Atlantic Flyway Cooperative Banding Program

Atlantic Provinces

1985

compiled by
M. C. Bateman
W. R. Barrow

Canadian Wildlife Service
Atlantic Region
February 1986

Environment Canada
Canadian Wildlife Service

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Service canadien de la faune

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This report is a summary of the 1985 waterfowl banding program in Atlantic Canada. Included in the compilation, for information only, are the reports prepared by the crew leaders of the banding stations. The information in the tables is correct but the opinions and recommendations are not necessarily those of the Canadian Wildlife Service. Any publication or quotation of the contents will require substantial additional editing.

List of Summary Tables

Summary

Atlantic Flyway Cooperative Banding Program, Atlantic Region 1985

Eight bait stations were operated in the Atlantic Provinces in 1985. In addition, waterfowl were banded using dogs, rocket nets, airboats and mist nets. A total of 5505 birds was banded (Table 1). Four banding operations in Labrador resulted in 1312 birds banded, two stations in insular Newfoundland banded 858; and 3335 birds were banded in the Maritime Provinces.

Forty-five percent of the waterfowl banded in the Atlantic Provinces was Black Ducks, 19 percent was Green-winged Teal and sixteen percent was Blue-winged Teal (Table 2). Four hundred ten Common Eider (7.4 percent) were banded in two eider studies in New Brunswick and Newfoundland.

The total number of Black Ducks banded was up marginally from 1984 (2468 compared to 2458 in 1984) despite a poor season in Labrador. A late spring in Newfoundland-Labrador apparently reduced Black Duck production and resulted in low numbers banded at Tinker Harbour, Indian House Lake, and Nutak in Labrador and at the Codroy station in insular Newfoundland. Bait stations at the New Brunswick-Nova Scotia border area, at Bathurst and at the Shepody National Wildlife Area banded a total of 803 Blacks compared to 640 in 1984. The CWS airboat banded 241 Blacks in New Brunswick, Nova Scotia and Prince Edward Island; the USFWS airboat banded 519 in the Saint John River marshes of New Brunswick.

A total of 1022 Green-winged Teal was banded at all stations. Codroy Newfoundland (458 banded) and Tinker Harbour Labrador (217 banded) were the most successful sites for green-wings. The total number of green-wings banded was higher than in 1984 (1021 compared to 865 in 1984). The numbers of most species banded were higher in 1985 than in 1984. Noticeable exceptions

were Ring-necked Ducks (44 in 1985 compared to 122 in 1984) and Wood Duck (84 in 1985 compared to 148 in 1984).

The research on molting male Black Ducks was continued at Nutak, Labrador in 1985. Radio transmittors attached to 12 flightless male Black Ducks were monitored for a total of 132 duck days. Orange nasal saddles were attached to 125 flightless blacks to obtain information on the location of breeding grounds of males molting at Nutak. One more field season is proposed for the study and preparation of the final report (M.S. thesis, University of Maine) is scheduled for December 1986.

The total cost of the banding program was higher in 1985 than in 1984 ($84,500 compared to $76,900) (Table 3). Most of the increase was due to increased salary costs caused by a lack of low cost summer student programs. The cost per bird banded ($21.31) and cost per Black Duck ($39.27) reflected that increase (Table 3). Comparable costs for 1984 were $20.13 per bird and $35.08 per Black Duck.

The Nutak Labrador station was the most expensive costing an average $111.67 per Black Duck. That cost is not comparable to other stations because of the ongoing research on molting Black Ducks there. The cost per Black Duck was higher in 1985 at Tinker Harbour and Indian House Lake Labrador, despite lower total expenses at those stations (Table 3), because of the low number of blacks banded. The least costly Black Duck was banded at the New Brunswick-Nova Scotia border area station.

Rocket-netting Canada Geese on Prince Edward Island during the spring migration was carried out with some success in 1985. A total 120 geese were banded at a relatively high cost per bird (Table 3). The 1985 banding effort was the first operational year of rocket-netting; the previous two years can be considered experimental, experience-gaining periods. Further improvements in efficiency are anticipated in future years.

Tables 4-15 provide the age, sex and species composition of waterfowl banded at each banding location in the Atlantic Region in 1985.

Table 1. Summary of waterfowl banded in the Atlantic Provinces by banding station - 1985

Banding Location	Black Duck	Mallard	Blk X Mall Hybrid	Green-w. Teal	Blue-w. Teal	American Wigeon	Northern Pintail	Northern Shoveler	Wood Duck	Ring-necked Duck	Common Goldeneye	Red-breasted Merganser	Canada Goose	Common Eider	Misc.* Species	Total
Groswater Bay, Lab.	60	1	2	1										261		325
Nutak, Labrador	245	5	1	26			3						34			314
Tinker Harbour,Lab.	123		3	217			37					1		5		386
Indian House Lake, Lab.	189	1		80			13				4					287
Codroy, Newfoundland	183		5	458			8			1						655
Carmanville, Nfld.	105	1		92	1		2									201
Newfoundland	1			1												2
Border Region, N.B.-N.S.	310	8	3	5	30					24						380
Shepody NWA, N.B.	281	26		18	113		14		38						1	491
Bathurst, N.B.	211	6	2													291
The Wolves, N.B.														144		144
PEI Rocket-netting PEI													120			120
CWS Airboat, N.B.,N.S., P.E.I.	241	7		97	321	85	34	14	10	19					3	831
USA Airboat,N.B.	519	23	3	27	426	106	2	8	36		4					1154
Total	2468	78	19	1022	891	191	113	22	84	44	8	1	154	410	4	5509

*Miscellaneous Species include: 3 Pied-billed Grebe at Wallace Bay NWA
1 Common Gallinule at Shepody NWA

Table 2. Total number and percent by province of waterfowl banded by Cooperative Waterfowl Banding Program, Atlantic Provinces - 1985

Species	New Brunswick No.	%	Nova Scotia No.	%	Prince Edward Island No.	%	Insular Newfoundland No.	%	Labrador No.	%	Total No.	%
Black Duck	1048	48.5	436	51.8	79	23.6	288	33.6	617	47.0	2468	44.8
Mallard	55	2.5	15	1.8	0		1	0.1	7	0.5	78	1.4
Black X Mallard Hybrid	5	0.2	3	0.4	0		5	0.6	6	0.5	19	0.3
Green-winged Teal	49	2.3	83	9.9	15	4.5	550	64.3	324	24.7	1022	18.6
Blue-winged Teal	631	29.2	215	25.5	44	13.1	1	0.1	0		891	16.2
American Wigeon	109	5.0	17	2.0	65	19.4	0		0		191	3.5
Pintail	17	0.8	22	2.6	11	3.3	10	1.2	53	4.0	113	2.1
Wood Duck	80	3.7	4	0.5	0		0		0		84	1.5
Northern Shoveler	12	0.6	10	1.2	0		0		0		22	0.4
Ring-necked Duck	5	0.2	37	4.4	1	0.3	1	0.1	0		44	0.8
Common Goldeneye	4	0.2	0		0		0		4	0.3	8	0.1
Red-breasted Merganser	0		0		0		0		1	0.1	1	tr
Eider	144	6.7	0		0		0		266	20.3	410	7.4
Canada Goose	0		0		120	35.8	0		34	2.6	154	2.8
Total	2159	100%	842	100%	335	100%	856	100%	1312	100%	5505	100%

Table 3. Cooperative Waterfowl Banding Cost Summary - Atlantic Region - 1985

Station	Estimated Salaries	Bait	Food & Lodging	Trans-portation	Equipment Supplies/ Repairs	Total Cost	No. of Birds	Cost/ Bird	No. of Black Duck	Cost/ Black Duck
Labrador										
Nutak	7750.00*		1983.00*	11753.00*	3467.68*	27358.68	314	87.13	245	111.67
	1362.00	325.00	250.00	86.00	382.00					
Tinker Harbour	4095.00*		933.00*	1075.23*	2461.54*	9159.77	386	23.73	123	74.47
		325.00			270.00*					
Indian House Lk.	4758.00*		891.00*	1200.00*	2095.00*	12544.00	287	43.70	189	66.37
	870.00	325.00		2100.00***	305.00***					
Insular Nfld.										
Codroy	3154.00*	-	1500.00*	-	-	5588.40	655	8.53	183	30.53
	150.00	237.00	-	115.40	432.00					
Carmanville	1252.00*	125.00*		250.00*	23.00*	1650.00	201	8.21	105	15.71
	-	-		-	-					
N.B.-N.S. Border	-	-			-	4254.00	380	11.19	310	13.72
	3600.00	316.00		200.00	338.00					
Bathurst	-	-	250.00*	-	-	4831.50	219	22.06	211	22.90
	2400.00	197.50	946.00	700.00	338.00					
Shepody	-	-			-	5460.00	490	11.14	281	19.43
	4385.00	285.00	490.00	300.00	338.00					
PEI Rocket	-	1000.00**	-	-	-	8521.50	120	71.01	-	-
Netting	5510.00	-	610.00	580.00	821.50					
CWS Airboat	-	-	-	-	-	3338.76	828	4.03	241	13.85
	1892.00	-	107.80	645.96	693.00					
USA Airboat	1150.00		400.00	No USA Costing Available						
Totals						32103.16				
	21319.00	2010.50	2803.80	2627.36	3342.50	49028.45*				
	20751.00*	125.00*	5557.00*	14278.23*	8317.22*	1000.00**				
		1000.00**		2100.00***	305.00***	2405.00***				
GRAND TOTALS	42070.00	3135.50	8360.80	19005.59	11964.72	84536.61	3880†	21.31†	1888#†	39.27#†
						82706.61†				
						74185.11#				

CWS funds - does not include costs for vehicle mileage, new and replaced equipment estimated at $10,000.00.

*Co-op funds

**P.E.I. Fish and Wildlife

***New Jersey Waterfowlers Funds

based on Black Duck stations only

† does not include U.S.F.&W.Service airboat because U.S. costs not available.

Table 4. Age, sex and species of waterfowl banded at the N.B.-N.S. border area bait station - 1985

Species	Local		Hatching Year		After Hatching Year		Total		
	M	F	M	F	M	F	M	F	Total
Black Duck	12	8	151	79	45	15	209	102	310
Blk X Mallard	0	0	2	0	1	0	3	0	3
Mallard	0	0	5	2	0	1	5	3	8
Ring-necked Duck	11	9	1	0	0	3	12	12	24
Blue-winged Teal	1	2	6	17	3	1	10	20	30
Green-winged Teal	1	0	3	0	1	0	5	0	5
Total	25	19	168	98	50	20	244	137	380

Table 5. Age, sex and species of birds banded at the Shepody Bay National Wildlife Area Bait Station - 1985

Species	Local			Hatch Year		After Hatch Year		Total
	M	F	U	M	F	M	F	
Black Duck	20	13		126	89	16	17	281
Mallard				17	3	4	2	26
Blue-winged Teal	1	1		49	46	9	7	113
Green-winged Teal				3	8	4	3	18
Wood Duck						36	2	38
Northern Pintail				6	7		1	14
Common Gallinule			1					1
Totals	21	14	1	201	153	69	32	491

Table 6. Age, sex and species of waterfowl banded at the Bathurst Bait Station - 1985

Species	Hatch Year		After Hatch Year		Totals		
	M	F	M	F	M	F	Total
Black Duck	34	53	72	52	106	105	211
Mallard	1	3	2	-	3	3	6
Blk x Mallard			1	1	1	1	2
Totals	35	56	75	53	110	109	219

Table 7. Age, sex and species of waterfowl banded by the USF&WS airboat on the Saint John River marshes - 1985

Species	Local		Hatching Year		After Hatching Year		Total		U. U.	Total
	M	F	M	F	M	F	M	F		
Black Duck	99	95	147	164	2	11	248	270	1	519
B.-w. Teal	151	171	46	38	12	8	209	217		426
American Wigeon	41	45	4	7	3	6	48	58		106
Wood Duck	8	3	3	3	17	2	28	8		36
G.-w. Teal	3	11	4	6	3	0	10	17		27
Mallard	2	3	5	9	3	1	10	13		23
Mallard X Black Duck	0	0	1	2	0	0	1	2		3
Shoveler	2	1	1	4	0	0	3	5		8
Pintail	0	0	1	1	0	0	1	1		2
C. Goldeneye	1	3	0	0	0	0	1	3		4
Total	307	332	212	234	40	28	559	594	1	1154

Table 8. Age, sex and species of birds banded by the CWS Airboat - 1985

Species	Local		Hatching Year			After Hatching Year		Totals			
	Male	Female	Male	Female	Unk.	Male	Female	Male	Female	Unk.	Total
Black Duck	20	20	90	96	1	1	13	111	129	1	241
Mallard	1	2	1	-	-	3	-	5	2	-	7
Blue-winged Teal	28	28	112	81	-	50	22	190	131	-	321
Green-winged Teal	5	4	41	17	-	12	18	58	39	-	97
American Wigeon	24	28	11	12	-	6	4	41	44	-	85
Pintail	5	6	16	7	-	-	-	21	13	-	34
Ring-necked Duck	2	4	4	6	-	1	2	7	12	-	19
Northern Shoveler	1	3	7	2	-	-	1	8	6	-	14
Wood Duck	-	-	-	-	-	10	-	10	-	-	10
Pied-billed Grebe	-	-	-	-	3	-	-	-	-	3	3
Total	86	95	282	221	4	83	60	451	376	4	831

Table 9. Age and sex of Canada Geese banded on Prince Edward Island by rocket netting - 1985

	After Hatching Year			
Species	F	M	U	Total
Canada Goose	60	60	-	120

Table 10. Age, sex and species of waterfowl banded at the Tinker Harbour bait station - 1985

	Local		Hatching Year		After Hatch Year		
Species	L	F	M	F	M	F	Total
Blk X Mallard					2	1	3
Black Duck			18	12	81	12	123
Green-winged Teal			104	81	25	7	217
Pintail			22	14		1	37
C. Eider	3	2					5
R.b. Merganser						1	1
Total	3	2	144	107	108	22	386

Table 11. Age, sex and species of waterfowl banded at the Indian House Lake bait station - 1985

Species	Local		Hatching Year		After Hatch Year		Total
	L	F	M	F	M	F	
Mallard						1	1
Black Duck	12	14	49	56	23	35	189
Green-winged Teal		1	44	26	8	1	80
Pintail			8	4	1		13
Common Goldeneye	3	1					4
Total	15	16	101	86	32	37	287

Table 12. Age, sex and species of waterfowl banded at Nutak (dog and hand caught and bait stations) - 1985

	Local		After Hatch Year		
	M	F	M	F	
Species					Total
Black Duck			231	14	245
Black X Mallard Hybrid			1		1
Mallard			4	1	5
Canada Goose			16	18	34
Green-winged Teal	5	2	19		26
Pintail			3		3
Total	5	2	274	33	314

Table 13. Age, sex and species of waterfowl banded at Groswater Bay - 1985

	Immature (SY)		Adult (ASY)		
Species	M	F	M	F	Total
Common Eider	6	24	84	147	261*
Black Duck			60		60
Blk X Mallard			2		2
Mallard				1	1

*Identified Common Eider subspecies include: 133 borealis, 57 dresseri, and 57 intergrade.

Table 14. Age, sex and species of waterfowl banded at the Codroy Valley bait station - 1985

Species	Hatching Year		After Hatch Year		Totals		
	M	F	M	F	M	F	Totals
Black Duck	96	65	13	9	109	74	183
Blk X Mallard		1	4		4	1	5
Pintail	3	4		1	3	5	8
Ring-necked Duck		1				1	1
Green-winged Teal	224	202	6	26	230	228	458
Totals	323	273	23	36	346	309	655

Table 15. Age, sex and species of waterfowl banded at the Carmanville bait station - 1985

	Hatching Year		After Hatch Year		Totals		
Species	M	F	M	F	M	F	Total
Black Duck	36	51	10	8	46	59	105
Mallard	1	-	-	-	1	-	1
Pintail	1	1	-	-	1	1	2
Blue-winged Teal	1	-	-	-	1	-	1
Green-winged Teal	39	45	2	6	41	51	92
Totals	78	97	12	14	90	111	201

Waterfowl Bait Trapping Report

Border Region

August 6 - September 13, 1985

Crew Members
Dave Crocker
David Arsenault
Steven Cormier

Introduction

In the summer of 1985 a waterfowl bait trap banding station was located in the Amherst area for a period of 38 days beginning August 6 and ending September 13. The purpose of this station was to band ducks, with Black Ducks being the most important species.

