per Animal Unit Trapped	Male	Female	Total
Aug. 2 to 20	25	12	6	18

Number of traps closed - 63
Other animals caught - 7 red squirrels.

Abbey Lake

Period	No. of Trap Days Per Animal Unit Trapped	Male	Female	Total
Aug. 24 to Sept. 7	47	4	1	5

Number of traps closed - 66
Other animals caught - 5 red squirrels.

Lipsett Lake

Period	No. of Trap Days Per Animal Unit Trapped	Male	Female	Total
Aug. 22 to Sept. 10	97	3	2	5

Number of traps closed - 33
Other animals caught - 7 red squirrels.

Seventy-seven (77) per cent of the marten were taken between Aug. 2 and Aug. 19th. Not one marten was taken in Sept., which from our experience in other years, is very unusual. Weather conditions were very adverse in late August and deteriorated further in September so that marten trapping ceased on Sept. 11th. The ratio of males to females 2:1 was the best ever encountered during live trapping operations.

Wages	$708.90
Groceries	$380.60
Gasoline	$ 50.90
Hay food for marten	$ 21.28
Total	$1161.68

Total cost per marten approximately - $27.00
Cost per meal (three per day) - .75½¢

Disposition of Marten

Ten males and eight females were released on Aug. 17 at Swan Lake northwest of Attawapiskat approximately latitude 53°48' longitude 83°55'. Thirteen males and five females were released on Sept. 3rd at Sand Bank Lake, approximately latitude 51° and longitude 82°40'. Two males and one female were released at Lipsett Lake on Sept. 11th. Two males sent to Ontario Research Foundation. Two males died in captivity. Total 29 males, 14 females.

Summary of Marten Trapped, 1956

Locality Trapped	Date Trapped	Locality Released	Date Released	Sex	Weight	Colour	Ear Tag	Tattoo Number
Schewabik Lake	Aug. 2	Swan Lake	Aug. 17	♀	1 lb.	Brown	143	F 18
Schewabik Lake	Aug. 3	Swan Lake	Aug. 17	♂	2 lb.	Brown	142	F 17
Schewabik Lake	Aug. 4	Swan Lake	Aug. 17	♂	2 lb.	Brown	140	F 15
Schewabik Lake	Aug. 4	Swan Lake	Aug. 17	♀	1½ lb.	Brown	144	F 19
Schewabik Lake	Aug. 6	Swan Lake	Aug. 17	♂	2 lb.	Dark Brown	146	F 21
Schewabik Lake	Aug. 6	Sand Bank Lake	Sept. 3	♀	1½ lb.	Dark Brown	145	F 20
Schewabik Lake	Aug. 7	Sand Bank Lake	Sept. 3	♂	2 lb.	Light Brown	139	F 14
Schewabik Lake	Aug. 7	Sand Bank Lake	Sept. 3	♂	2 lb.	Dark Brown	147	F 22
Schewabik Lake	Aug. 9	Swan Lake	Aug. 17	♀	1 lb.	Dark Brown	148	F 23
Schewabik Lake	Aug. 11	Sand Bank Lake	Sept. 3	♂	3 lb.	Light Brown	149	F 24
Schewabik Lake	Aug. 11	Sand Bank Lake	Sept. 3	♀	1½ lb.	Light Brown	141	F 16
Schewabik Lake	Aug. 13	Sand Bank Lake	Sept. 3	♂	2 lb.	Light Brown	150	F 25
Schewabik Lake	Aug. 17	Sand Bank Lake	Sept. 3	♂	2 lb.	Light Brown	151	F 26
Schewabik Lake	Aug. 19	Sand Bank Lake	Sept. 3	♂	2 lb.	Light Brown	152	F 27
Schewabik Lake	Aug. 19	Sand Bank Lake	Sept. 3	♂	2 lb.	Dark Brown	153	F 28
Lipsett L.	Aug. 22	Lipsett Lake	Sept. 11	♂	2 lb.	Light Brown	154	F 29

Locality Trapped	Date Trapped	Locality Released	Date Released	Sex	Weight	Colour	Ear Tag	Tattoo Number
Lipsett Lake	Aug. 22	Sand Bank Lake	Sept. 3	♂	2 lb.	Dark Brown	155	F 30
Lipsett Lake	Aug. 23	Lipsett Lake	Sept. 11	♂	2 lb.	Light Brown	156	F 31
Lipsett Lake	Aug. 26	Sand Bank Lake	Sept. 3	♀	2 lb.	Light Brown	164	F 40
Lipsett Lake	Aug. 27	Lipsett Lake	Sept. 11	♀	1½ lb.	Light Brown	165	F 41
Trump Lake	Aug. 4	Swan Lake	Aug. 17	♂	2 lb.	Dark Brown	126	F 1
Trump Lake	Aug. 4	Swan Lake	Aug. 17	♀	1½ lb.	Dark Brown	127	F 2
Trump Lake	Aug. 5	Swan Lake	Aug. 17	♂	2 lb.	Brown	128	F 3
Trump Lake	Aug. 6	Swan Lake	Aug. 17	♂		Light Brown	129	F 4
Trump Lake	Aug. 7	Swan Lake	Aug. 17	♂	2 lb.	Brown	131	F 6
Trump Lake	Aug. 7	Swan Lake	Aug. 17	♀	2 lb.	Dark Brown	130	F 5
Trump Lake	Aug. 11	Died	Aug. 17	♂	2 lb.	Brown	-	-
Trump Lake	Aug. 11	Swan Lake	Aug. 17	♀	1½ lb.	Pale	132	F 7
Trump Lake	Aug. 11	Died	Aug. 17	♂	2 lb.	Brown	133	F 8
Trump Lake	Aug. 12	Swan Lake	Aug. 17	♂	2 lb.	Brown	134	F 9
Trump Lake	Aug. 12	Swan Lake	Aug. 17	♂	2 lb.	Dark Brown	136	F 11
Trump Lake	Aug. 12	Swan Lake	Aug. 17	♀	1½ lb.		135	F 10
Trump Lake	Aug. 13	Swan Lake	Aug. 17	♂	2 lb.	Brown	137	F 12

Locality Trapped	Date Trapped	Locality Released	Date Released	Sex	Weight	Colour	Ear Tag	Tattoo Number
Trump Lake	Aug. 14	Sent to Maple		♂	1½ lb.	Brown	-	-
Trump Lake	Aug. 14	Sent to Maple		♂	2 lb.	Brown	-	-
Trump Lake	Aug. 14	Swan Lake	Aug. 17	♀	1½ lb.	Brown	138	F 13
Trump Lake	Aug. 18	Sand Bank Lake	Sept. 3	♂	2 lb.	158 Brown	158	F 33
Trump Lake	Aug. 18	Sand Bank Lake	Sept. 3	♀	1 lb.	Brown	157	F 32
Abbey Lake	Aug. 27	Sand Bank Lake	Sept. 3	♂	1¾ lb.	Brown	159	F 34
Abbey Lake	Aug. 27	Sand Bank Lake	Sept. 3	♂	2 lb.	Brown	160	F 35
Abbey Lake	Aug. 28	Sand Bank Lake	Sept. 3	♂	2 lb.	Brown	161	F 36
Abbey Lake	Aug. 29	Sand Bank Lake	Sept. 3	♂	2 lb.	Brown	162	F 37
Abbey Lake	Aug. 31	Sand Bank Lake	Sept. 3	♀	1½ lb.	Brown	163	F 38

NOTES ON TRIP TO ST. IGNACE ISLAND, JULY 16-21, 1956.

by
H. G. Cumming

Purpose of Trip

To check on reports of increasing moose populations on St. Ignace Island.