Previous to these dates, areas had been observed and selected as the best possible areas to set the traps. Areas selected were Amherst Point Migratory Bird Sanctuary, Imp. 1; John Lusby Salt Marsh, Russell and Burgess Imp.; Pederson's Pond located just east of the sanctuary.

This station was handled by a Canada Works crew consisting of David Crocker, David Arseneau and Steven Cormier.

Prebaiting started July 30, and 8 traps were set in the above areas August 1 and 2. These traps were set without their top nets to let the birds become familiar with the traps. The nets were put on these traps August 5 and the following day banding had begun. Another trap was added August 7 and the station was in full operation. Trap locations can be seen in Figures 1 & 2. Five species of ducks totalling 380 birds were banded with Black Ducks accounting for approximately 90% of the total. Station totals with age and sex breakdown are shown in Table 1. Trap success in 1985 was uniform throughout the station.

Although banding numbers for this region have been declining the past few years, field observations were encouraging. Black Duck numbers were steady and Green-winged Teal sightings increased. The shorter operational period for this station contributed to fewer banded birds. However the station ran smoothly and the potential for 1986 is encouraging.

Trap Mortality

Eleven ducks were found dead in traps all of which were hatching year or adult birds. The reason for the mortalities is unknown as the ducks did not look to be injured or disfigured.

Recommendations

1. New areas were used this past year and should be continued.
2. Most of the bait should be contained in the trap and small amounts in the funnels.
3. When placing traps in the Burgess Imp. be very selective as a black sooty soil covered the corn in certain areas.
4. Shallow water conditions were the most productive in 1985.

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Table 1. Age and Sex Breakdown - Border Area Bait Trapping Station 1985.

Species	Local				Hatching Year				After Hatching Year				Total			
	M	F	Unk	Total	M	F	Unk	Total	M	F	Unk	Total	M	F	Unk	Total
Black-Duck	12	8	0	20	151	79	0	230	45	15	0	61	209	102	0	310
Blk X Mallard	0	0	0	0	2	0	0	2	1	0	0	1	3	0	0	3
Mallard	0	0	0	0	5	2	0	7	0	1	0	1	5	3	0	8
R.n. Duck	11	9	0	20	1	0	0	1	0	3	0	3	12	12	0	24
B.w.Teal	1	2	0	3	6	17	0	23	3	1	0	4	10	20	0	30
G.w. Teal	1	0	0	1	3	0	0	3	1	0	0	1	5	0	0	5
Total	25	19	0	44	168	98	0	266	50	20	0	71	244	137	0	380

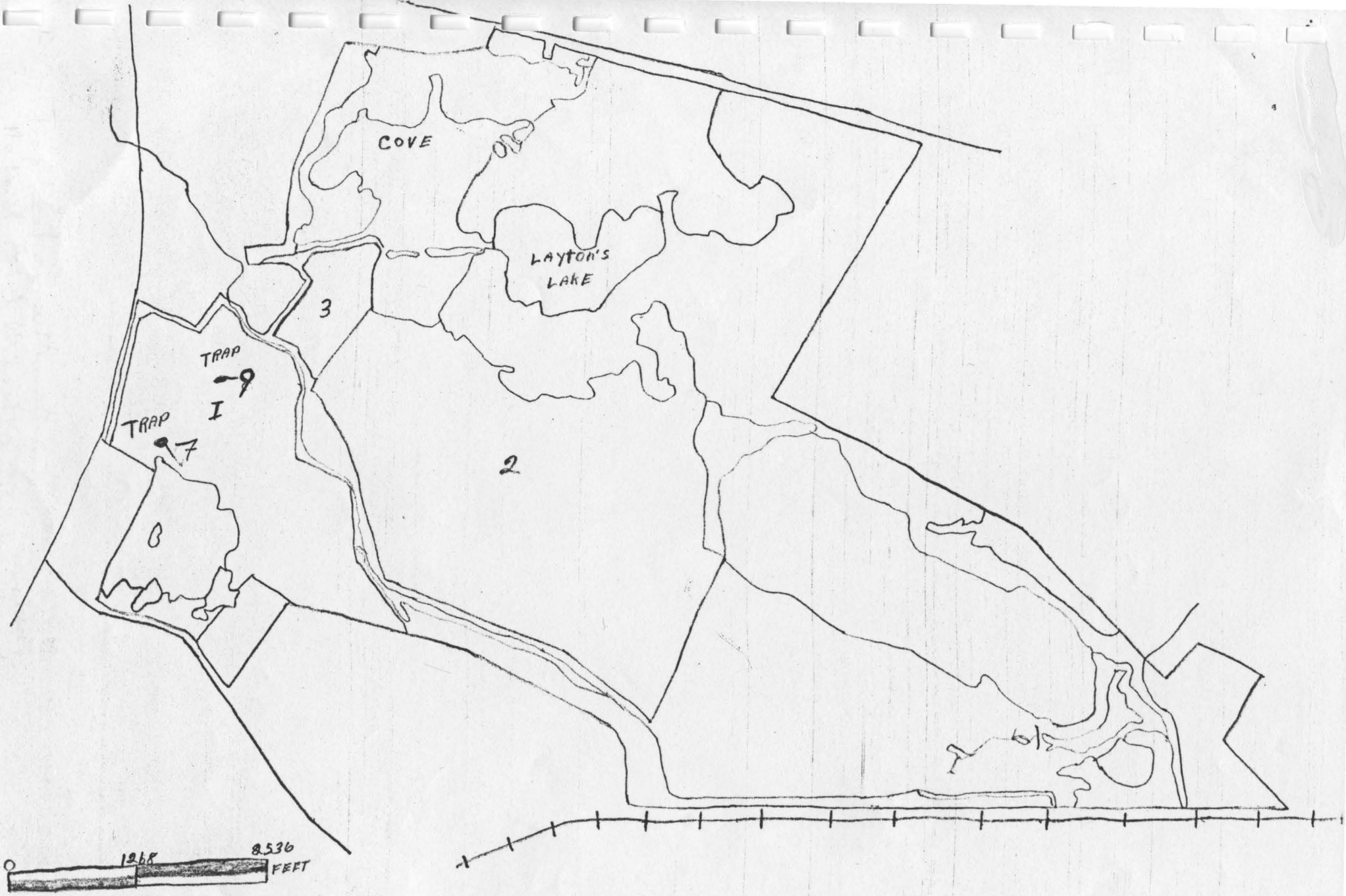

Figure 1. Trap locations within the Amherst Point Migratory Bird Sanctuary

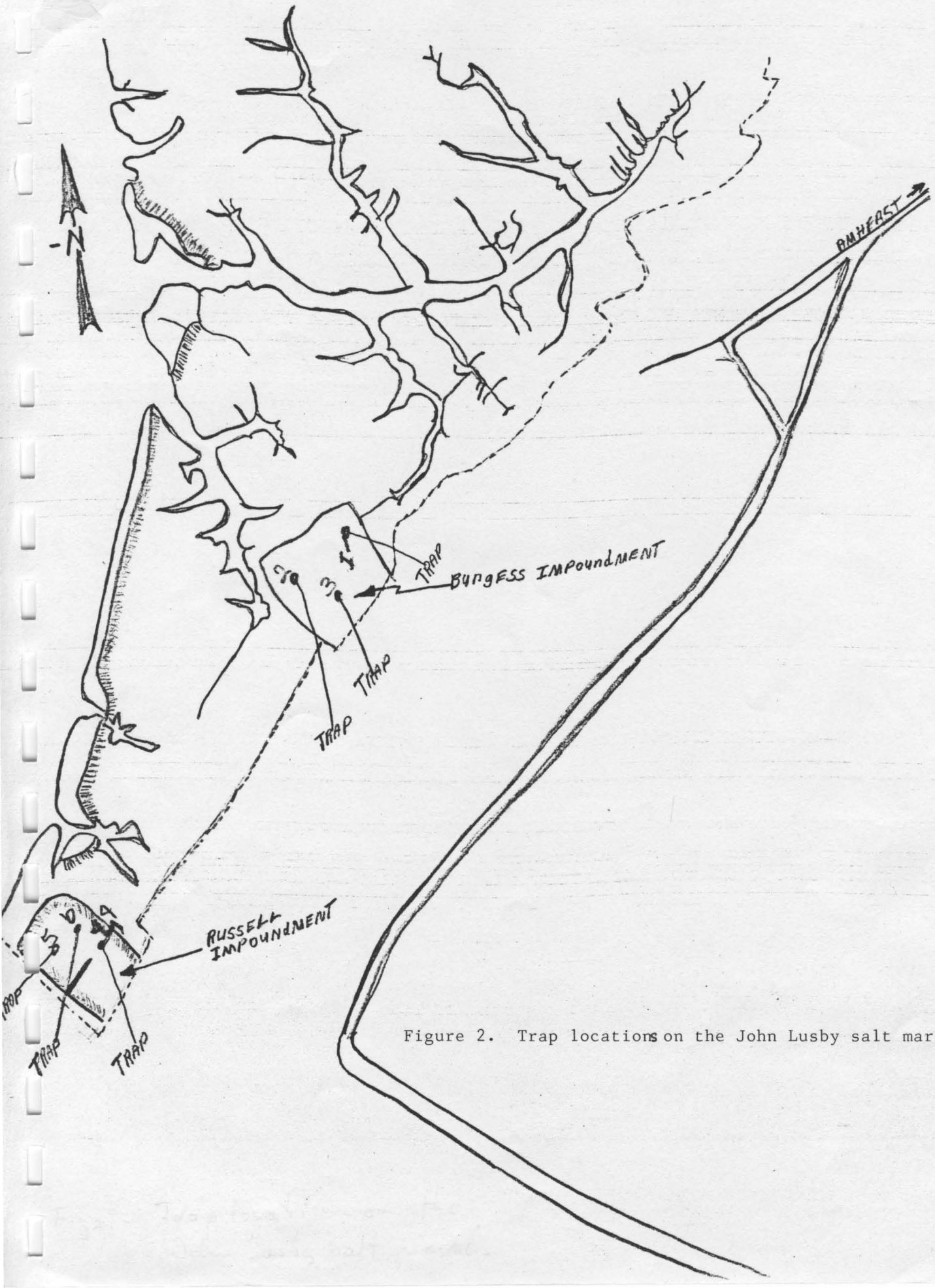

Figure 2. Trap locations on the John Lusby salt marsh.

Waterfowl Banding Project

Shepody Bay National Wildlife Area

August 9 - September 12, 1985

Crew Members

Todd Estabrooks

Gerry Richard

Tim Donovan

During 1985 a waterfowl bait trapping station was operated within the three sections of the Shepody Bay National Wildlife Area. Maps of these areas, (Mary's Point, New Horton, Germantown) with trap locations are found in Figures 1-3.

Six species of waterfowl and a total of 491 birds were banded. The summary by species and age class is found in Table 1. Black Ducks and Blue-winged Teal were the most numerous, however it was interesting to note the Mallard and Wood Duck totals. The Atlantic Mallard population is now under investigation and the total trapped (26) is unusually high for this area. The potential for this wildlife area to provide molting habitat for waterfowl should be recognized and maintained. A total of 38 adult Wood Ducks and 33 adult Black Ducks were banded in 1985.

Future banders should operate this station during the same time period and concentrate their efforts throughout the last two weeks of August as illustrated in Figures 4 and 5. Compared to 1984 (262 total, 140 Black Ducks) this year was more productive and the potential for 1986 is encouraging

Trap Problems and Suggestions

New Horton

A-1 This trap proved to be the best producer of Black Ducks. It was located just off the main channel behind a 20 meter island. The water depth at the trap was approximately 8 inches. This proved to be a good depth and one should try to find trap locations to maintain this depth, when possible.

A-2 This trap had a problem with dropping water which rendered it useless at times. Located in a small cove this trap produced when the water stayed up.

A-3 Located in an area of flooded alders this trap was set up late but produced well. The constant presence of birds in this area would suggest that in the future this would make a good trap site.

C-1 This trap located just off a point of land was productive. A predator problem may be eliminated in future by moving the trap away from the shore.

C-2 Located just off an island one meter in diameter this trap produced the most Blue-winged Teal of all the traps.

Mary's Point

M-1 This trap proved to be the most difficult to prebait but once a raised floor was installed in the trap, bird numbers increased.

Germantown

A-1 Located just off a dike and next to a channel this trap produced well for the size of impoundment it was located in.

C-1 This trap located off a channel produced well, but should have done better with the number of birds present. High water levels hampered trapping.

Table 1. Age, sex and species of birds banded at the Shepody Bay National Wildlife Area Bait Station - 1985

Species	Local			Hatch Year		After Hatch Year		Total
	M	F	U	M	F	M	F	
Black Duck	20	13		126	89	16	17	281
Mallard				17	3	4	2	26
Blue-winged Teal	1	1		49	46	9	7	113
Green-winged Teal				3	8	4	3	18
Wood Duck						36	2	38
Northern Pintail				6	7		1	14
Common Gallinule			1					1
Totals	21	14	1	201	153	69	32	491

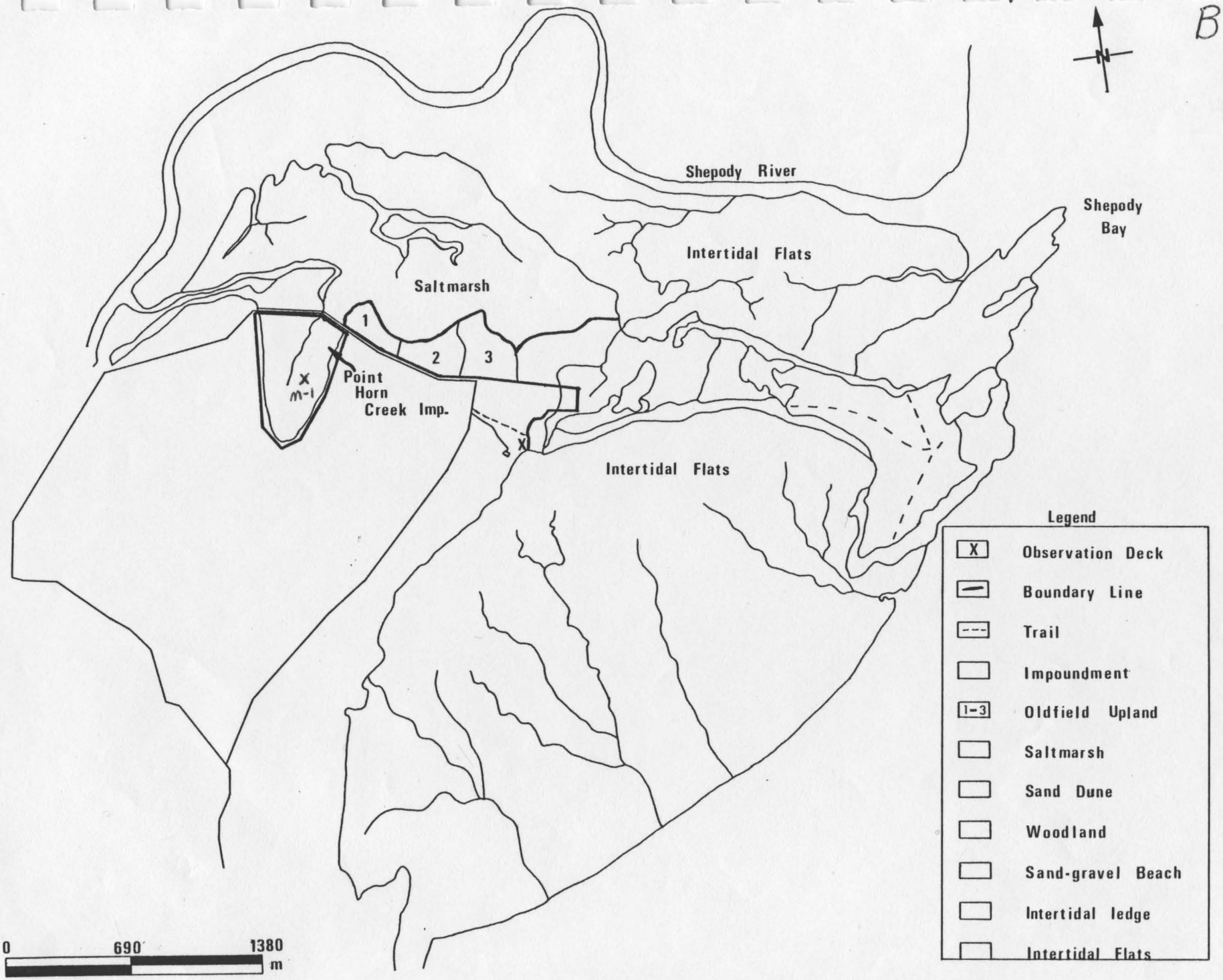

Figure 1 Location and Extent of Major Habitats of Mary's Point Section, Shepody NWA.