Members of Party

J. B. McKenzie, Conservation Officer.
H. G. Cumming, Biologist.

Itinerary

July 16: Proceeded from Pays Plat to Morn Harbour on the South end of Simpson Island.

July 17: Looked over the surrouding country including a small inland lake on Simpson Island. Proceeded to Bead Island and St. Ignace Harbour on St. Ignace Island.

July 18: Investigated the country inland from St. Ignace Harbour.

July 19: Proceeded along coast to Agate Island, Squaw Harbour, Bowman Island and Duncan Cove.

July 20: Worked inland to McEachan Lake, and travelled along the coast to Finch Point on the Northwest corner of St. Ignace Island.

July 21: Proceeded to Pays Plat.

Observations

The procedure of the trip was to follow along the coast a short distance each day, contacting commercial fishermen and checking any anglers encountered, until we reached a suitable harbour. Here, camp would be set up and an excursion inland would be made. Notes were made on all life seen.

Plants

Plants were collected on Simpson Island and observed throughout the trip. Strawberries were ripe; blueberries and juneberries were near ripe. Gooseberries were in flower and green fruit.

No observable difference between the vegetation on the islands and on the mainland was noted. There appeared to be a higher percentage of the mountain species (Alnus crispa) among the alder than in the Geraldton area where speckled alder (Alnus rugosa) is more abundant.

Birds

The most impressive thing about the bird life was the large number of warblers present. Since it is far past migration time, it can be assumed that these were nesting on the islands. The following species were seen: Mourning Warbler, Canada Warbler, Bay-breasted Warbler, Myrtle Warbler and a possible Cape May Warbler.

Cedar Waxwings were also in abundance as were White-throated Sparrows. A Chipping Sparrow and Brown-capped Chickadee were also seen.

Among the larger birds, Ruffed Grouse appeared fairly numerous. Three adults and one young were seen. This does not speak well for this year's reproduction, but since the one seen was able to fly and the bush was quite dense, it may have been that many young were missed. One Bald-headed Eagle was seen at the west end of Bowman Island. A female Golden-eye with 5 young and 11 adult Black Ducks were seen in the stream flowing from McEachan Lake. Mergansers, Loons and Herring Gulls were in abundance.

Small Mammals

Deer Mice (Peromyscus maniculatus) seemed to be particularly abundant on Simpson Island. Tracks were seen in the sand at several places, and two mice were observed for some time in the camp-fire light at Morn Harbour. The population may have been just as high on St. Ignace, but there were no equal opportunities for observing them. Red squirrels were heard on several occasions. Snowshoe hares seemed to be at their usual low level.

Caribou

The only sign of caribou was on Agate Island where a trail and winter droppings were seen. The fishermen report that this island is one of a series that the caribou cross in their wanderings. Winter food in the form of both tree lichens and ground lichens was in good supply on Agate Island, around Squaw Harbour and to a lesser extent around Duncan Cove. There were also some lichens available on Simpson Island. The contrast between the large amount of lichens present in these places, and the almost complete absence of them in similar forest types on the Slate Islands where caribou are numerous, was quite striking.

Moose

No moose were seen on the trip but there was considerable sign in evidence. Where ever young growth was to be found, there

were signs of winter browsing. The most abundant winter browse was found around Morn Harbour and St. Ignace Harbour. The McEachan Lake area appeared to be better summer habitat. Many fresh tracks were seen along the chain of lakes leading to Lake Superior.

The mud wallow at Finch Point was very much in use as indicated by the tracks. Fresh calf tracks were among the others. Since the ladder from the old tree house used by the Peterson expedition was still standing, it was intended to make some observations at this point. One hour was spent in the evening of July 20, with no results, and rain interfered with the proposed vigil next morning.

Due to the small boat used and the shortage of time, the north side of the island was not visited. Since there were timber operations in that area as late as 1952, it is quite possible that good moose populations may be present.

The Timber Management Division reports that more operations are planned for the northern part of St. Ignace. If carried out they should bring about more increases in the moose herd.

Other Animals

No deer or wolf signs were found. Fresh bear sign was noticed in two places on St. Ignace Island. A beaver was seen in Morn Harbour. Two garter snakes were also seen.

Summary

1. The week of July 16 to 21 was spent along the south shore of St. Ignace and neighboring islands, looking for moose signs.

2. Plants were collected and a record of the small mammals and birds seen was maintained.

3. There were some signs of caribou on Agate Island and good winter food for them there, and on the South-western portion of St. Ignace Island.

4. Winter moose browsing was evident at the Southern end of Simpson Island and at St. Ignace Harbour. Fresh tracks were seen at McEachan Lake and Finch Point.

5. In order to give a more complete picture of the moose on St. Ignace Island, a week or so should be spent along the North side of the island.

6. Future cutting would probably lead to higher moose populations on the island.

RONDEAU BAY FISHERY SURVEY, MAY TO OCTOBER, 1950

by
A. H. Berst

Description of Rondeau Bay

Rondeau Bay is a shallow oval-shaped bay of Lake Erie, comprised of about 6,000 acres, running roughly northeast and southwest. It is flanked on the northwest side by clay farming land and rich onion marshes and on the southeast by a continuous marshy region which contains the area known to local residents as the "ponds" - an area which is very productive in wildlife, serving as a spawning grounds for northern pike, maskinonge, largemouth bass and dogfish in the spring and for wild duck breeding in the late spring and summer.

About 50 percent of the bottom of the bay supports a luxurious growth of a great variety of water plants. Each summer there is a phenomenal growth of these plants in large areas in the bay, and each winter they decrease to a minimum as the water cools and the ice and snow cover shuts out part of the sun's rays.

The water level of the bay is the same as that of Lake Erie, since there is a direct connection between the two bodies of water by the channel at Erieau. Seiches occurring in Lake Erie have a marked effect upon the water level of Rondeau Bay, since they produce small "tides" which sometimes raise or lower the water level of the bay as much as 4" above or below normal. This is the only means by which the water of Lake Erie can mix with that of Rondeau Bay.