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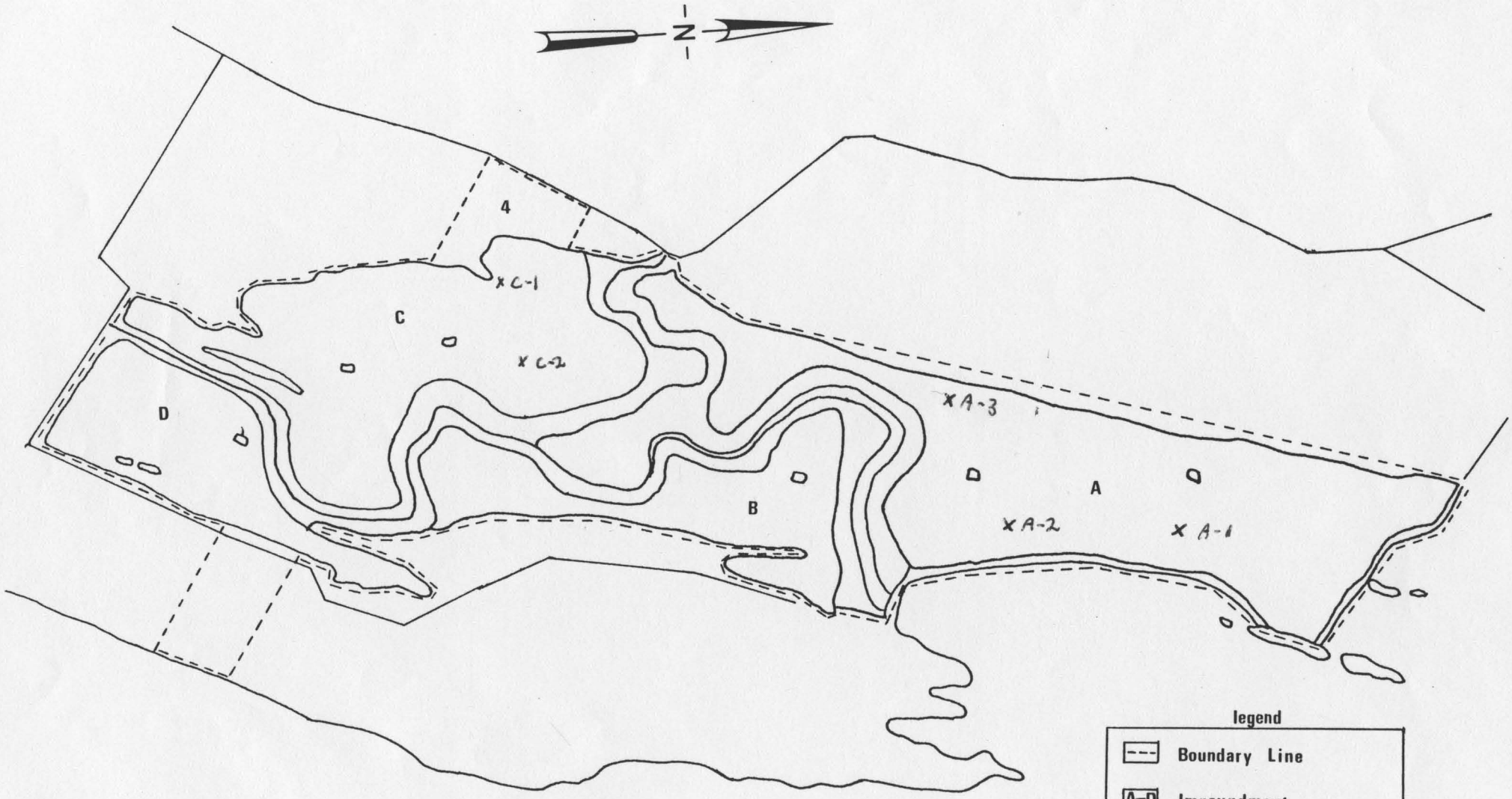

Figure 2. Location and Extent of Major Habitats of New Horton Section, Shepody NWA.

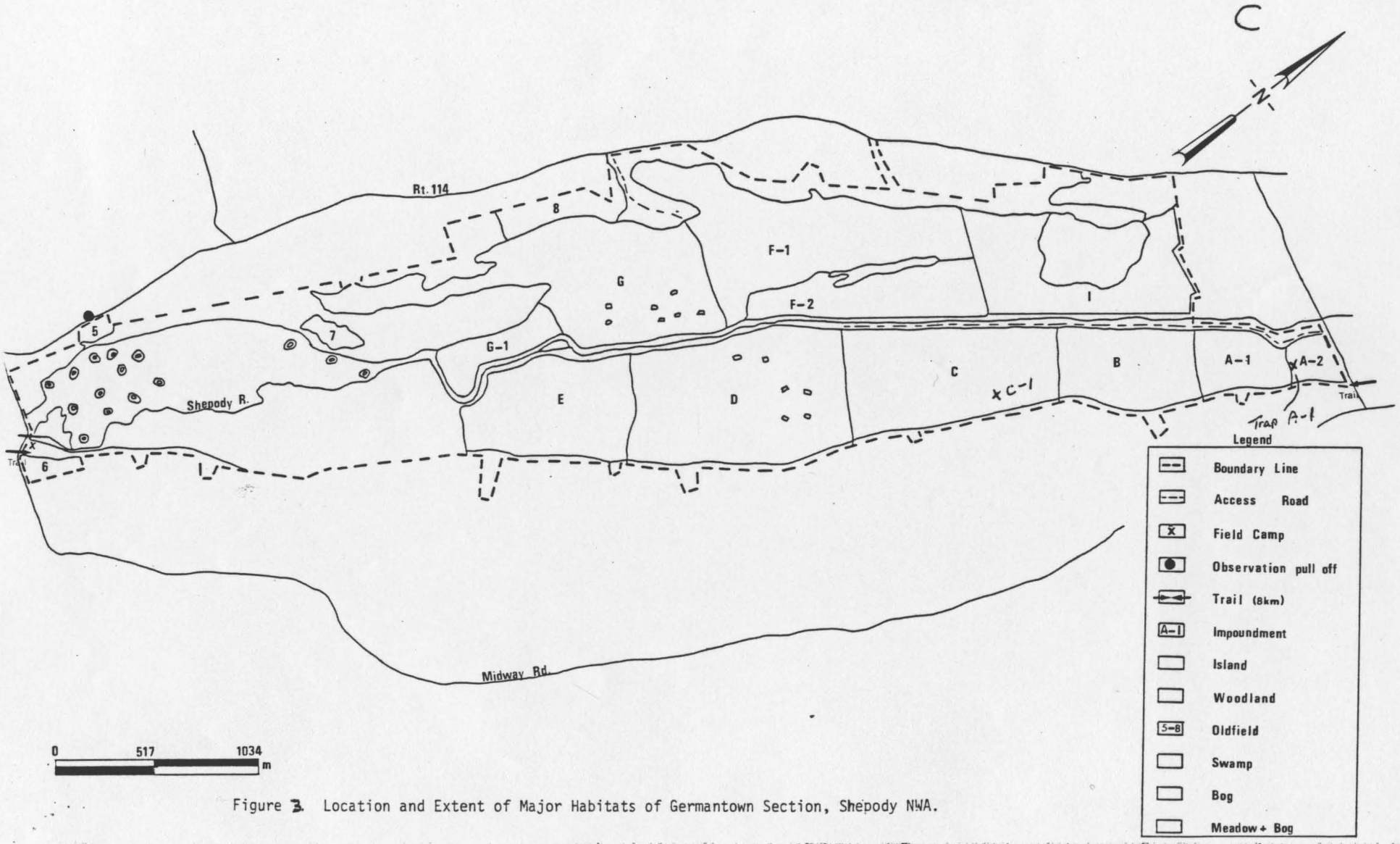

Figure 3. Location and Extent of Major Habitats of Germantown Section, Shepody NWA.

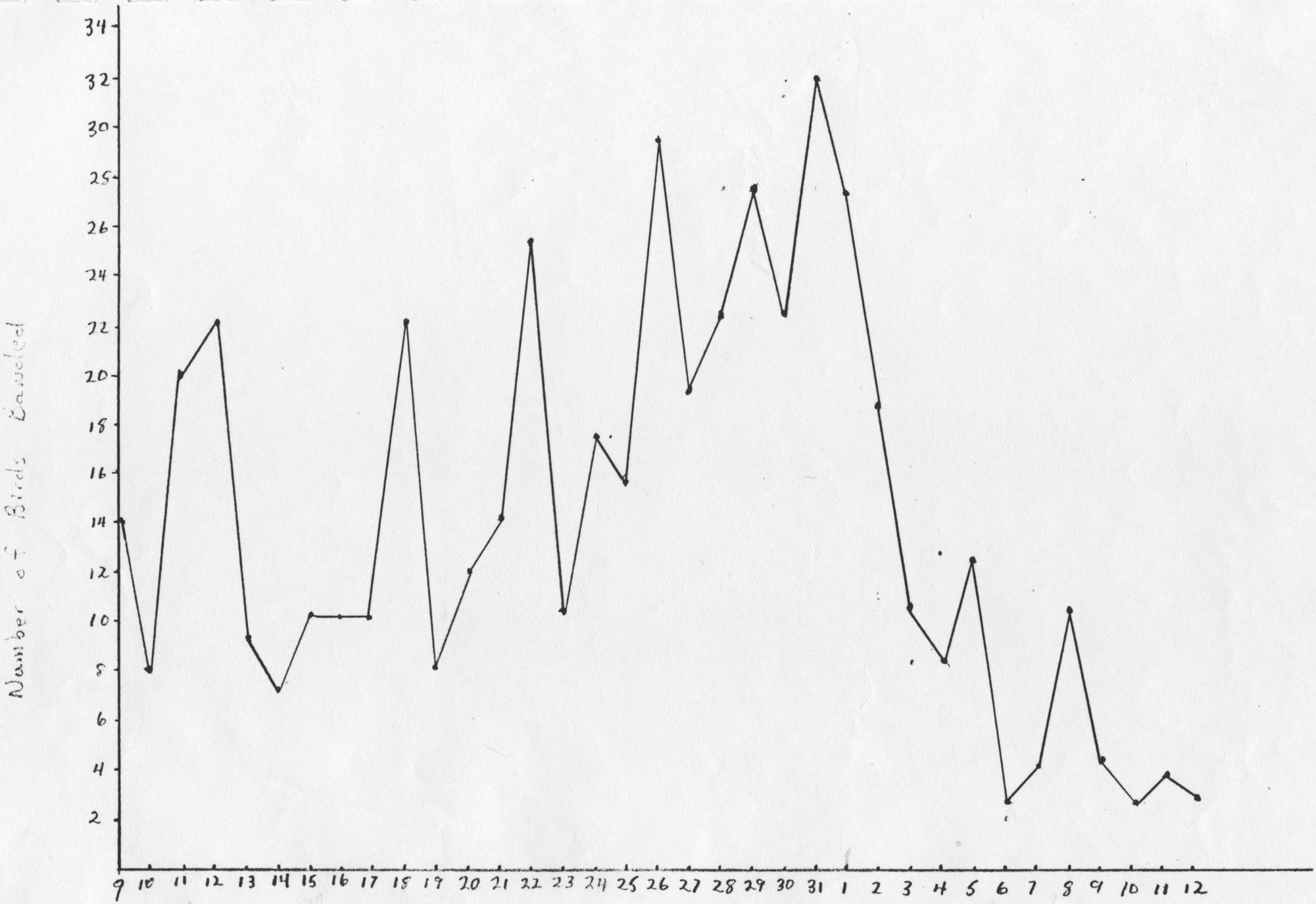

Figure 4.

Date 05 9 55 – 09 12 55

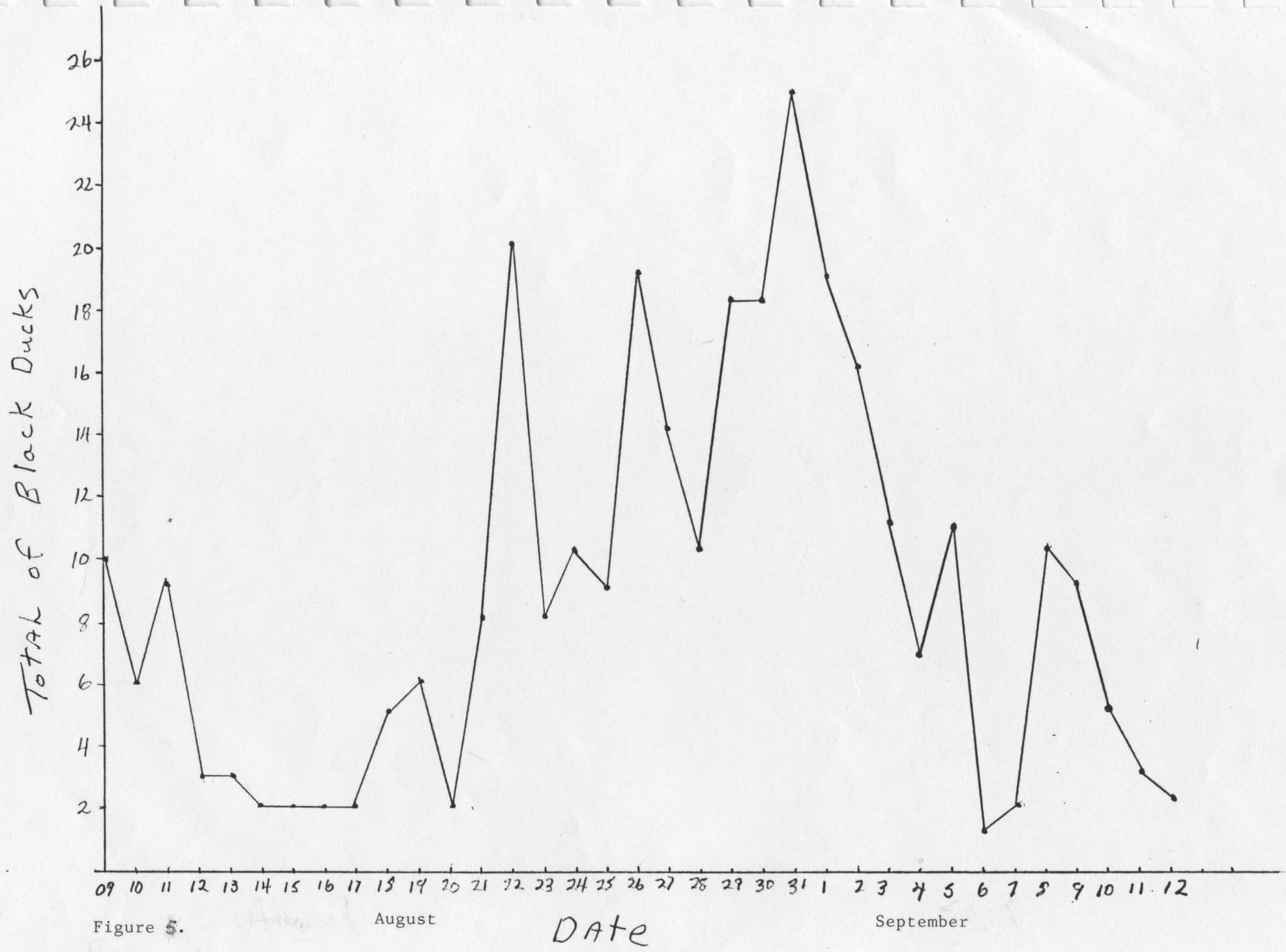

Figure 5.

08 09 85 — 09 12 85

1985 - Waterfowl Bait Trapping Station

Bathurst, New Brunswick

Crew Members

John Maxwell

The Canadian Wildlife Service has banded waterfowl at the mouth of the Tetagouche River in Bathurst since 1978. A total of 219 ducks was banded from September 9 to October 10 in 1985. This shows a slight increase from 1984 however it falls short of the 500+ Black Ducks banded in 1979 and 1980 when banding first began in this area. There were two areas trapped in Bathurst again this year, the Tetagouche river area and the Bathurst Basin area.

The Bathurst Basin site is located in the southwest corner of Bathurst harbour. The traps were located on the Western shore directly in front of a large farm owned by Walter Branch. A housing development occupied the shoreline north of the site and some trees and a small group of houses to the south. In the east a housing development occupied the far shoreline. The Basin site was first trapped in 1984 and it produced 119 or 68% of the 176 birds caught. In 1985 the Bathurst Basin only produced 30 birds or approximately 14% of the total captures. Two traps were used again at the Basin site in approximately the same locations as 1984.

The Tetagouche site is located in Bathurst harbour at the mouth of the Tetagouche river. The Bathurst Golf Course occupies the Northeast corner of the estuary and is next to a wooded area that extends west to route 134. The opposite shore is a mixture of wooded areas and houses. The former lookout site for checking traps on this shore is now occupied by a house and a new owner would rather not have the roadway used by vehicles. There is another site about 200 yds to the east of this site where a street ends almost at the rivers edge. This site affords a good view of most of the traps on the opposite shore.

All traps were constructed of 1" x 2" mesh 14 welded wire and were in the shape of a clover leaf. Traps were covered with green nylon netting that had a very small mesh size. This did not allow the corn to pass freely through the top when baiting the traps. Four of the traps were 4' high and three were 6' high. The 6' traps were used at the mouth of the Tetagouche where there was a danger of very high tides covering the traps.

The Ranger cache in Petit Rocher served as a base station during the banding period with all of the equipment being stored in a shed on the back of the property.

The access road across from the Bathurst Community College provided a parking area while checking and rebaiting the traps. Bait and banding equipment were carried down to the traps from this site. When setting out the traps, wire and poles were moved to the trap site by canoe at high tide. The canoe was launched from the lookout point on the opposite shore of the river.

Recommendations

In 1985 the Campbellton area had a concentration of over 1500 Black Ducks early in September. This area could be trapped from late August until late September then equipment moved to the Bathurst Area for trapping during the month of October.

Because of the small number of birds trapped in Bathurst Basin, trapping should be confined to the Tetagouche River area unless large concentrations of birds are seen at the Basin site.

Trap wire should be replaced on all seven traps as the old wire is rusted and weak and has many broken points which could cause injury to the ducks.

Most birds were caught on a rising tide during periods of low light intensity or at night. In order to increase the length of time birds might be caught a floating type of trap could be used along with the standard type to compare the efficiency of the two types of traps.

Acknowledgements

Special thanks is extended to Mike Arsenault and Charlie McAleenan for their helpful advice, friendship and assistance throughout the banding operation.

Table 1. Waterfowl Captures by Date and Trap at the Bathurst Bait Station - 1985

Date	Trap #1		Trap #2		Trap #3		Trap #4		Trap #5		Trap #6		Trap #7		Total	Total	Total	1st
	1st Cap.	Recap.	1st Cap.	Recap.	1st Cap.	Recap	1st Cap.	Recap.	1st Cap.	Recap.	1st Cap.	Recap.	1st Cap.	Recap.	1st Cap.	Recap.	Caps.	Cap. %
Sept. 9	6		2				5		Not	in					13		13	100
10	3		2		1		8		Operation						14		14	100
11	2		3	1	3	1	5	2							13	4	17	76
12	3	1			2	1	5	3			1				11	5	16	69
14	2	1	6	3	2		2	1	1		2		4	1	19	6	25	76
15	1	2	5	1	5	5	2		4	3	3				20	11	31	64
16	2	3	3	1	3	5	2	6		1	5	1			15	17	32	47
17	1	1								1					1	2	3	33
18		1	1	2	5	5	2	2							8	10	18	44
19		1		1	1	2	3		2		2	4	2	1	10	9	19	53
20	5		2		2		3		1	2			2	2	15	4	19	79
21	1	1	1			1	2	1	2	3					6	6	12	50
22		1		3	4	2		1	3	3			2	2	9	12	21	43
23	1	1	1	2	2	1	2	1		2			3	2	9	9	18	50
	Traps closed from September 24 to October 1st																	
Oct. 2			2	5	6	4			6	5					14	14	28	50
3		2	3	2	5	3	1	3	2	1			1	1	12	12	24	50
4	1		1	3	1		3	1	1				2		9	4	13	69
5		1	1	1	2	1	2	1	1	1				2	6	7	13	46
6															4	6	10	40
7															5	5	10	50
8															1	1	2	50
9															1	1	2	50
10															4	4	8	50
															219	149	368	59.5%

Table 2. Age structure and sex of each waterfowl species banded at Bathurst - 1985

Species	Hatching Year			After Hatching Year			Totals		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Black Duck	34	53	87	72	52	124	106	105	211
Mallard	1	3	4	2	-	2	3	3	6
Black X Mallard				1	1	2	1	1	2
									219

Table 3. Age, sex and species of waterfowl banded at the Bathurst Bait Station - 1985

Species	Hatch Year		After Hatch Year		Totals		
	M	F	M	F	M	F	Total
Black Duck	34	53	72	52	106	105	211
Mallard	1	3	2	-	3	3	6
Blk x Mallard			1	1	1	1	2
Totals	35	56	75	53	110	109	219

1985 Waterfowl Banding

St. John River, New Brunswick

July 31 - August 13, 1985

Crew Members

Carl Ferguson, U.S.F.W.S., Parker River N.W.R., Newburyport, MA

Bill Giese, U.S.F.W.S., Blackwater N.W.R., Cambridge, MD

John Maxwell, C.W.S., Sackville, New Brunswick, Canada

Introduction

The U.S. Fish and Wildlife Service provided a two-man crew and a nightlighting equipped airboat for the waterfowl banding assignment on marshes along the St. John River, east of Fredericton, New Brunswick. The Canadian crew member was from the Sackville, New Brunswick office of the Canadian Wildlife Service. The other Canadian crew member, an alternate for one night, was from the Fredericton office, New Brunswick Department of Natural Resources. The quota, again this year, was 500 Black Ducks.

Preparation

The airboat and nightlighting equipment is stored at Parker River National Wildlife Refuge and maintained by refuge maintenance personnel. The airboat had been used last year at the St. John River banding station and was purchased in February, 1984 from Panther Airboat Inc.

Coordination with C.W.S. in Sackville, New Brunswick included arranging to obtain C.W.S. bands, obtaining an oversized trailering permit, and coordinating an arrival date at the St. John River banding station. Arrangements were also made to rendezvous with the Canadian crew member.

A letter of introduction to Canadian Customs from USFWS-OMBM was waiting at the border crossing. A temporary work permit was needed from Canadian Immigration and a letter explaining the cooperative banding program. A complete equipment list helped expedite the border crossing which took about 30 minutes.

This banding assignment is normally scheduled to start during the last week of July, so that the majority of Black Duck broods encountered will be Class 3 size. Also, scheduling took advantage of moon phases of lesser illumination which is important in using the nightlighting capture technique.

Results

A total of 1,154 ducks were netted and banded by the airboat crew in 53.3 hours of operations or approximately 13 1/2 nights within thirteen marshes along the St. John River (Tables 1, 2, 3, and 4).

The water level in the St. John River and adjacent marshes was considerably lower (10 to 15 inches), than the 75 year high of 1984. The airboat crew was restricted to the impoundments and channels and could not "get up on top" of the extensive Spartina pectinata vegetation. The water level dropped 15 to 18 inches during the two week period, making several marshes inaccessible to the airboat toward the end of the banding period.

The crew used 53.3 operating hours to capture 519 Black Ducks versus 44.0 hours and 500 Black Ducks in 1984; a 9.8 Black Duck/hour average this year versus 11.4 Black Duck/hour average last year.

Generally, it appeared that traditional staging areas were not utilized and Black Duck numbers were down. The airboat crew had to travel further in visiting several new marshes, and in revisiting other marshes to reach the quota of 500 Black Ducks. It may be that the number of Black Ducks in these marshes are not down this year, but that considerable numbers of ducks are roosting and feeding at night in areas where they are inaccessible to this heavy airboat. This was clearly the situation in Babbits Meadows on August 13.

Concerning Black Ducks, the percent of local birds captured increased from 28 percent in 1984 to 37 percent in 1985. This large number of flightless local birds due to later hatching could help explain the decrease at local staging areas. There is considerable circulation between different marshes in the area by the hatching year Black Ducks. Black Ducks banded 7-10

days earlier, were recaptured by the airboat crew 2-15 miles away in other marshes.

Staging areas where Black Ducks were located this year listed in orders of importance included Grand Lake marshes, Foshay Lake, Jemseg Flats, upper Long Island impoundment, Masquash Island, Babbits Meadows, and Otnabog Lake marshes.

Portobello and Farnham Marsh, again this year, were disappointing for the numbers of Black Ducks found there.

Blue-winged Teal broods were numerous in the Grand Lake marshes, Foshay Lake, and Jemseg Flats. Otnabog Lake marshes appeared to be a molting spot for Wood Ducks. The majority of Wigeon broods were located in Foshay Lake.

Changes in the marshes due to human activities this year included an expanded cranberry farming effort in Farnham Marsh and a new dike emplaced by Ducks Unlimited in the north end of Foshay Lake.

Concerning other waterfowl species, Mallard and Blue-winged Teal were up from last year and Wood Ducks and Green-winged Teal dropped sharply from 1984.

Recommendations

Personnel

An aerial flight is recommended for first time crew leaders to familiarize themselves with the marshes and channels and to locate Black Duck staging areas if necessary. Information should also be solicited from the New Brunswick Department of Natural resources personnel, the Ducks Unlimited office in Fredericton, and private individuals on Black Ducks concentration areas. Questionable launch sites should be visited in the daylight.

Information on welding shops, garages, parts supplies stores, etc. should be passed on from year to year.

In order to shorten the time spent at the border in Canadian customs, the crew leader should have a copy of a past temporary work permit, a letter of introduction from USFWS-OBMB on file, and should have provided Customs with a letter explaining the cooperative banding program, the arrival date in Canada, and a complete equipment list at least three weeks in advance.

Equipment

Problems encountered with the airboat seems to be a rerun of last year. Mechanical and system component problems with this airboat have cost more than two thousand dollars the last two years and have pushed the crew's working day many times to 16 plus hours in locating and repairing problems. In my opinion, most of these problems originate from poor design, low grade materials, and low quality workmanship in assembling this airboat.

The banding crew has had problems with the electrical, fuel, coolant, and other systems on this airboat both years.

Hopefully the two years of "sea trials" with this airboat have detected and corrected the major problems with the engine and its components. Some suggestions for improvements and further modifications include:

1. Continual leaks of the fuel tank pose an extreme safety hazard to the banding crew. Due to weight of the fuel and poor cradle design, the fuel tank will continue to stress and fatigue the welds and will again develop leaks in the near future. The location of the 40 gallon fuel tank under the engine and adjacent to the extremely hot, unmuffled exhausts and its propensity for leaking poses an explosion and fire hazard. The fuel

tank under the engine should be removed and twin 20 gallon tanks placed mid-ship, under the deck, one on each side of the airboat.

2. The flywheel will have to be replaced as it was "out of round" from the factory and had thirty plus teeth chewed up by the starter driver gear.
3. Red warning lights for low oil pressure and high temperatures should be installed on the steel support bar that the operator uses to brace himself against while maneuvering the airboat to capture ducks. The operator is in front of and above the instrument panel during capturing operation and cannot quickly detect a serious coolant or oil system problem.
4. The present system of using a hand winch, cable, and sand anchor to extract a grounded airboat needs to be improved. An electric winch is needed for this situation. Mount holes could be drilled and tapped on both front corners of the boat; the winch could be stored under the deck until needed. This particular airboat is extremely heavy and is difficult to "muscle" around by 2 to 3 people.
5. The radiator will have to be repaired or replaced. This is another example of poor factory design. The radiator has to be insulated from engine vibrations and should be secured in rubber damper mounts <u>away</u> from the engine support structure. In addition, because of the "bug" problem, screens that can be easily removed and cleaned should be put on both sides of the radiator.
6. The bolts that attach the propeller to the flywheel were loosening daily. The wires through the bolts wer not preventing this problem. This situation should be corrected if possible.

With this airboat and its history of mechanical and systems problems, complete daily maintenance is not only a necessary routine but is essential for a continual nightly banding effort.

The banding crew continued the tradition of working long hours to resolve various mechanical problems with this boat. John Maxwell, C.W.S., was extremely valuable in his knowledge of the banding area and his almost daily reconnaissance effort in locating new marshes to work and alternate launch sites. As crew leader, I would like to say thanks to Bill and John for a job done well and in a timely fashion.

Bill Whitman, who I wish well in his retirement, Myrtle Bateman, Randy Hicks, Canadian Wildlife Service, Sackville and John Baird and Rich Monroe, Fish ad Game Branch, Department of Natural Resources, Fredericton again provided assistance and support in accomplishing this banding assignment.

Good luck to next year's banding crew.

Prepared by: Carl F. Ferguson

Table 1. Nightly Capture Rates of the Most Common Waterfowl Species Banded along the St. John River in New Brunswick.

Species	Banding Years						
	1979	1980	1981	1982	1983	1984	1985
Black Ducks/Night	36	45	57	29	65	46	38.4
B.-w. Teal/Night	22	27	62	28	28	18	31.5
American Wigeon/Night	5	22	6	7	6	9	7.9
G.-w. Teal/Night	4	8	14	3	6	7	2
Other Waterfowl Species	8	16	12	6	9	12	5.6
	75	118	151	73	114	92	85.4

Table 2. Waterfowl Banded Along the St. John River, New Brunswick From 1980 - 1985

	Banding Years											
	1980		1981		1982		1983		1984		1985	
	#	%	#	%	#	%	#	%	#	%	#	%
Black Duck	631	38.4	511	37.6	436	40.0	521	56.9	500	49.6	519	45.0
Blue-winged Teal	374	22.7	557	41.0	421	38.6	225	24.6	200	19.8	426	36.9
American Wigeon	305	18.5	52	3.8	109	10.0	49	5.5	97	9.6	106	9.2
Green-winged Teal	106	6.4	129	9.5	51	4.7	5	5.6	78	7.7	27	2.3
Wood Duck	148	9.0	34	2.5	5	2.3	33	3.6	94	9.3	36	3.1
Mallard	32	1.9	18	1.3	7	0.6	19	2.1	12	1.3	23	2.0
Mallard X Black Duck	3	0.2	5	0.4	7	0.6	6	0.6	7	0.7	3	0.3
Goldeneye	1	0.1	11	0.8	6	0.6	4	0.4	1	0.1	4	0.3
Shoveler	25	1.6	25	1.8	5	1.3	4	0.4	10	1.0	8	0.7
Pintail	16	1.0	12	0.9		0.6	3	0.3	10	0.8	2	0.2
Totals	1645	100	1357	100	1090	100	915	100	1009	100	1154	100

Table 3. Nightly Success Within Each Marsh Worked During 1985 St. John River Banding Assignment.