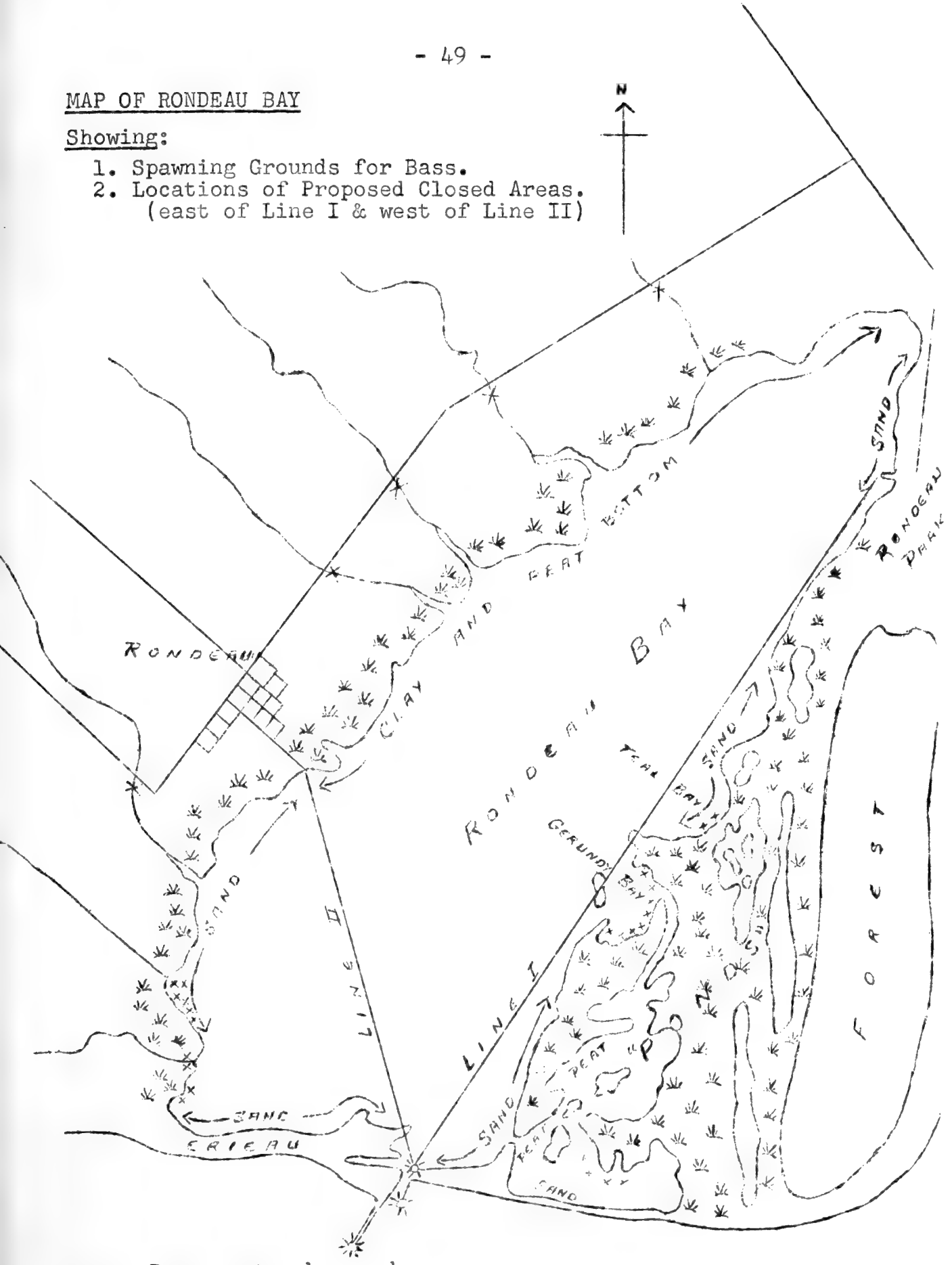
The water in the bay remains turbid (Secchi disk reading of 1'-2') until about the end of May in each year, becoming clearer as the season progresses, until in the late summer or early fall we find a Secchi disk reading of 10'-12'.

There is a great variation in bottom composition around the shores of the bay. The south shore (at Erieau) is composed of sand and gravel, the southeast shore of sand, the northwest shore of clay from Rondeau Park to Rondeau village and of sand from Rondeau village to Squaw Camp and of sand and "peat" from Squaw Camp to Erieau. (Please refer to map).

MAP OF RONDEAU BAY

Showing:

1. Spawning Grounds for Bass.
2. Locations of Proposed Closed Areas. (east of Line I & west of Line II)



× × × × Bass nests observed

Rondeau Bay supports a small carp seine fishery owned by Mr. E. Stirling of Ridgetown and operated by Messrs. McGee, Farnsworth, and Speed. According to the owner, this enterprise has not been very profitable in late years, partly due to the abundance of bottom obstructions on the seining grounds and partly due to the high water levels.

The sports fishery of Rondeau Bay provides the greater part, and in some cases the entire income for about 12 tourist operators, some having from $10,000 to $20,000 invested. According to the reports of various business men interviewed, the success of the sports fishery governs to an appreciable extent, the amount of tourist business in the area during the summer due to the large numbers of American tourists who come there to fish.

Purpose of the Survey

In response to the appeals of residents of the area and others, to conduct a scientific investigation of the habitat and the fisheries contained therein, with a view to making certain recommendations designed to improve the depleted condition of the black bass fishery if it can be shown that there is a definite depletion.

Methods Used in the Survey

1. The Creel Census:

At the beginning of the season the cooperation of the tourist operators was solicited. Mr. Clum, Mr. Howell, Mr. McRobb at Erieau, and Mr. Shanks at Rondeau gave invaluable assistance both in the creel census and in the collection of length-weight data. Conservation Officer Martin and I checked anglers' catches while on patrol on the bay whenever the government boat was serviceable.

I also made a weekly trip to Mitchell's Bay and obtained data on anglers' catches for comparative purposes.

2. Investigation of the Spawning of Black Bass:

During May and June, whenever water conditions were suitable, I made field observations on the spawning activities of large and smallmouth bass, both at Rondeau and Mitchell's Bay. At this time I made notes on the bottom types around the shores in order to make some estimation of the percentage of suitable spawning areas which were being used by the bass for that purpose.

Honteau Bay supports a small camp [illegible] owned by Mr. E. Sp[illegible]ling of Ridgetown, and [illegible] by [illegible] McGee, Farnsworth, and Reed. According to [illegible] enterprise has not been very profitable in [illegible] years, partly due to the abundance of bottom [illegible] grounds and partly due to the high water levels.

The sports fishery of [illegible] Bay [illegible] greater part, and in some cases [illegible] 12 tourist operators, some having from [illegible] invested. According to the reports of [illegible] interviewed, the success of this sports fishery [illegible] an appreciable extent, the amount of [illegible] area during the summer due to [illegible] tourists who come there to fish.