Date	Location											
7/31	Foshay Lake	12	5	0	0	0	0	0	0	0	0	17
8/01	Little Lake	0	11	0	0	0	0	0	0	0	0	
	Grand Lake	44	29	0	7	4	3	0	3	0	0	101
8/02	Foshay Lake	29	55	20	0	0	0	0	1	1	1	107
8/03	Musquash Island	14	17	4	0	0	0	0	0	0	0	
	Long Island	23	13	6	0	0	1	0	0	1	0	
	Foshay Island	0	14	1	0	0	0	0	0	0	0	94
8/04	Grand Lake	30	11	9	0	2	0	0	0	0	0	
	Timber Lake	4	2	0	1	0	0	0	0	0	0	
	Jemseg Flats	28	30	7	0	1	0	0	0	0	0	125
8/05	Farnham Marsh	29	1	0	0	2	0	0	0	0	0	
	Foshay Lake	12	17	1	1	0	0	0	1	0	2	66
8/06	Portobello	21	1	0	5	1	1	0	0	0	0	29
8/07	Grand Lake	18	16	1	2	1	2	0	0	0	0	
	Jemseg Flats	22	42	4	4	1	2	0	0	0	0	115
8/08	Foshay Lake	25	54	23	6	4	1	0	0	0	1	114
8/09	Otnabog Lake	20	0	0	0	10	4	0	0	0	0	
	Long Island	22	5	3	0	0	0	0	0	0	0	
	Jemseg Flats	5	18	1	0	0	0	0	0	0	0	88
8/10	Spoon Island	20	49	4	0	3	2	1	0	0	0	
	Coy Lake	10	1	0	0	4	0	0	0	0	0	94
8/11	Musquash Island	28	2	5	0	0	0	0	0	0	0	
	Long Island	15	3	5	1	0	0	0	0	0	0	
	Foshay Lake	2	16	8	0	1	0	0	0	0	0	86
8/12	Portobello	11	0	0	0	1	0	0	0	0	0	
	Grand Lake	14	2	1	0	1	1	0	0	1	0	
	Jemseg Flats	20	9	1	0	0	1	0	0	0	0	63
8/13	Babbits Meadows	41	3	2	0	0	5	1	3	0	0	55
	Totals	519	426	106	27	36	23	2	8	3	4	1154

Table 4. Age, sex and species of waterfowl banded by the USF&WS airboat on the Saint John River marshes - 1985

Species	Local		Hatching Year		After Hatching Year		Total		U. U.	Total
	M	F	M	F	M	F	M	F		
Black Duck	99	95	147	164	2	11	248	270	1	519
B.-w. Teal	151	171	46	38	12	8	209	217		426
American Wigeon	41	45	4	7	3	6	48	58		106
Wood Duck	8	3	3	3	17	2	28	8		36
G.-w. Teal	3	11	4	6	3	0	10	17		27
Mallard	2	3	5	9	3	1	10	13		23
Mallard X Black Duck	0	0	1	2	0	0	1	2		3
Shoveler	2	1	1	4	0	0	3	5		8
Pintail	0	0	1	1	0	0	1	1		2
C. Goldeneye	1	3	0	0	0	0	1	3		4
Total	307	332	212	234	40	28	559	594	1	1154

Goose Banding Project

Prince Edward Island

March 26 - May 9, 1985

Crew Members

Randy Hicks

Myrtle Bateman

John Maxwell

Introduction

The P.E.I. Goose Banding project for 1985 began March 26 using the same projectile traps used during the 1984 season. Two additional ground nets were also used for the 1985 project. These were constructed of a lighter mesh and were smaller in overall size. Banding was continued at different intervals until May 9, 1985 and included a two week period from April 15 to April 26 when the nets were worked daily.

Preparation

The two ground nets were refitted with new anchor ropes and rocket ropes. Each of the two rocket nets that were used in 1984 was modified to use an additional rocket and therefore, new rocket ropes had to be added.

The boxes used for holding the rocket nets were painted the same as the "dummy boxes" used for setting up pre-baited areas. The box for the larger rocket net proved to be too small in 1984 and a new larger one was constructed. Each of the boxes was equipped with an additional rocket launcher. The back of these launchers were lowered to give more range to the rockets. Metal coverings were fastened to the boxes under the rocket launchers to protect them from damage from the force of the charges.

Each of the rockets was thoroughly checked before use. It was necessary to counterstrike some of the portholes in the rockets to give them greater thrust. All of the rockets were rethreaded to prevent their flying apart when shot.

Methods

The thirteen sites used for banding migrating Canada Geese in 1985 were in Orwell (2 sites), Victoria (1 site), Vernon (1 site), Earnscliff (2 sites), Pownal (1 site), Alexandra (1 site), Glenfinnan (1 site), Mill's Point (2 sites) and St. Eleanor's (1 site).

The methods used for setting nets in 1985 were the same as those used during the 1984 season.*

A tent-trailer set up at Beach Grove, P.E.I. was used for accommodations from April 15 onward.

A three-wheel bike and utility trailer were used for transporting the nets and rockets to some otherwise inaccessible sites.

Results

A total of 120 Canada Geese were banded between April 10 and May 9. Of those, 60 were adult females and the remaining 60 were adult males. Two foreign recaptures were also netted, one of which was an adult female and the other an adult male which had a yellow neck band. Table 1 summarizes this total by sex and age class and Table 2 summarizes the total by banding sites.

Discussion

Out of the thirteen sites that were trapped, shown in Figures 1-5, the most successful traps were in the Orwell and Earnscliff areas. Seventy-six out of the total 120 geese were netted in these two areas.

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*see Atlantic Flyway Cooperative Banding Program, Atlantic Provinces 1984 compiled by W. R. Whitman.

In total, fifteen shots were taken at the various sites. Only one shot was unsuccessful due to the fact that the geese moved out of range just as the net was fired.

At one site in the Vernon area the net became tangled in the detonating wires preventing its full extension. Other than these instances, the equipment worked well. It was noted, however, that when the ground nets were used the geese came in closer to the nets and the shots were more successful.

Box nets were used for just three shots and accounted for twenty-one geese being banded.

In two sites, one in Orwell, field #2 and the other in St. Eleanor's, field #1, nets were set up but no geese returned to them. Therefore, no shots were fired at these two sites.

Recommendations

These recommendations should be considered if the PEI Goose Banding Project is to be continued.

1) The tent-trailer should be used throughout the duration of the project since it provides cheaper accommodation and is more convenient.
2) To be worked efficiently, the station should be operated with two banders. In this way birds can be banded more quickly and left in nets for a shorter time.
3) A three-wheel bike and utility trailer should be used to transport the nets and rockets in some areas since this gives better access to the sites, is quicker and less work.
4) More areas should be pre-baited and used in the banding project.
5) All equipment should be thoroughly checked prior to the banding project.

Conclusion

The 1985 Goose Banding Project was more successful than the 1984 season primarily because the problems encountered with equipment in 1984 were corrected.

Since PEI is one area in the Atlantic Provinces where significant numbers of Canada Geese can be found, the banding project is a good opportunity to study the species and should continue to become more successful as further experience is gained.

Acknowledgements

I would like to thank the PEI Fish & Wildlife Department for their assistance in the program. I would also like to thank the landowners who allowed us access to and use of the banding sites.

List of Bands Used for the 1984-85 Goose Banding

728-15334 to 15400

698-83925 to 83977

Table 1. Total Banded Canada Geese by Sex and Age Class, Prince Edward Island Rocket-Netting, 1985.

Species	After Hatching Year F	M	U	Total
Canada Goose	60	60	-	120

Table 2. Total Banded Canada Geese by Field, Prince Edward Island Rocket Netting, 1985.

Fields	After Hatching Year F	M	U	Total
Orwell #1	25	21	-	46
Orwell #2	-	-	-	-
Vernon #1	1	-	-	1
Vernon #2	3	2	-	5
Earnscliff #1	4	5	-	9
Earnscliff #2	11	10	-	21
Pownal #1	1	5	-	6
Alexandra #1	-	-	-	-
Glenfinnan #1	6	8	-	14
Victoria #1	4	5	-	9
Mill's Point #1	4	2	-	6
Mill's Point #2	1	2	-	3
St. Eleanor's #1	-	-	-	-
Total	60	60	-	120


LAWTONS HILL
Pownal
Mount Mellick
Waterside
Moores Point
Haleys Pt
Christie Island
Pownal Point
POWNAL BAY
Irvings Bar
Cherry Valley Cove
Jennys Pt
Jobs Pt
Cherry Valley
Trans Canada Highway
Vernon Field #2
Vernon Field #1
Vernon Bridge (Vernon Sta)
Seal River
Worths Pond
Bradley Ct
Millview
VERNON
Glencoe
Orwell Field #1
Motel
SIR ANDREW MacPHAIL PROV PARK
Orwell Prov Historic Park
Uigg
Orwell
Orwell River
Orwell Field #2
Throggys Marsh
Haydens Point
Dump
Finleys Pt
Grays Point
China Point
Davies Point
Douse Point
Mutlock Point
Orwell Cove
Earnscliffe
Watts Creek
Youngs Marsh
Penn Point
Birch Point
Mutchs Point
McInnis Point
Gallas Point
Newtown Cross
Cooks Pond
River
PRIN
BAY
01
02
03
04
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06
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09
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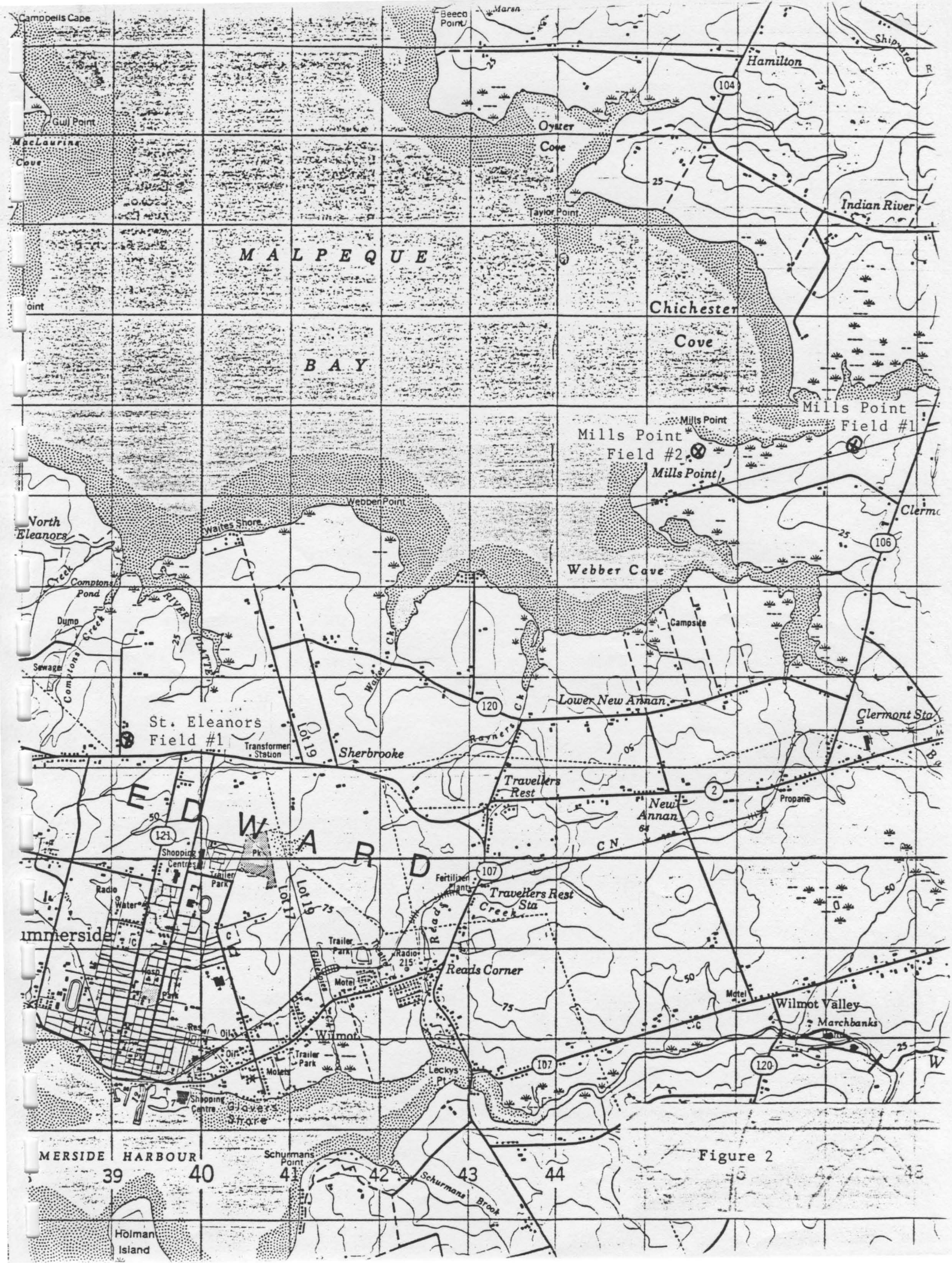
Figure 1


Campbells Cape
Gull Point
MacLauring Cove
Beech Point
Marsh
Hamilton
104
Oyster Cove
Taylor Point
Indian River
MALPEQUE
BAY
Chichester Cove
Mills Point
Mills Point Field #1
Mills Point Field #2
Webbers Point
North Eleanors
Waites Shore
Comptons Pond
Comptons Creek
RIVER
Dump
Sewage
Webber Cove
Campsite
106
Lower New Annan
120
St. Eleanors Field #1
Transformer Station
Lot 19
Sherbrooke
Travellers Rest
New Annan
Propane
Clermont Sta
EDWARD
121
Shopping Centre
Trailer Park
Radio
Water
Lot 16
Lot 17
Fertilizer Plants
107
Travellers Rest Sta
Creek
CN
Reads Corner
Motel
Wilmot Valley
Marchbanks
Wilmot
Oil
Leckys Pt
Glovers Shore
Schurmans Point
Schurmans Brook
Holman Island
MERSIDE HARBOUR
39
40
41
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44

Figure 2

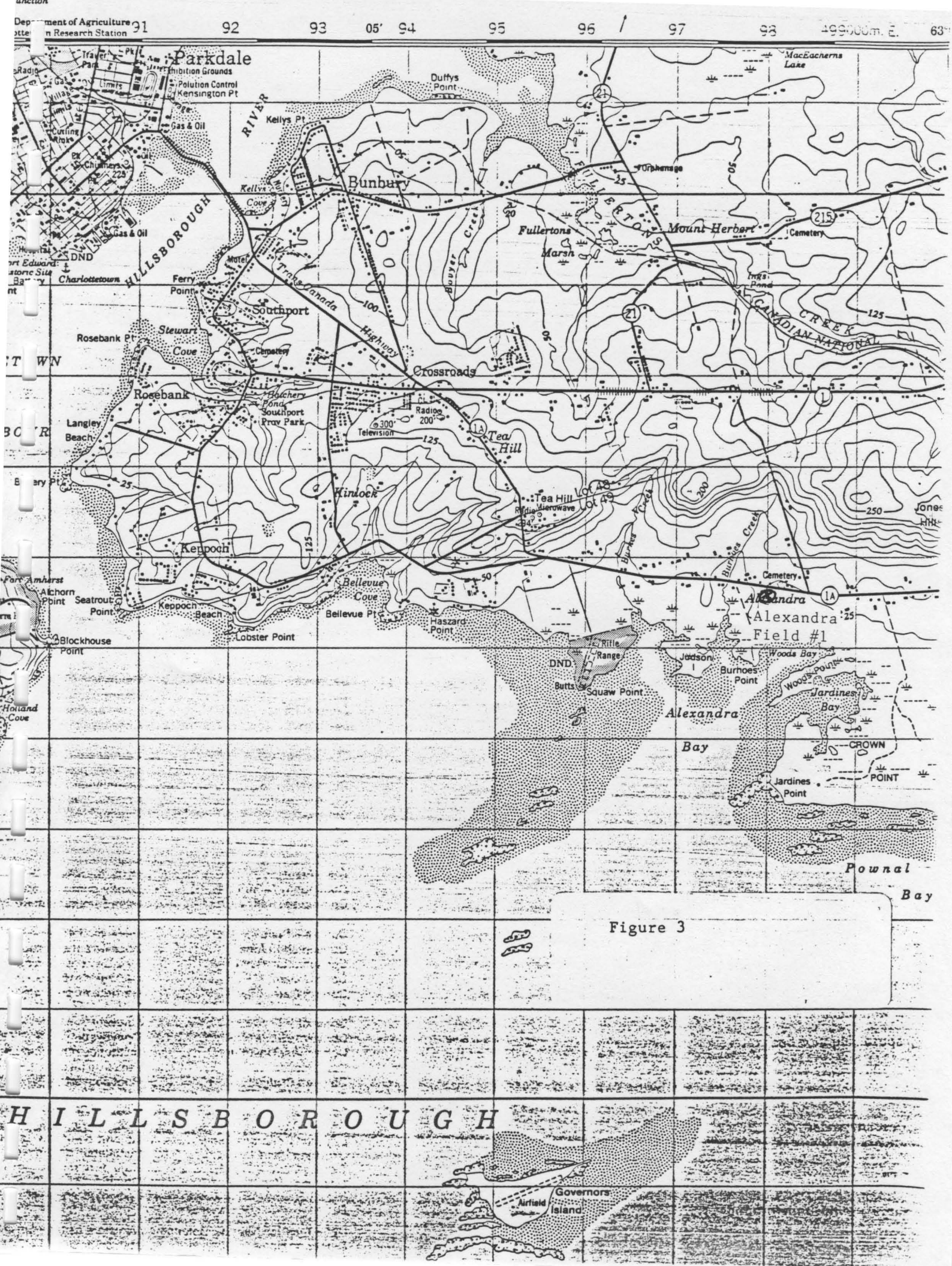
Parkdale
Traver Park
Exhibition Grounds
Pollution Control
Kensington Pt
Limits
Duffys Point
MacEacherns Lake
RIVER
Kellys Pt
Gas & Oil
Chimneys
Bunbury
Kellys Cove
Orphanage
FULLERTONS
Fullertons Marsh
Mount Herbert
Cemetery
Buyer Creek
HILLSBOROUGH
DND
Charlottetown
Motel
Trans Canada Highway
Ferry Point
Southport
Inns Pond
CANADIAN NATIONAL
CREEK
Rosebank Pt
Stewart Cove
Cemetery
Crossroads
Rosebank
Butchery Pond
Southport Prov Park
Langley Beach
Radio 200'
300' Television
Tea Hill
Kinlock
Tea Hill Microwave
Lot 48
Lot 49
Jones Hill
Keppoch
Fort Amherst
Aitchorn Point
Seatrout Point
Keppoch Beach
Bellevue Cove
Bellevue Pt
Haszard Point
Lobster Point
Blockhouse Point
Burkes Creek
Cemetery
Alexandra
Alexandra Field #1
Rifle Range
DND
Butts
Squaw Point
Jadson
Burhoes Point
Woods Bay
Woods Point
Jardines Bay
CROWN POINT
Jardines Point
Alexandra Bay
Pownal Bay
HILLSBOROUGH
Governors Island
Airfield

Figure 3

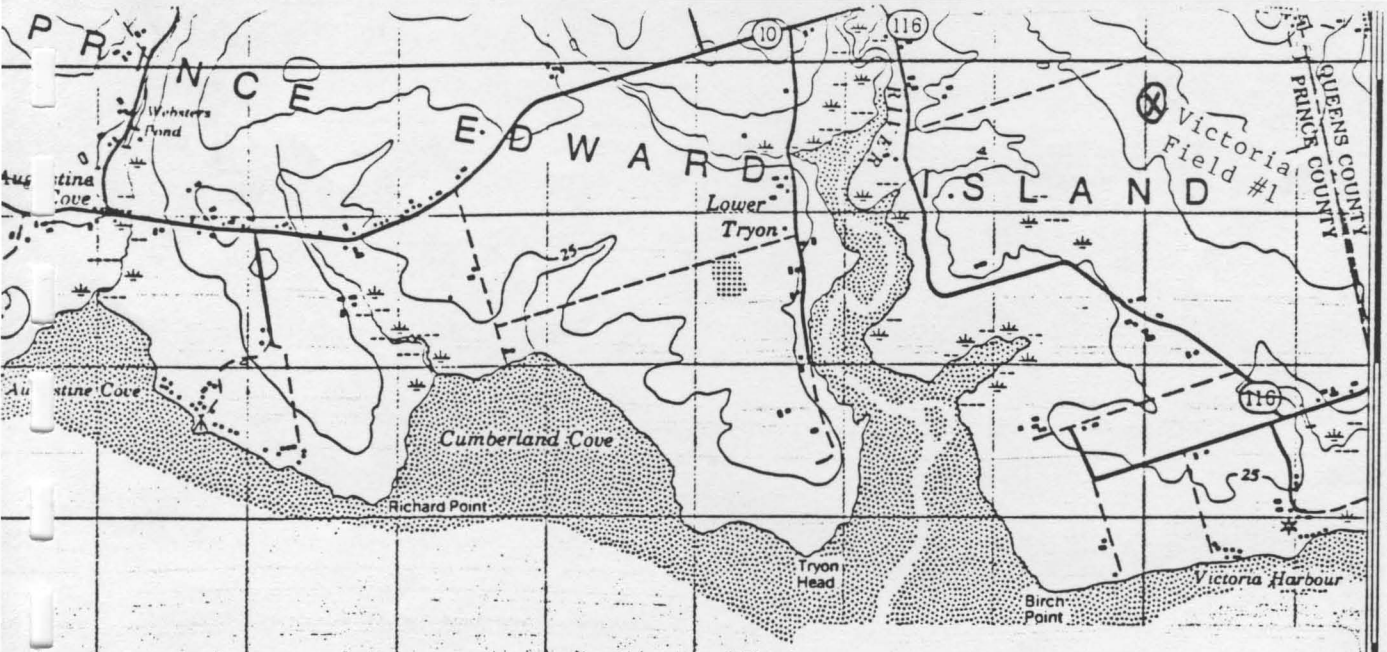

Figure 4

20 19 18 17 16 15 14 13 10' 12 11 10 09 08 07

53 54 55 56 57 58 59 60 61

Airfield
Arena
City Lim
Custom
Ditch
Dugout
Dump
Filtrati
Gas
Golf Co
Junk Ya
Kiln
Lookout
Mine W
Oil Well
Park
Rink
Senior C
Ski Area
String B
Surveyed
Tank
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AE

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RCMP

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UN

QUA

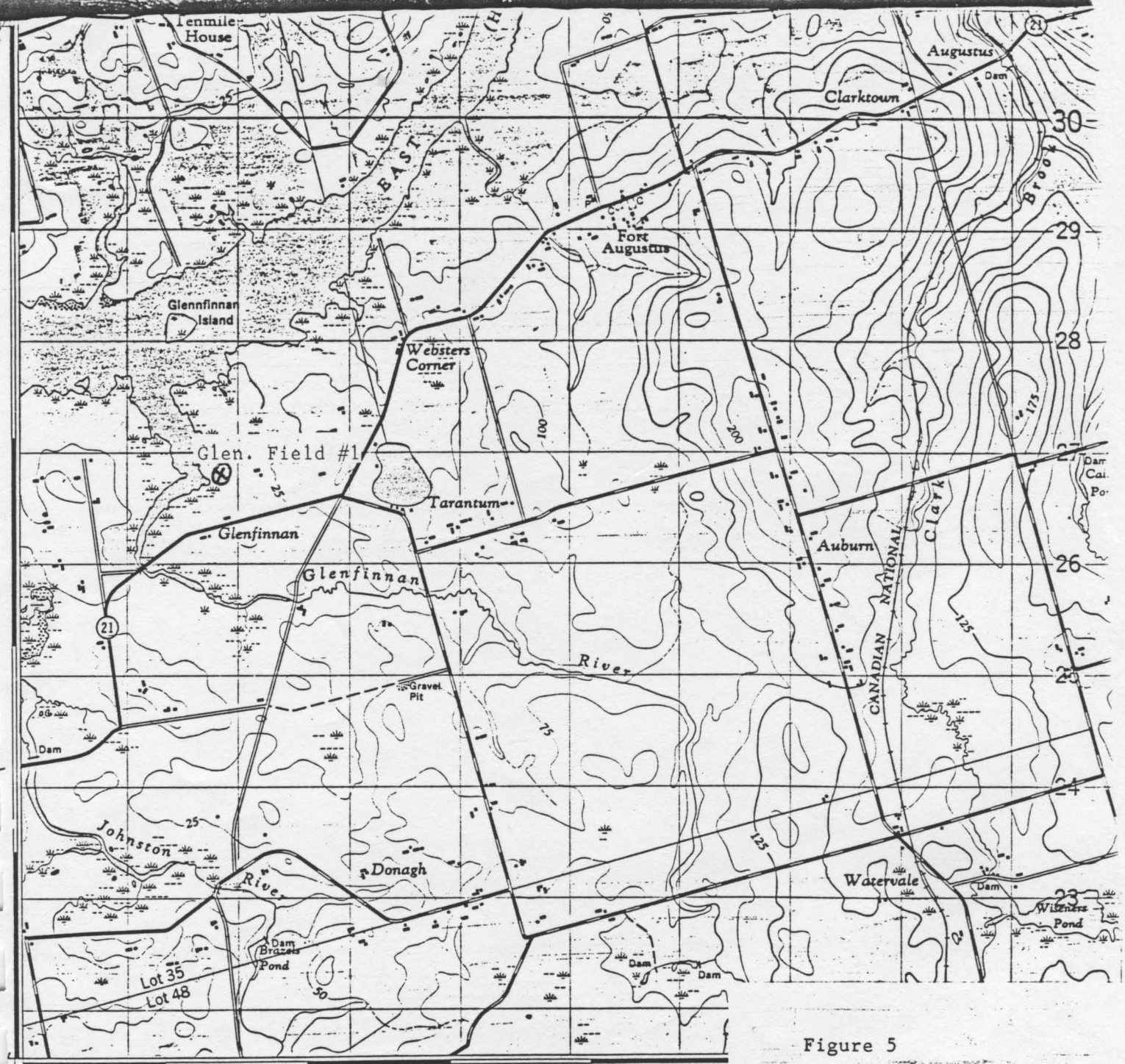

Figure 5

d. 1965, by the SURVEYS AND MAPPING BRANCH,
RTMENT OF ENERGY, MINES AND RESOURCES.
veys and culture check 1964. Printed 1967.

obtained from the Map Distribution Office,
Energy, Mines and Resources, Ottawa.

MOUNT ST
PRINCE EDWAR

SCALE 1:50,000 É

Miles 1 0 1

Metres 1000 500 0 1000 20

Yards 1000 500 0 1000 2000

CONTOUR INTERVAL 25 FEET
Elevations in Feet above Mean Sea Level

ÉQUI
Élévations en

Roads:	Routes:	
hard surface, all weather	pavée, toute saison	more than 2 lanes / plus de 2 voies; 2 lanes / 2 voies
hard surface, all weather	pavée, toute saison	less than 2 lanes / moins de 2 voies
loose or stabilized surface, all weather	gravier aggloméré, toute saison	2 lanes or more / 2 voies ou plus; less than 2 lanes / moins de 2 voies
loose surface, dry weather	de gravier, période sèche	
cart track	de terre	
trail or portage	sentier ou portage	
Railway, normal gauge, single track	Chemin de fer, voie unique (écartement normal)	siding / voie d'evitement; station / gare
Horizontal control point, with elevation	Point géodésique avec cote	454 △

CWS Airboat

July 24 - September 18, 1985

Crew Members

R. J. Hicks

M. Petrie

Introduction

The CWS night-lighting program operated throughout the three Atlantic Provinces in 1985. Two crew members, CWS staff and local banders assisted in this program. Four marshes were worked in Nova Scotia and Prince Edward Island and one in New Brunswick.

Preparation

The airboat needed a number of repairs before any night-lighting was attempted. At the end of the 1984 night-lighting season, the engine was using about one litre of oil for every six hours of use.

After a test drive was taken in the spring of 1985, it was found that the oil pressure gauge did not work properly and compression was down in one of the cylinders. A bolt on the front of the engine had vibrated loose and consequently the motor was throwing oil.

Therefore, to correct these malfunctions; a new oil pump was installed and the bolt on the front of the engine was replaced. The engine was given a complete tune-up.

The dip nets were re-strung and a new pump was installed on the boat. The oil was changed in the generator which is used to supply power to the lights.

Discussion and Results

In general, few difficulties were encountered with equipment this year. On one occasion one of the newly constructed ramps at Amherst Marsh gave away just as the boat was being taken from the water causing the bottom of the boat to fill. After many futile attempts at trying to haul the boat with the four-wheel drive it was apparent that a tow truck which was only available the following day was needed to haul the boat and trailer.

For approximately the latter half of the season, the hand winch had to be used on the boat due to a failure with the electric winch.

The number of Black Ducks banded in the Wallace Bay NWA dropped markedly from previous years. This could be due to the fact that salt water which flooded the impoundment after the aboiteau broke down killed the spiraea which provided cover for a large number of birds.

A total of 831 birds was banded in 12 nights (22.2 hours) between July 24 and September 18, 1985. Of the 831 birds, 241 were Black Ducks, 321 Blue-winged Teal, 97 Green-winged Teal, 85 American Wigeon and 87 others or birds.

Recaptured birds included one foreign recapture and 10 station returns.

The total birds banded and age and sex breakdown is presented in Table 1. The age and sex breakdown by province and/or marsh is found in Tables 2-7.

Recommendations

1) The electric winch for the boat needs to be repaired before the next night-lighting season.
2) The airboat's engine needs an overhaul since it is using 6 l of oil for every 7 hours of use.
3) A new pump is needed for the boat. A wire cage attached around the pump would prevent clogging and burnout of the motor.
4) The trailer should be rewired for the lighting system.
5) A permanent crew should be assigned to the airboat for a more productive season.

Acknowledgement

Thanks to Tom Duffy who provided guidance to banding areas on P.E.I. and assisted with banding.

All volunteer help was greatly appreciated this year since only one permanent crew member was involved in the program.