Purpose of the [illegible]

In response to the appeals of [illegible] area and others, to conduct a [illegible] the habitat and the fisheries [illegible] view to making certain recommendations [illegible] the depleted condition of the [illegible] be shown that there is a definite [illegible].

Methods Used in the Survey

1. The Creel Census

At the beginning of [illegible] the tourist operators was solicited [illegible] Mr. McRobb at Erieau, and Mr. [illegible] valuable assistance both in the creel census [illegible] collection of length-weight data. [illegible] Martin and I checked anglers' catches [illegible] the bay whenever the government boat [illegible]

I also made a weekly [illegible] obtained data [illegible]

2. Investigation of the [illegible]

During May and June, [illegible] were suitable, I made [illegible] observations [illegible] activities of large and smallmouth bass [illegible] and Mitchell's Bay. At this time [illegible] bottom types around the shores [illegible] tion of the percentage of suitable spawning [illegible] being used by [illegible] for that purpose.

The spawning investigation was followed during the remainder of the summer by a study of the bass fry and fingerlings. This study was made by interviewing persons who held minnow seining licenses re- the abundance of bass fingerlings and by having them save specimens from time to time to provide information on the growth rate of the young bass.

3. General Observations and Study of the Coarse Fish in Rondeau Bay

Observations of Carp spawning activities were made. Anglers were interviewed re- the abundance of coarse fish i.e. carp, dogfish, bullheads, ling, garpike. Owners and operators of the carp fishery were interviewed re- the availability of coarse fish. (When this fishery begins its fall operations in November, I expect to accompany them on some trips to obtain data on this fishery.

4. Public Opinion Census

Early in October a public opinion survey was carried out in which all of the tourist operators, the Conservation Officer of the area, and the officials of the local fish and game associations were interviewed re- the value of northern pike as a game fish in Rondeau Bay and proposed changes in the regulations designed to improve the bass fishery. The results of the above survey of public opinion may be found below and on page 63.

Public Opinion on Closure of a Portion of Rondeau Bay Until July 1/51.

(a) In favour of closure of sections of Rondeau Bay where black bass nests were most abundant this year.

1. President of Hunters and Anglers - Mr. Viv Sutton - Ridgetown.
2. Sec'y Treas. of Harwich Rod and Gun Club - Mr. MacCampbell - Blenheim.
3. Conservation Officer for the area - Mr. Carlyle Martin - Ridgetown.
4. Tourist operators on Rondeau Bay -
   Mr. Clarence Shanks - Rondeau Park
   Mr. Ross Burke - Erieau
   Mr. Geo. McRobb - Erieau
   Mr. Stan Clum - Erieau
   Mr. V. Howell - Erieau
   Mr. Al Crow - Erieau
   Mr. Walter Wilson - Rondeau
5. License Issuer - Mr. Cornish - Erieau
6. Owner of Goodison Fisheries - Mr. Dexter Goodison - Erieau.

(b) Not entirely in agreement with above.

1. Mr. "Pop" Weir, Rondeau Park "Should only close Gerundy Bay and "Ponds".
2. Mr. Provo, Rondeau "Should only close Gerundy Bay and "Ponds".

(c) Not in favour with any closure of Rondeau Bay. No one.

The Results of the Creel Census

The following table gives the data obtained from the creel census of Rondeau Bay.

TABLE I

		May & June	July	August	September
Hours		3497	4131	2216	564
N. Pike	K	571	151	56	89
	R	605	92	38	8
L. Bass	K	0	69	44	44
	R	110	30	6	0
S. Bass	K	0	13	11	21
	R	0	1	0	16
Muskie	K	2	0	0	0
	R	2	0	0	0
Sunfish		2010	1610	417	104
x Pickerel	K	42	36	267	82
	R	2	0	221	0
Rock Bass		144	143	210	75
Perch		13	101	99	134
Crappies		9	40	128	0
Dogfish		1	1	2	1
Sheepshead		0	97	0	0

x - pickerel were caught at south end of channel.
K - means kept.
R - means released.

Sheepshead

Dogfish

Crappies

Perch

Rock bass

x Pickerel

Sunfish

Muskellunge

Bass

Suckers

x - pickerel were caught in some of the ponds.
R - means present.
R - means returned.

Results of the Creel Census - Mitchell's Bay.

TABLE 2

		May	June	July, August, September
Hours		302	960	370
N. Pike	K	41	2	1
	R	0	0	0
L. Bass	K	0	2	0
	R	2	0	0
S. Bass	K	0	403	109
	R	109	65	28
Muskie	K	0	2	3
	R	2	0	1
Sunfish		86	221	25
Pickerel	K	8	20	2
	R	0	5	0
Rock Bass		183	365	20
Perch		186	313	85
Crappies		0	3	1
Dogfish		0	0	0
Sheepshead		0	0	0

K - means kept.
R - means released.

Estimation of Total "Crop" of Northern Pike Removed by Angling from Rondeau Bay in the Spring, Summer, and Fall of 1950.

Estimating that the creel census covered 1/15 of the angling on the bay and estimating from the data on the sizes of northern pike on page 61 that the average weight of pike was 2.60 pounds this would give a total of 15 x 2.60 x 867 = 33813 pounds.

Explanation of the Above Calculation

15 is the number required to bring the result to 100 percent.
2.60 is the average weight of a sample of 52 northern pike taken by angling.
867 is the total number of northern pike which were removed by anglers covered in the creel census.

Estimation of the Total "Crop of Black Bass Removed From Rondeau Bay in the Summer and Fall of 1950

Estimating that the average weight of bass removed was 1.57 pounds by averaging the weight of a sample of 26 largemouth and 12 smallmouth bass, this gives a total of 15 x 1.57 x 202 = 4755 pounds. Combining the "crop" of northern pike and black bass removed, we estimate that 33813 + 4755 = 38568 pounds were removed. This gives a figure of 6.4 pounds of bass and pike removed by angling per acre, assuming that there are about 6,000 acres of water in Rondeau Bay.

It is to be noted that fishing on a small scale is carried out through the ice in winter, and I understand that a few northern pike are taken in this manner. Also, from all reports, considerable pike spearing and illegal netting occurs every spring in the marshes surrounding the bay and there is no doubt that many northern pike are removed at this time.

The Black Bass Fishery of Rondeau Bay

Population and Availability

The population is presently comprised of largemouth bass and smallmouth bass in the ratio of approximately 3:1, as shown by the creel census (please refer to table on page 55). Unfortunately, the bass fishery is now of little importance due to the low availability of bass. From all reports this fishery has been deteriorating steadily for a number of years, and especially since the close of the last world war in 1945.

The results of the present survey seem to show that the depletion of the bass fishery was caused partly by the heavy fishing pressure, partly by the wilful interference by the anglers with the bass spawning activities and possibly partly by a gradual change in the proportions of the two main species, northern pike and largemouth bass.

Competition Between Northern Pike and Black Bass

The northern pike are dominant over the black bass at the present time. The creel census indicated that about 4 northern pike are caught for every black bass. Table 3 shows that the availability of northern pike was always much higher than that of the bass.

Explanation of the Abbreviations

15 is the
2.60 is the
taken by anglers.
867 is the total number of
by anglers covered

Estimation of the
Wooden Bay in the

was 1.57 pounds by
Largemouth and
15 x 1.57 x 2 =
northern pike and
+ 4765 =
6.4
assuming that
Bay.

is carried out
that a few
from all
meeting occurs
bay and there is
at this

The Black Bass Fishery

Population Level

The
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Competition between Northern Pike

at the present time.
4 northern pike are caught for
always much higher than that of

The extent of the predation by the northern pike upon the bass in Rondeau Bay is not known to the writer at this time. Some data on the stomach contents of northern pike of Rondeau Bay may be found on page 52. Additional data on stomach contents of the northern pike of Rondeau Bay should be available to me when the carp seine fishery begins operations later this month and I shall forward any significant findings.

TABLE 3 - Rondeau Bay

Availability of Northern Pike, Large and Smallmouth Bass.

		May & June	July	August	September & October
Hours		3497	4131	2216	589
N. Pike	K	571	151	56	91
	R	605	92	38	8
No. Hrs. to Catch 1		2.9 hrs.	16.9 hrs.	23.6 hrs.	5.9 hrs.
L. Bass	K	0	69	44	46
	R	110	30	6	2
No. Hrs. to Catch 1		31.7 hrs.	41.7 hrs.	44.3 hrs.	12.0 hrs.
S. Bass	K	0	13	11	27
	R	0	1	0	16
No. Hrs. to Catch 1			295.0 hrs.	201.4 hrs.	13.6 hrs.
L. & S. Bass Combined	K	0	82	55	73
	R	110	31	6	18
No. Hrs. to Catch 1		31.7 hrs.	36.5 hrs.	36.3 hrs.	6.4 hrs.

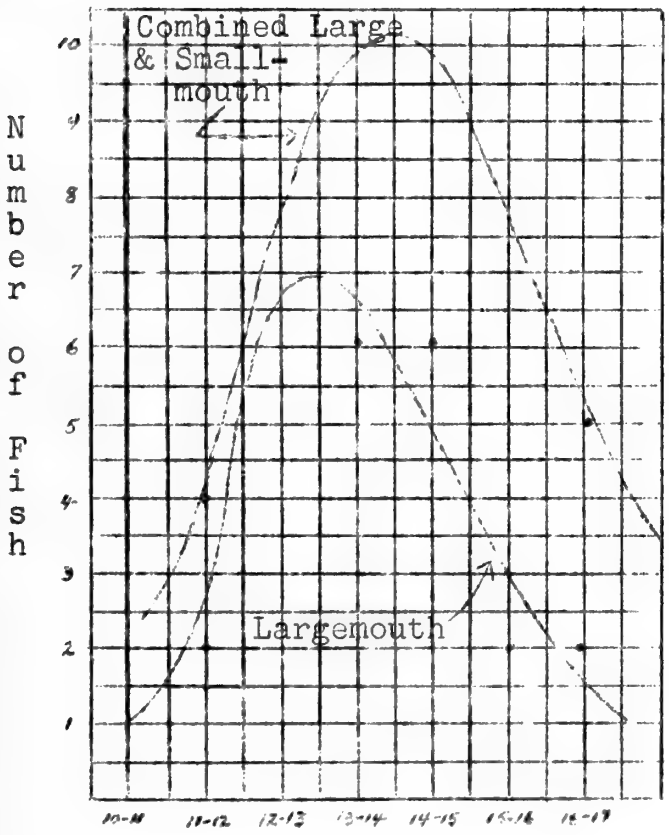
TABLE 4 - Mitchell's Bay

Availability of Northern Pike and Smallmouth Bass

		May 1 to June 25	June 25 to July 30	July 30 to September 30
Hours		302	960	370
N. Pike	K	41	2	1
	R	0	0	0
No. Hrs. to Catch 1		7.3 hrs.	480 hrs.	370 hrs.
S. Bass	K	0	403	109
	R	109	65	28
No. Hrs. to Catch 1		2.7 hrs.	2.1 hrs.	2.7 hrs.

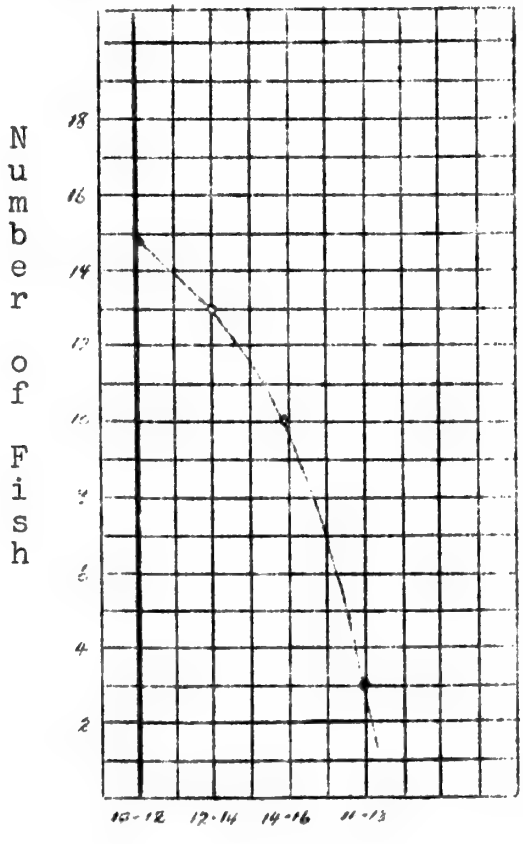
Length Distribution of a Sample of 26 Largemouth and 12 Smallmouth Bass Rondeau Bay, 1950.

FIGURE I



Length Distribution of a Sample of 40 Small-mouth Bass, Mitchell's Bay, 1950.

FIGURE II



Comparisons With Mitchell's Bay and Long Point Bay

It is to be noted that in Mitchell's Bay (see table 4) where the bass fishery has been excellent this year, that the limited creel census which I made there showed only a very weak population of northern pike. A similar condition exists at the present time at Long Point Bay where the bass fishery has been good this summer.

Size and Condition of the Bass

Altogether I was able to examine 26 largemouth and 12 smallmouth bass specimens from Rondeau Bay and 40 smallmouth bass specimens from Mitchell's Bay. The distribution curve (fig. 1) indicates that most of the bass which are being caught in Rondeau Bay are in the 12" to 16" group and that the 10" to 12" bass which should make up the bulk of the fishery are very low in numbers. In contrast to this (see fig. II) the curve for the length distribution of the smallmouth bass in Mitchell's Bay shows that the greater proportion of the bass being caught there are in the 10" and 12" group - a condition which is to be expected in a healthy fishery.