List of Band Numbers for the 1984-85 Night-lighting Season

624-13964 to 14000

624-21278 to 21300

664-35552 to 35560

664-35773 to 35800

825-44248 to 44300

825-54501 to 54600

825-54601 to 54668

825-54801 to 54900

876-01494 to 01500

876-62714 to 62800

876-62901 to 62971

896-68198 to 68200

1357-13182 to 13200

1357-13242 to 13300

1427-95101 to 95171

1427-95201 to 95300

Table 1. Age and Sex Breakdown, CWS Airboat 1985

	Local			Hatching Year			After Hatching Year			Totals			
Species	Male	Female	Unk.	Male	Female	Unk.	Male	Female	Unk.	Male	Female	Unk.	Total
Black Duck	20	20	–	90	96	1	1	13	–	111	129	1	241
Mallard	1	2	–	1	–	–	3	–	–	5	2	–	7
Blue-winged Teal	28	28	–	112	81	–	50	22	–	190	131	–	321
Green-winged Teal	5	4	–	41	17	–	12	18	–	58	39	–	97
American Wigeon	24	28	–	11	12	–	6	4	–	41	44	–	85
Pintail	5	6	–	16	7	–	–	–	–	21	13	–	34
Ring-necked Duck	2	4	–	4	6	–	1	2	–	7	12	–	19
Northern Shoveler	1	3	–	7	2	–	–	1	–	8	6	–	14
Wood Duck	–	–	–	–	–	–	10	–	–	10	–	–	10
Pied-billed Grebe	–	–	–	–	–	3	–	–	–	–	–	3	3
Total	86	95	–	282	221	4	83	60	–	451	376	4	831

Table 2. Age and Sex Breakdown, Amherst Marsh, CWS Airboat 1985

	Local		Hatching Year		Aft. H. Year		Totals		
Species	Male	Female	Male	Female	Male	Female	Male	Female	Total
Black Duck	3	3	6	-	-	-	9	3	12
Mallard	-	1	1	-	3	-	4	1	5
Green-winged Teal	-	-	6	1	4	2	10	3	13
Blue-winged Teal	8	11	20	12	17	10	45	33	78
Ring-necked Duck	1	1	-	-	-	-	1	1	2
American Wigeon	1	-	4	2	1	-	6	2	8
Pintail	2	4	2	1	-	-	4	5	9
Wood Duck	-	-	-	-	1	-	1	-	1
Shoveler	1	3	3	-	-	1	4	4	8
Total	16	23	42	16	26	13	84	52	136

Table 3. Age and Sex Breakdown, Amherst Point, CWS Airboat 1985

	Local		Hatching Year		Aft. H. Year		Totals		
Species	Male	Female	Male	Female	Male	Female	Male	Female	Total
Black Duck	1	2	3	4	–	–	4	6	10
Mallard	1	1	–		–	–	1	1	2
Green-winged Teal	3	4	–	–	–	–	3	4	7
Blue-winged Teal	15	9	3	6	9	1	27	16	43
Ring-necked Duck	1	1	1	–	–	–	2	1	3
Pintail	1	2	3	2	–	–	4	4	8
Total	22	19	10	12	9	1	41	32	73

Table 4. Age and Sex Breakdown, Louis Lake CWS Airboat 1985

	Local		Hatching Year		Aft. H. Year		Totals		
Species	Male	Female	Male	Female	Male	Female	Male	Female	Total
Black Duck	-	-	1	2	-	-	1	2	3
Green-winged Teal	-	-	22	3	-	1	22	4	26
Blue-winged Teal	-	-	3	4	1	-	4	4	8
American Wigeon	-	-	-	1	-	-	-	1	1
Total	-	-	26	10	1	1	27	11	38

Table 5. Age and Sex Breakdown, Wallace Bay NWA, CWS Airboat 1985

	Local		Hatching Year			Aft. H. Year		Totals			
Species	Male	Female	Male	Female	Unk.	Male	Female	Male	Female	Unk.	Total
Black Duck	7	6	41	40	1	1	4	49	50	1	100
Green-winged Teal	2	–	9	9	–	4	8	15	17	–	32
Blue-winged Teal	2	1	20	12	–	14	7	36	20	–	56
Ring-necked Duck	–	–	2	4	–	–	2	2	6	–	8
American Wigeon	6	2	–	–	–	–	–	6	2	–	8
Pintail	–	–	3	2	–	–	–	3	2	–	5
Wood Duck	–	–	–	–	–	3	–	3	–	–	3
Shoveler	–	–	2	–	–	–	–	2	–	–	2
Pied-billed Grebe	–	–	–	–	3	–	–	–	–	3	3
Total	17	9	77	67	4	22	21			4	216

Table 6. Age and Sex Breakdown, Shepody NWA, CWS Airboat 1985

	Local		Hatching Year		Aft. H. Year		Totals		
Species	Male	Female	Male	Female	Male	Female	Male	Female	Total
Black Duck	-	1	14	21	-	1	14	23	37
Green-winged Teal	-	-	2	2	-	-	2	2	4
Blue-winged Teal	-	-	49	33	7	3	56	36	92
Ring-necked Duck	-	2	1	2	-	-	1	4	5
American Wigeon	-	1	1	1	-	-	1	2	3
Pintail	-	-	1	-	-	-	1	-	1
Wood Duck	-	-	-	-	6	-	6	-	6
Shoveler	-	-	2	2	-	-	2	2	4
Total	-	4	70	61	13	4	83	69	152

Table 7. Age and Sex Breakdown, Prince Edward Island, CWS Airboat 1985

Species	Local		Hatching Year		Aft. H. Year		Totals		
	Male	Female	Male	Female	Male	Female	Male	Female	Total
Black Duck	9	9	25	28	–	8	34	45	79
Green-winged Teal	–	–	2	2	4	7	6	9	15
Blue-winged Teal	3	7	16	15	2	1	21	23	44
Ring-necked Duck	–	–	–	–	1	–	1	–	1
American Wigeon	17	25	6	8	5	4	28	37	65
Pintail	2	–	5	4	–	–	7	4	11
Total	31	41	54	57	12	20	97	118	215

Waterfowl Banding Project

Tinker Harbour, Newfoundland

August 23 - September 24, 1985

<u>Crew Members</u>

Robert McKee

Mark Lindburg

Ned Gerber

This Labrador banding project has been a cooperative venture among the Atlantic Flyway states, provinces and Federal Wildlife Services. This is the fifth year of a program to duplicate Cooch's (1951) work on black ducks in which 450 birds were banded.

Methods

Banders McKee and Lindburg arrived in Rigolet on August 23. Two boats and crews were hired locally to assist in transporting supplies and equipment to Tinker Harbour that same day.

Baiting of trap sites (whole corn and barley) began on August 24 with some traps in operation by August 31. The last traps were pulled September 24 and camp vacated that same day. Nine traps were of circular design (lily-pad) with 1" x 2" welded wire (12 & 14 g) with one slit entrance. Of these, 4 were 2' high and used in pond sites while the remaining five were 4' high and used in intertidal sites and one pond. The other traps (3) were of panel design with 2 traps measuring 5'x 10'x 10' with 2x2" welded wire (12 g) and one measuring 4'x 8'x 8'. All trap tops were of 2" mesh poultry wire. Circular traps were staked with 2-3 five foot, 3/4" steel conduit. Depending on the site a 6-7' spruce sapling was added for greater rigidity and a place to hang burlap bags while birds were netted with long handled dipnets. Catch boxes were used to retrieve most birds from the 5' panel traps.

Results

A total of 386 ducks was banded (Table I). Of these, 123 were Black Ducks and 217 were Green-winged Teal. Low numbers of birds observed and age ratios of major species banded indicate that the late spring (3 weeks+) probably had an impact on nesting. Other species banded include: Black X

Mallard (3), pintail (37), Common Eider (5), and Red-breasted Merganser (1). In addition 29 retraps (25 Black Ducks and 4 Green-winged Teal) were captured.

Eleven sites were trapped (Figure 1). As in past years pond sites (especially Camp and Teal Ponds) proved to be choice trapping sites for teal. The most successful sites for Black Ducks were Canoe Cove, Lookout Island, Stag Island, and Scumsucker Stream. Two other sites, Rock Ledge and Midstream were visited by large numbers of blacks and bait "cleaned" daily however, blacks failed to enter once traps were set. Perhaps if 5' panel traps were used results might have been better since there is no doubt they were the preferred design and most successful.

Black Duck numbers declined by mid September after a maximum of about 225 on any one day (average daily 75/100). A large concentration of blacks (300+) was observed continually west of Stag Island Brook to Cranford Head. This area should be included in the banding area for next year.

Maximum populations of teal peaked at 265 (Sept. 8-12) with averaged daily counts of 50-100. Other species noted include: Canada Goose, pintail, goldeneye, Mallard, A. Widgeon, mergansers and Common Eiders. A marked decline of eider populations was noted with perhaps a maximum of 50 observed on any given day.

Predation was a minor problem with 4 green-wings killed by a rough-legged hawk and 1 black killed by a goshawk. Five green-wings and 1 black died of unknown causes. Fox and bear sign was uncommon with only 1 bear observed. No known human poaching or shooting on sites occurred.

The weather was relatively mild with the temperature dropping below freezing on four mornings. Rain was frequent with winds of 20/30 K common. A three day gale (Sept. 21-23) peaked at 60-65 knots for 24 hours, damaging

and/or destroying all traps. Since trapping success had fallen off traps were pulled and preparations made for breaking camp.

Trap caches were made at 6 locations with some miscellaneous equipment stored in the woods 150 yards SW of the campsite (Figure 2).

Recommendations

1) This station should be operated from late August through mid October.
2) The trapping area should be extended westerly to include the cove from Stag Island Brook to Cranford Head.
3) Black Duck traps for intertidal areas should include more panel types.
4) Trap numbers/locations

   Tinker Harbour: six traps should be sufficient for this area (4 intertidal for blacks of which two should be panels 10' x 10' x 5-6' high and two lily-pad traps for pond sites for teal. Two foot traps are fine for teal however 4' is more enticing for other species.)

   S/K Bay: Six traps would be adequate (4 intertidal panel traps and 2 lily-pad for ponds).

   Stag Island/Cranford Head: Four + traps (2 panel - 5 x 10 x 10' and 2 lily pad - 4-5' high).
5) Trap mouths should be vertical slit entrances in tidewater. Same design fine for pond sites.
6) Trap tops should be of 2" mesh (6' wide) poultry wire or 1"-1.5" mesh bar plastic garden netting (12' wide), preferably the latter for panel traps.
7) Bait used should be whole corn in tidal and corn or barley in pond sites.

8) All trap sites should be accessible on foot since wind and wave conditions preclude reliable access.

9) Equipment used by the banding crew should be in top working condition upon their arrival since in nearly all instances repairs, parts and equipment are not available locally.

10) Public notices about the operation should be posted in Rigolet, Northwest River and Goose Bay post offices. A news relese should be made available to the radio and TV stations in Goose Bay.

11) Due to the difficulty of working in the tidal area, alternative banding sites should be investigated.

12) Trapping equipment: Traps and/or supplies cached at the banding station are sufficient to provide for all lily pad traps and one 5' x 10' x 10' panel trap (excluding tops). In addition 1 roll of 12 gauge 4' x 1" x 2" welded wire and 70' of 3/4" conduit is at the site. Materials needed include tops for all traps and wire, rods and conduit to construct 5-7 panel traps.

Acknowledgements

The N.A.T. (Pasadena) and G.B.A.S. (Goose Bay) radio network was a welcome feature for sending and receiving messages and their transmissions were greatly appreciated especially for coordinating the hospital plane pickup of an injured crew member.

Myrtle Bateman with CWS supervised this operation and the CWS provided equipment used. Funding was provided by the Atlantic Flyway's Cooperative banding fund.

Table 1. Age and Sex of Ducks Banded at Tinker Harbour Area, Labrador, 1985.

Species	LM	LF	HyM	HyF	AHyM	AHyF	Total	Recaptures AHyM	AHyF	UU	Total
Black X Mallard					2	1	3				
Black Duck			18	12	81	12	123	17	4	4	25
GW Teal			104	81	25	7	217			4	4
Pintail			22	14		1	37				
C. Eider	3	2					5				
R.b. Merganser						1	1				
Total	3	2	144	109	106	24	386	17	4	8	29

Table 2. Capture by Trap Site, Tinker Harbour, Labrador, 1985.

Trap Site	Black X Mallard	Black Duck	G.w. Teal	Pintail	Common Eider	Red-breasted Merganser	Totals
Stag Kellick Bay							
Canoe Cove	1	41	–	1	5	–	48
Teal Pond	–	–	98	–	–	–	98
Midstream	–	3	1	–	–	–	4
Rock Ledge	–	3	–	–	–	–	3
Stag Island	1	16	28	18	–	1	64
Stag Island Cove	–	–	12	–	–	–	12
Sub total	2	63	139	19	5	1	229
Tinker Harbour							
Camp Pond	–	–	61	–	–	–	61
Tidal Pond	–	1	2	–	–	–	3
Lookout Island	1	44	4	4	–	–	53
Scumsucker South	–	16	1	14	–	–	31
Scumsucker Pond	–	–	12	–	–	–	12
Sub total	1	61	80	18	–	–	160
Grand Total	3	124	219	37	5	1	389

Waterfowl Banding Project

Indian House Lake, Labrador

August 23 - October 1, 1985

Crew Members

V. D. Stotts

B. M. Berger

This banding project has been a part of a cooperative program between Atlantic Flyway States and provinces and federal wildlife services. It was the second year that waterfowl were banded at Indian House Lake, Labrador. The primary objective was to band a significant representative sample of the Black Ducks inhabiting the region in order to calculate such factors as survival rates and distribution of recoveries.

Description of Area

Indian House Lake (also known as "Indian Steady" or "Shoal Pond") is a wide section of a river that feeds Parke Lake in its northwest quadrant (Figure 1 and 2). It is located about 90 kilometers E.S.E. of Goose Bay-Happy Valley, Labrador and is part of the ten-minute block 525-0590 (52°57.5'N, 59°08'W). Elevation of the lake is about 375 meters above sea level. It is subject to early frosts and snowfall. Upland habitat is primarily open boreal forest of black spruce, balsam fir and tamarack interspersed with string bogs. Lake, pond and river shores are bordered by dense thickets of alder, dwarf birch and willow with minor fringes of sedges, rushes and spikerushes. Major waterfowl feeding areas occur on shoals dominated by burreed, arrowhead, dwarf spikerush, awlwort, horsetail, mare's tail, and bladderwort. The first four species are intensively eaten by Black Ducks. Deeper waters have dense beds of pondweeds (several species), aquatic moss and filamentous green algae. This region is part of the Precambrian Shield, having major outcrops of rocks, boulders and hard sands. Most aquatic bottoms have 10-25 cm of soft sandy-clay-silt overlaying hard sand or rock.

Methods

The banding crew set up camp on the northeastern corner of Indian House Lake on August 23, 1985. Using 85 percent whole barley and 15 percent whole corn, baiting was begun on August 24 at good sites noted in 1984. The first five traps were set to catch on September 1 in the western and northern edges of Indian House Lake. Eventually 14 traps were set at 17 different sites (Figure 3) for a total of 340 trap days (Table 1). Traps were not set in the southeastern sector of the lake above Willow Island Rapids this year due to lack of Black Ducks there. All traps were closed by October 1. Eleven were closed at the west end of the lake on September 28 due to overwhelming repeats and predictions of incoming bad weather.

Traps were made of 2" x 2" mesh, 3 ft. high and 4 ft. high, 14 ga. welded wire. Twelve were formed from 25 ft. long sections into lily pad shapes. Two were 10 ft. long x 10 ft. wide x 4 ft. high panel traps. Lily pad traps were covered with 6 ft. wide 1 in. mesh garden netting or poultry netting. Panel traps were covered with 1 in. mesh poultry or garden netting. Traps were held in place by two 5 ft. conduits (3/4" diameter) and one tall wooden stake that also served as a bag-holding stake. Ducks were retrieved with a long-handled dip net (a catch box was used for panel traps) and placed in burlap bags to speed drying. Initial water depth of sets was 10-25 cm, often in soft silt overlaying hard-bottomed shoals. Trap mouths were of slit design with many, especially 4 ft high traps requiring additional reinforcing to maintain optimum openings.

Results

A total of 287 ducks was banded (Table 2). Of these 189 were Black Ducks with 30.7 percent adults (38.5 percent including retraps from earlier years), indicating much lower production in the population sampled than in 1984. Only four other species were captured with Green-winged Teal of secondary importance. Twenty-five retraps were captured (24 Black Ducks and one Mallard hybrid); in 1984 none were taken.

Frank Phillips and Douglas Blake, Newfoundland-Labrador Wildlife Division personnel, reported that the spring season was three weeks late in 1985 and that is reflected in later and poorer production at Indian House Lake. Black Ducks only 4.5 weeks-old were captured. In 1984, 12.9 percent (38 of 295) of young blacks had 1 or more green primaries; in 1985 it was 52.7 percent (69 of 131). Unlike last year birds repeating in traps became a problem immediately (Table 3 and Appendix I). Within eleven trapping days the number of new bandings among daily catches fell below 50 percent and later fell as low as 9.5 percent. That level occurred in 15 days in 1984, but rebounded to 83 percent before falling again. The largest 1-day catch in 1985 was 65 midway through the banding period but even then, only 38 percent were new birds. The average catch per trap-day during the overall period of operation was 0.84 ducks (1.63 during 203 trap-days in 1984).