The condition of all specimens from Rondeau Bay appeared to be excellent. The fish were clean and well filled out.

Parasites

No external parasites of any kind were found on any of the specimens. In most of the female bass specimens obtained from Rondeau Bay I was able to find two or three larvae of the bass tapeworm, Proteocephalus ambloplitis, in each ovary. However, I found that many of the smallmouth bass which I examined at Mitchell's Bay were very heavily infested with this parasite and in many cases normal spawning, especially in the older fish, was impossible, since the ovaries were very badly damaged by the activities of this parasite.

Spawning Investigation of Black Bass in Rondeau Bay

Before May 20th the water in Rondeau Bay was so turbid (Secchi disk reading of 1.5' to 2.5') that observation of the bottom of the bay was impossible. It is very doubtful if any spawning took place before this time in Rondeau Bay anyhow, since up to this date the water temperature had not exceeded 59°F.

By June 1st the temperature of the bay had reached 65°F and the first spawning activities probably took place about that time. The first nests were discovered on June 6th in Teal Bay on sand bottom about 15 feet from the shore. Only two nests were found. Both had one largemouth bass

guarding. Water temperature at the nests was 66°F.

On June 7th I searched for nests along the northwest shore from Erieau to Rondeau. Two largemouth bass were seen together over what seemed to be a nest, or the beginning of one, in "peat" bottom (muck and roots of vegetation) near the mouth of Big Creek. I remained at this spot for 1/2 hour to observe. Both bass kept circling around an area about 2 1/2 feet in diameter, in the center of which were a few straight-stemmed water plants which reached the surface. The depth was 3' and the area was 15' from shore. Seven other bass, all of good size, were observed along the shore nearby, one approx. every 50 yards. None of them were very much disturbed by my presence and they all moved very slowly. They must have been taking part in some spawning activity, but I searched the shore carefully and could not discover any more nests.

Also on June 7th, I found a very heavy concentration of nests along the shore near Squaw Camp, in sand bottom. They were well protected from wave action, since they were between the shore and a sand bar which was covered with vegetation. There were approx. 35 nests, all in an area of about 250 square yards. Only four nests had bass guarding. Eggs were collected from several of the unguarded nests by using a rubber sucking tube with 1' of glass tubing on the bottom. Several days later I learned from one of the tourist camp operators that anglers from another camp had encountered unusually good "sport" in this area.

One tourist operator later told me that on June 7, some anglers from his camp had caught and released 50 largemouth bass in the "ponds" in one day.

Also on June 7th, I searched Gerundy Bay for bass nests. Seven largemouth bass nests were observed, about 30 yards apart and from 10' to 40' from the shore in 3' to 5' of water. Three of these had bass guarding. Eggs were collected from most of the unguarded nests. Two boats with anglers were in Gerundy Bay when I arrived and one boat was seen in Gerundy Creek. I contacted each boat and told them that they were fishing over bass nests. Two of the boats left the area.

On June 11th Mr. Viv Sutton and I made a portage into the "ponds" region. Water temperature in the "ponds" was 70 degrees F. We covered almost the entire "ponds" area but only found a few old nests. One group of largemouth bass was discovered in which approx. 20 were counted, ranging from about 7" to 15" in length. Dogfish were observed, guarding their nests. Hundreds of northern pike fingerlings were observed. I concluded that we were about one week too late to observe bass nests in the "ponds".

On June 14th I searched Gerundy Bay again. The nests which I discovered seven days ago were all deserted now.

On June 19th, two nests were discovered in Big Creek on "peat" bottom. Both had largemouth bass guarding. The nests which I had found near Squaw Camp were all deserted.

On June 21st a group of six largemouth bass ranging from 6" to 16" was observed in the southwest corner of Rondeau Bay. No nests were found on this day.

On June 23rd, a large school of largemouth bass fingerlings was observed along the shore at Rondeau Park.

To the best of my knowledge, no spawning took place in Rondeau Bay after this date.

Largemouth and Smallmouth Bass Fingerlings

It is the general consensus of opinion among the men who hold minnow seining licenses that the numbers of bass fingerlings were low this year.

Students of the University of Western Ontario laboratory at Erieau seined with a fine mesh seine once a week all summer and obtained only a few specimens of black bass fingerlings during the entire summer.

Predictions on the Black Bass Fishery of Rondeau Bay

From a study of the size composition of the bass population, and from the reports of unusually small numbers of fingerlings this year, I predict that the bass fishery of Rondeau Bay will show no improvement for at least the next three to four years.

Conclusions:

1. The largemouth bass fishery of Rondeau Bay is very seriously depleted at the present time.

2. The smallmouth bass fishery plays an important part of the sports fishery of Rondeau Bay and should be helped if possible.

3. The reason for the failure of the bass fishery is not due to disease; at least there is no evidence of disease.

4. Sufficient data were obtained to lead us to believe that the spawning activities of the bass are being seriously interfered with by the anglers, and something should be done to protect the bass next year.

5. Northern pike are dominant over the black bass in Rondeau Bay, where the bass are depleted. In Mitchell's Bay and in Long Point Bay where the northern pike population is weak, the bass are plentiful. Possibly the northern pike are competing with the bass by (a) reducing the potential food supply of the bass, or (b) direct predation on the bass.

Recommendations for the Bass Fishery of Rondeau Bay for 1951

1. In order to give the bass some measure of protection during their spawning season, I recommend that angling should be prohibited east of a line extending from the inner light on the east side of the channel at Erieau to Rondeau Park dock until after July 1, 1951. (See location of this line on map) Line I.

   I also recommend that angling be prohibited west of a line extending from the inner light on the east side of the channel at Erieau to Rondeau dock (See map for location of line.) Line II.

2. That we conduct a tagging experiment in Rondeau Bay in May, 1951, using smallmouth bass which may be obtained from the Campbell Fishery at Colchester. This experiment could be carried out with very little expenditure, perhaps $35 for trucking expenses, and would be a source of valuable information and would at the same time be good for public opinion. Dr. Sprules of the University of Western Ontario is very much interested in such an experiment and has offered assistance with the tagging of the bass if we decide to carry it out.

The Northern Pike Fishery

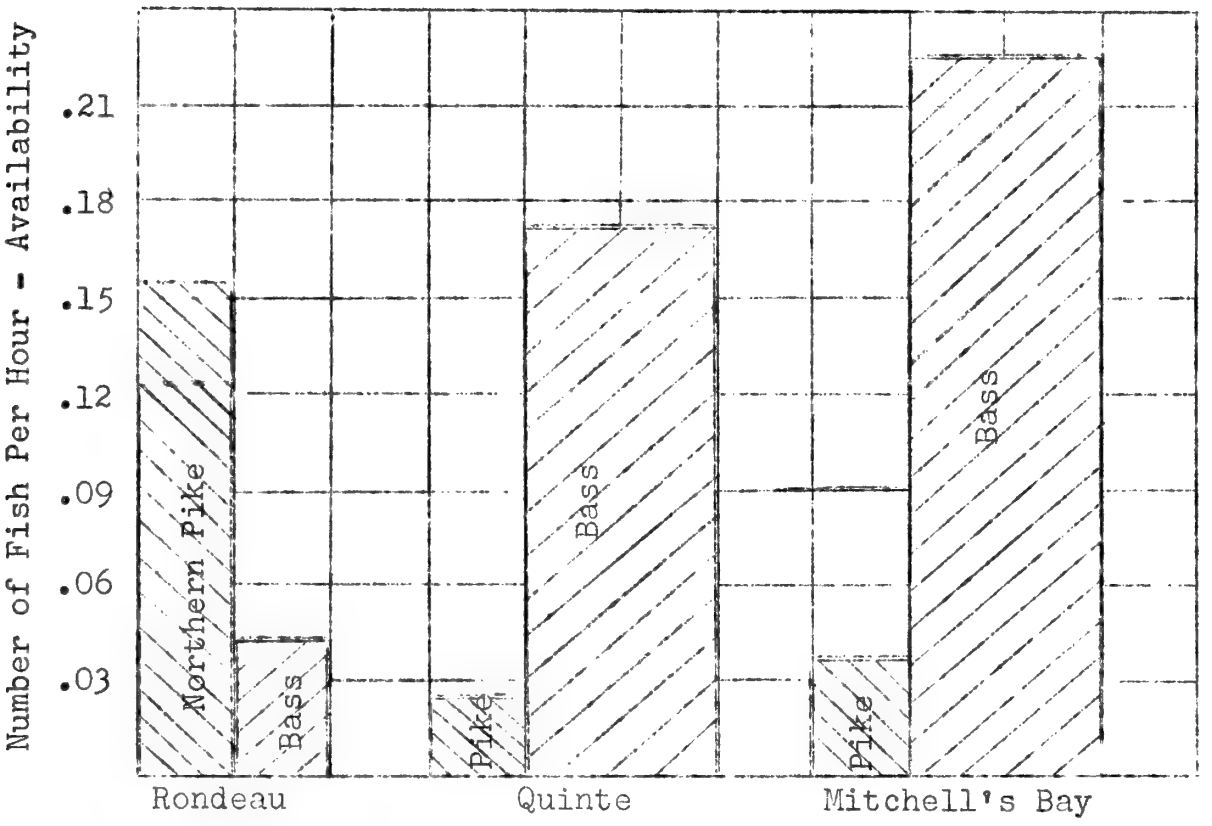
At the present time the northern pike fishery is the most important fishery in Rondeau Bay, due to the high availability of this species. Many of the Americans interviewed in the creel census indicated that they considered the northern pike to be a very desirable species to catch. On the other hand, most of the Canadians interviewed, (exclusive of the boat rental operators) indicated that northern pike was undesirable in Rondeau Bay and that immediate steps should be taken to decrease its numbers.

Population

The population of northern pike in Rondeau Bay is relatively high as compared with the populations in Mitchell's Bay and Bay of Quinte (1949). The following bar graph (fig. 3) made from data on availability from my creel census work in three different waters serves to illustrate the above information.

FIGURE III -

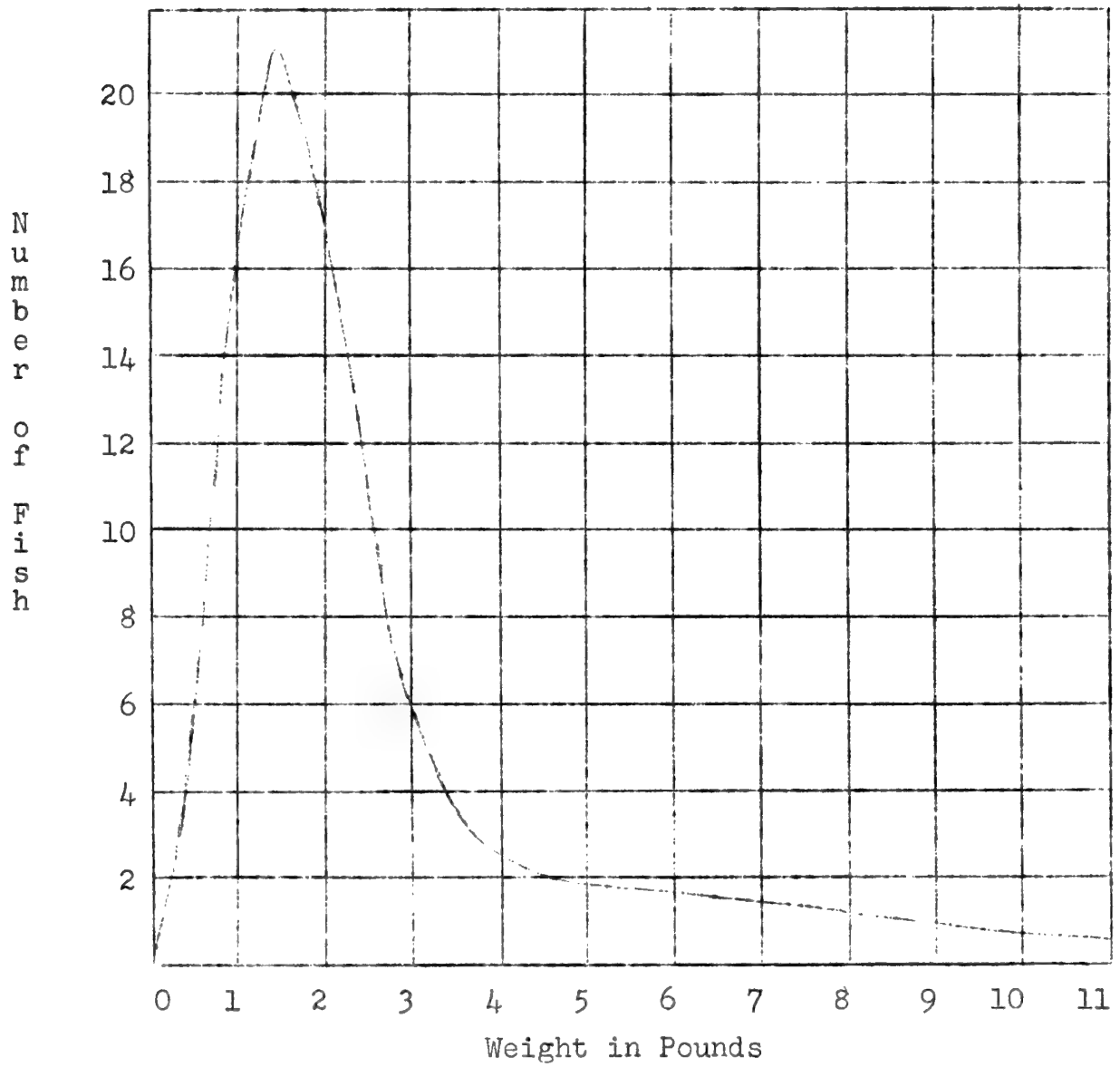
Bar Graph Showing Relative Availability of Northern Pike and Black Bass in Rondeau, Quinte and Mitchell's Bay



Size and Condition of the Northern Pike

The average size of the northern pike in Rondeau Bay is very small. Most of the specimens in a sample of 52 northern pike taken in Rondeau Bay this summer by angling fell between one to two pounds in weight or 17" to 21" in length. The reason for the small average size of the pike is probably the intensity of the sports fishery which serves to remove a large proportion of each year class as soon as it comes into the fishery. The following weight distribution curve illustrates this statement.

FIGURE IV - Weight Distribution of a Sample of 52 Northern Pike (taken by angling) Rondeau Bay, 1950.



The condition of all of the northern pike which I was able to examine (about 40 specimens from Rondeau Bay) appeared to be excellent, with no sores or parasites evident.

The Controversy Over the Spearing of Northern Pike in Rondeau Bay in the Spring

Most of the local residents are in favor of having northern pike speared in the springtime in the marshes surrounding Rondeau Bay, and some of them make emphatic demands about it. For this reason, I made a brief census of public opinion on this question in October. The results are as follows:

I. Those in Favour of Pike Spearing.

Local Conservation Officer.- Mr. C. Martin.
Official of the Federation of Hunters & Anglers - Mr. Viv Sutton.
Official of the Harwich Rod and Gun Club - Mr. MacCampbell.
Owner and Mgr. of Goodison Fisheries, (whose interest is in the good of the sports fishery) - Mr. Dexter Goodison.
Issuer of licenses at Erieau - Mr. Cornish.
Various residents in Rondeau, Blenheim, Erieau, Ridgetown and vicinities.

II. Those Not in Favour of Pike Spearing

Seven boat rental operators on Rondeau Bay who claim that northern pike are too valuable a fish from the point of view of the American angler to allow them to be destroyed by spearing.

Evidence in Favour of Reducing the Northern Pike Population

1. The bar graph(see Fig. 3) shows that in three of the waters studied, where the bass populations are high the pike are low and vice versa. Therefore, if the northern pike population could be reduced by pike spearing it might give the bass a better chance to increase since there would be less competition.

Evidence Against Reducing the Population of Northern Pike

The following is a record of the stomach contents of northern pike which were taken from Rondeau Bay this summer. Part of the data was supplied by the University of Western Ontario Research Lab. at Erieau.

May, 1950

15 northern pike - stomach empty.
3 northern pike - small fish unidentified.
3 northern pike - Notropis Sp.

June, 1950

1 northern pike - 1 log perch, 1 unidentified.
3 northern pike - 1 log perch.
1 northern pike - 1 rock bass.
14 northern pike - stomach empty.
1 northern pike - 2 fish unidentified.
10 northern pike - Notropis Sp.

It is to be noted that no black bass were found in the stomachs.

Conclusions:

1. Northern pike are the dominant game species in Rondeau Bay at present.

2. The northern pike fishery is in a very good condition at the present time, since there are large numbers of young, healthy pike in the fishery.

3. Circumstantial evidence (as found in bar graph) indicates that the northern pike may be depressing the bass population.

Recommendations for the Northern Pike Fishery

1. If possible, more attention should be paid next year to the feeding habits of the northern pike in Rondeau Bay. It is rather difficult to obtain these data unfortunately, since no angler will permit the biologist to remove the viscera from the fish while on the water, and therefore it is usually necessary for the biologist to be on hand when the angler is ready to clean the fish.

The easiest way to obtain these data is for the biologist to accompany the carp seiners and to obtain northern pike specimens from them. However, this summer, due to the high water level, very little carp seining was done.

2. Pike spearing.

We should give serious consideration to this request by a majority of the residents, because there is a good possibility that a reduction in the numbers of northern pike would help the bass population to return to a normal level.

The Pickerel Fishery

The availability of blue pickerel (by angling) has been very high this summer. These fish are mostly caught off the outer light of the channel at Erieau and consequently not inside Rondeau Bay.

Considerable angling at night was carried on at the above location from commercial fishing tugs until restrictions were imposed on the use of the tugs for this purpose by the Mounted Police. Due to these restrictions, most of the operators were obliged to lay up their boats and so many anglers were disappointed.

The Silver Bass Fishery (Lepibema chrysops)

At various times during the summer, large catches of this species were obtained by anglers fishing at night off the outer light of the channel at Erieau.

The Maskinonge Fishery

To the best of my knowledge, about 7 maskinonge of legal size were caught in Rondeau Bay this summer. The largest weighed 38 pounds.

Angling for Pan Fish

Bluegills, pumpkinseeds, crappies, perch and rock bass are all important. Bullheads are scarce.

Hundreds of negroes from Detroit and vicinity come to Rondeau Bay to fish for pan fish or anything they find available. They are experts in the use of the bamboo pole and worm-baited hook, and they remove thousands of pounds of pan fish from the bay every summer.

There are excellent habitats for bluegills in some of the weedy coves around the shores and I noticed considerable spawning of sunfish in these places, but it was also apparent that many of the parent fish were being taken off the nests by the anglers.

If the areas which I have mentioned on page 60 are closed to angling before July 1/51 the bluegills and the pumpkinseeds will receive some protection as well as the black bass.

The Carp Fishery of Rondeau Bay

It is evident that there is a fairly large population of carp in Rondeau Bay at the present time; most of the shores of the bay composed of "peat" are heavily "pock marked" by their feeding activities. They can always be found during the summer amongst the wild rice beds along the shores of the bay.

I observed the spawning of the carp during the latter part of May in the creeks which empty into the bay on the northwest shore. Their mating manoeuvres were so vigorous that they kept the water a coffee-brown color, with Secchi disk readings of 4" to 6". Largemouth bass spawning would have been quite impossible in these places due to the high turbidity.

It is very difficult to make any estimation on the numbers of this species which are present; in 1935, the Bates Fishery removed 50 tons of carp from the bay, but this year only a few hundred pounds have been removed up to now. The present owner of this fishery is hopeful that when the water level returns to normal he will be able to catch large numbers of carp.

General Remarks on the Rondeau Bay Survey

I believe that a creel census should be kept for the next few years in order to show any changes which occur in the population. This seems to be our best method of following the progress of a sports fishery and its value will increase if we are able to obtain this type of data for several consecutive years for the same body of water.

An investigation of the spawning of the black bass should also be carried out next summer in order to find out whether the closure of parts of the bay has any significant effect on the success of the spawning of the black bass.