Regular daily counts of birds showed peak occurrence prior to mid-September for all species seen except Black Ducks (Table 4) (scaup did increase on September 30 when counts had been discontinued). Black Ducks peaked immediately after mid-September. Good numbers of Black Ducks (500) were estimated for the area on September 9, 1983 (D. Dennis pers. comm.). The highest single-day count in 1984 was 385 late in the trapping period. It was

119 on September 22 in 1985. After that date Black Duck numbers fell precipitously, indicating an exodus by local residents and lack of incoming birds from elsewhere. We estimate now that 1983 must have been an above average production year and that 450 or more Black Ducks would have been banded if operations had been active then.

Predation was no problem at this station (bait-eating muskrats and suckers were). Three Black Ducks and 9 Green-wings drowned in banding traps presumably a result of 2" x 2" mesh welded wire.

The condition of primary flight feathers was checked in all Ducks captured. "Green" primaries (blood-tipped) were noted in all species (except the one mallard) throughout the trapping period. Those in which progression from green to solid was well depicted are shown in Table 5. Although there is much variation, the average disappearance of each green primary from 6 through 1 was an average of 2.6 days for young Blacks. Stotts (1959) found this progression to occur at the rate of about 2 per day in Maryland. Of interest is that young Common Goldeneye flew with 10 green primaries.

All ducks were checked for "pinto" or speckled feet (Stotts, 1959). Only the adult Black Ducks showed this lack of foot pigment. Four of 13 females and 1 of 8 males were pinto webbed in 1984. In 1985 these numbers were 13 of 49 (26.5) and 11 of 43 (25.6), respectively.

All Black Duck wing linings were checked for dark feathers along the anterior edge in the vicinity of the bend of the wing. Although a number were classed as "light-winged", none showed a white stripe anterior to the speculum justifying a classification to Black X Mallard hybrid.

Blood samples (0.5 - 1.00 cc) were taken from 51 blacks (31 adults and 20 immatures) brachial vein for a study at the Johns Hopkins University, Baltimore, Maryland by N. Gerber. Primary objective of the study is to detect lead levels. None was detected (N. Gerber, pers. comm., 12/04/85).

Unlike 1984, the best trap sites were located in streams (Table 6 and Figure 3). That may have been influenced by severely fluctuating water levels. Although northern sectors of the lake (Traps No. 1-5) caught poorly this year, we feel that the last three sites used (1, 3, 4) would prove productive in an average production year.

Traps were cached in the alder/willow thicket nearest to where each had been set. These sites (plus food, gas and other caches) are shown in Figure 4.

Weather and Water Levels

During the period in camp, the temperture averaged 4.4°C ranging from -3° to 10.5° at 0600 ADT. It dropped to freezing on 5 days, the earliest on September 11. Snowfall or snow/ice showers occurred on September 12 and 15 and October 1. Overall period in camp was warm with some long rain periods.

Lake levels were well above those at the start of 1984. The lake level fell 9.5 cm the first week, going down to 11.0 cm below the first day level by September 5. Prior to that day rain had begun to fall daily bringing the level up to within 1.0 cm of the first day level by September 11. Another downward trend then started, culminating in a drastic drop to 18.5 cm below first day level after a two-day gale with winds topping 60 km. The changing lake levels required that most traps be moved twice during the period they were set.

Miscellaneous Observations

Hunters were known to have been in the area on only a very few days. A few shots were heard on Rapids Island on September 21. Two hunters from

Labrador Wilderness Camp on Parke Lake boated around Indian House Lake, but fired no shots on September 23.

Conditions must have been ideal for Brook Trout in 1985, since they were more abundant and easily caught. One of their very common food items was voles.

An added feature of this year's venture was a mouse trapline of 5 small (Victor) snap-traps and a water trap. Eight four-night traplines were operated between August 25 and September 27 in the near vicinity of the camp. A total of 154 small mammals of 5 species were taken (Appendix II). Red-backed voles were far the most common species captured.

An unoccupied eagle nest built in a tamarack was located just southeast of the gas-drum island. A pair of adult Bald Eagles roosted nearby in 1984, but only one was in attendance in 1985. Two first or second year immature Bald Eagles were also noted nearby in late September, 1985.

A list of flora and fauna is appended in Appendix III.

Recommendations

1. This station should be continued, especially because of the preponderance of young black ducks that can be taken here. However, if the spring is 3 or more weeks late at Goose Bay, this area can be bypassed one year without jeopardizing overall results. Jim Nichols, U.S. FWS statistician, indicated that current statistical programs allow survival rate analyses even though banding sequence is interrupted but not comparisons of the various annual rates for years that are missed (pers. comm., 01/20/85). If it is deemed best to maintain continuity of banding effort, the following schedule is recommended:.

a. Always arrive in camp no later than August 30 so that "Baited Area" signs can be erected before September 1 to warn waterfowl hunters.

b. Never arrive in camp before August 15, even when the spring season is as early as it was in 1983. Prolonged trapping, especially before birds attain flight, tends to increase mortality and physical damage from repeated captures.

c. Operations should end when "recapture" mortality appears imminent or new birds become scarce. That date has been no later than September 25 in 1984 and 1985. It appears that local dabblers tend to leave in late September and are not replaced by more northern migrants.

2. The best trapping areas are the western and northern lake edges. It is recommended that the southeastern sector of the lake near Rapids Island not be baited so that hunters from Labrador Wilderness Camp can hunt there without conflict with banding operations.

3. Green-wings can best be trapped in "Back Gut" and "Cut-thru". We strongly recommend that four lily-pad traps be constructed from new 1" X 2" mesh (stay-wires 1" apart and line-wires 2" apart), 3' high welded wire. One should be erected in Back Gut and three strung along Cut-thru where most Green-wings were caught.

4. Whole barley should be the only bait used because corn was often left after barley was eaten. Geese did not seem to take to baited sites and did not become a problem to duck banding. About 22-25 bags (40 kg each) of bait will be sufficient.

5. Banders should be aware of the possibility of rapidly changing lake levels and begin to edge their traps toward shore or away with each change of about 10-15 cm.
6. Use of artificial decoys seemed to help but worked best when three or more were clustered at a site.
7. One roll of welded wire (100' long x 3' wide, 14 ga. 1" x 2" mesh with line wires spaced at 2"and stay wires at 1") and 1 roll of top wire (1"mesh, 150' long x 6' wide, 20 ga.) should be supplied next year. The welded wire should be used at the best green-wing sites. Garden netting for tops is needed (12' x 24' minimum) for the 2 panel traps.
8. A 17' square-end canoe proved sufficient for use with a 4.5 h.p. A motor with a shift is a must. A weedless propellor would be beneficial. A motor with an auxillary gas tank would improve balance and wading logistics. Because of abundant rocks and shoals, a half-tilt mechanism would reduce wear and improve travel capabilities.
8. The current campsite cannot be improved upon in this area. Loading and off-loading aircraft at the first small island south of camp was proved best for both campers and aircraft. Fuel and food caches can keep weight down so one Otter load will decamp the operation.

Acknowledgements

The Newfoundland-Labrador Wildlife Division and Department of Public Works provided equipment storage space in Goose Bay. M. Bateman and R. Hicks of Canadian Wildlife Service supervised this operation and provided logistics and assistance in the initial phases. The Canadian Widlife Service provided equipment and the Atlantic Waterfowl Council and New Jersey Waterfowlers provided funds for salaries (in part), materials and supplies. Jim Yoos of New Jersey Waterfowlers was most helpful with setting up camp. Members of the Canadian Wildlife Service, Maryland DNR and Maryland Department of Agriculture identified benthos, insect and rodent specimens. We are especially grateful to the radio operators at G.B.A.S., Goose Bay and N.L.A.T., Pasadena for transmitting messages.

Literature Cited

Stotts, V. D. 1959. Black Duck Studies Final Report: A study of the breeding ecology of black ducks on the upper Eastern Shore of the Chesapeake Bay in Maryland from 1953 to 1959. MD Pittman-Robertson Proj. W-30-R. 241 p.

(Submitted December 29, 1985).

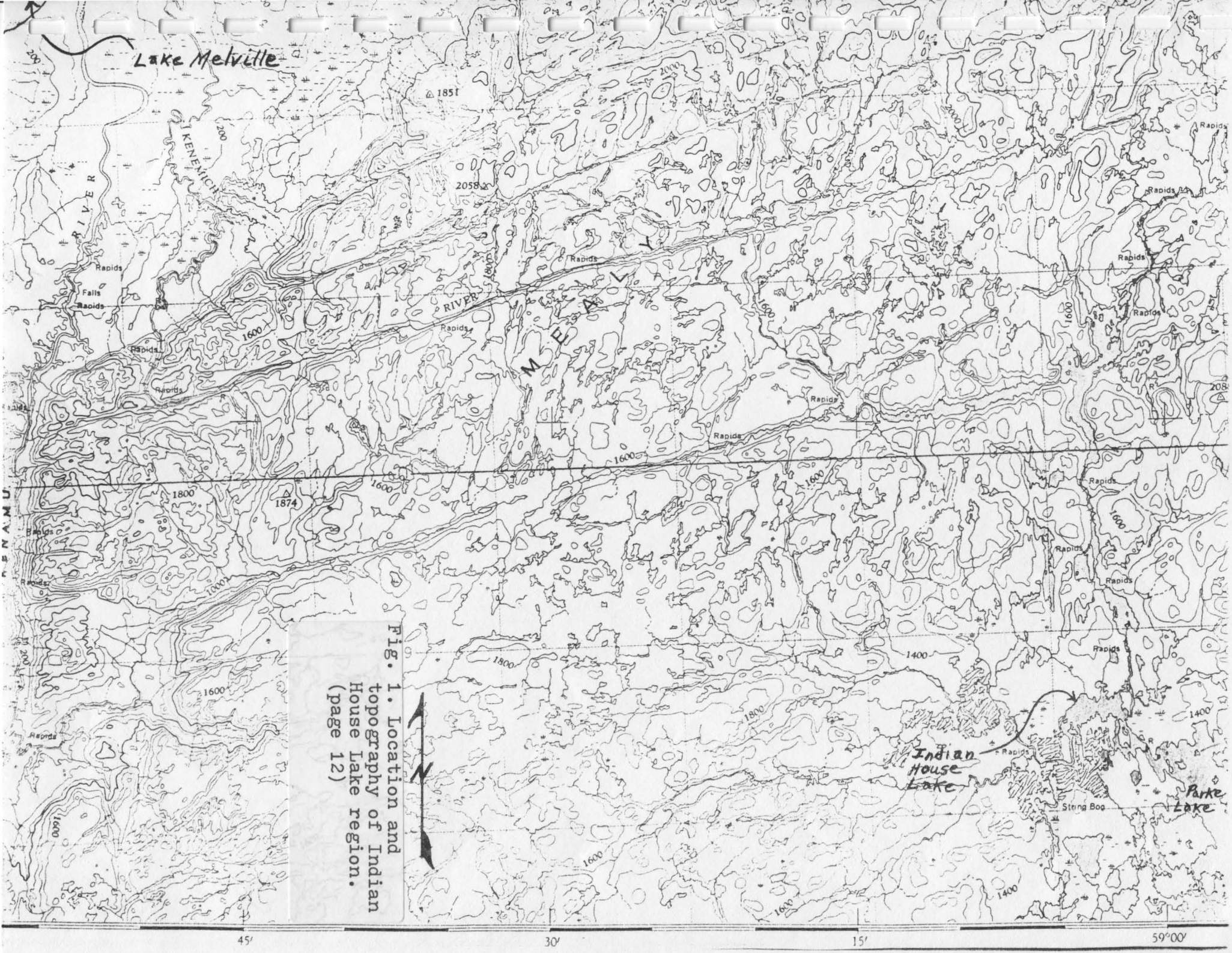

Fig. 1. Location and topography of Indian House Lake region. (page 12)

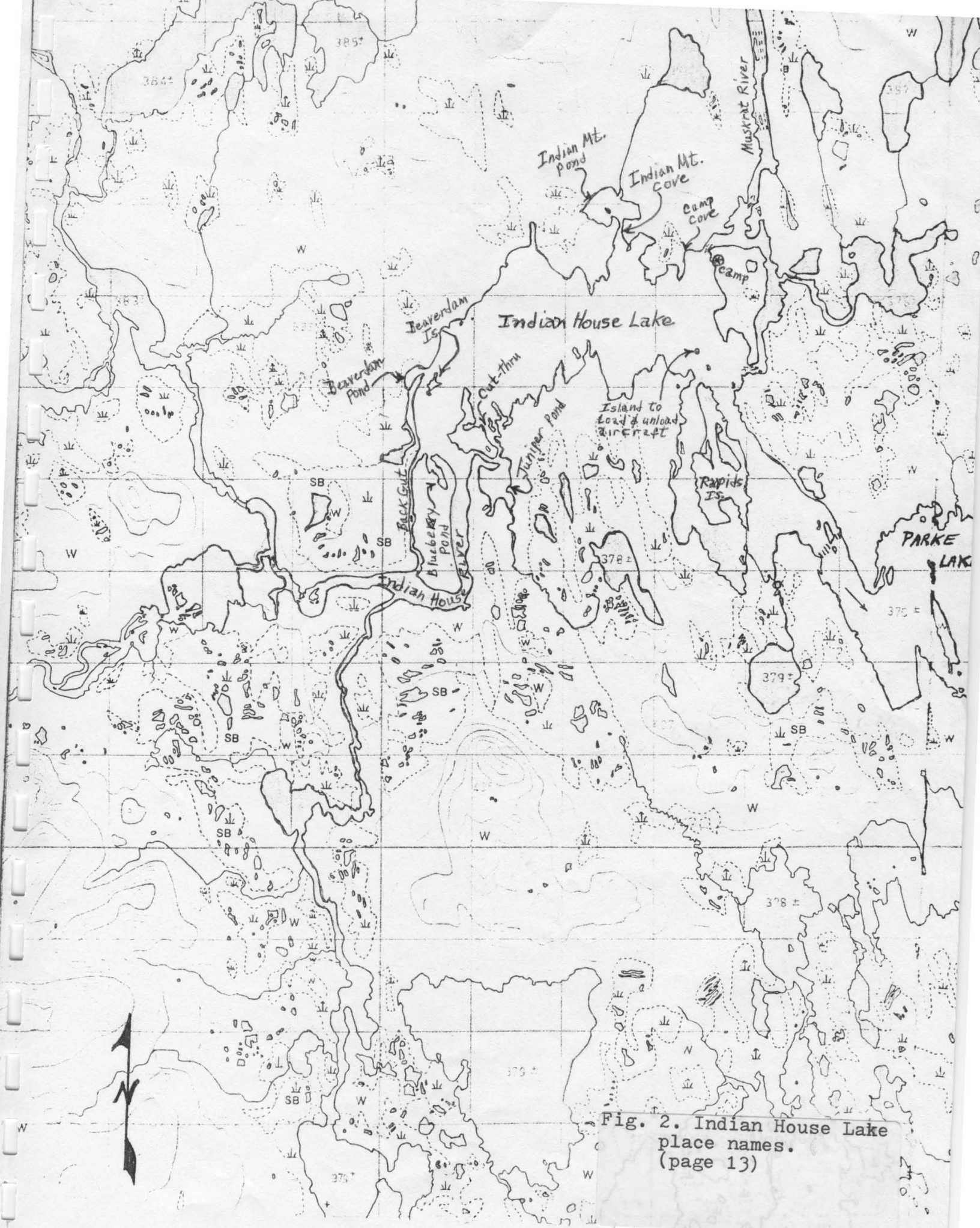

Fig. 2. Indian House Lake place names.
(page 13)

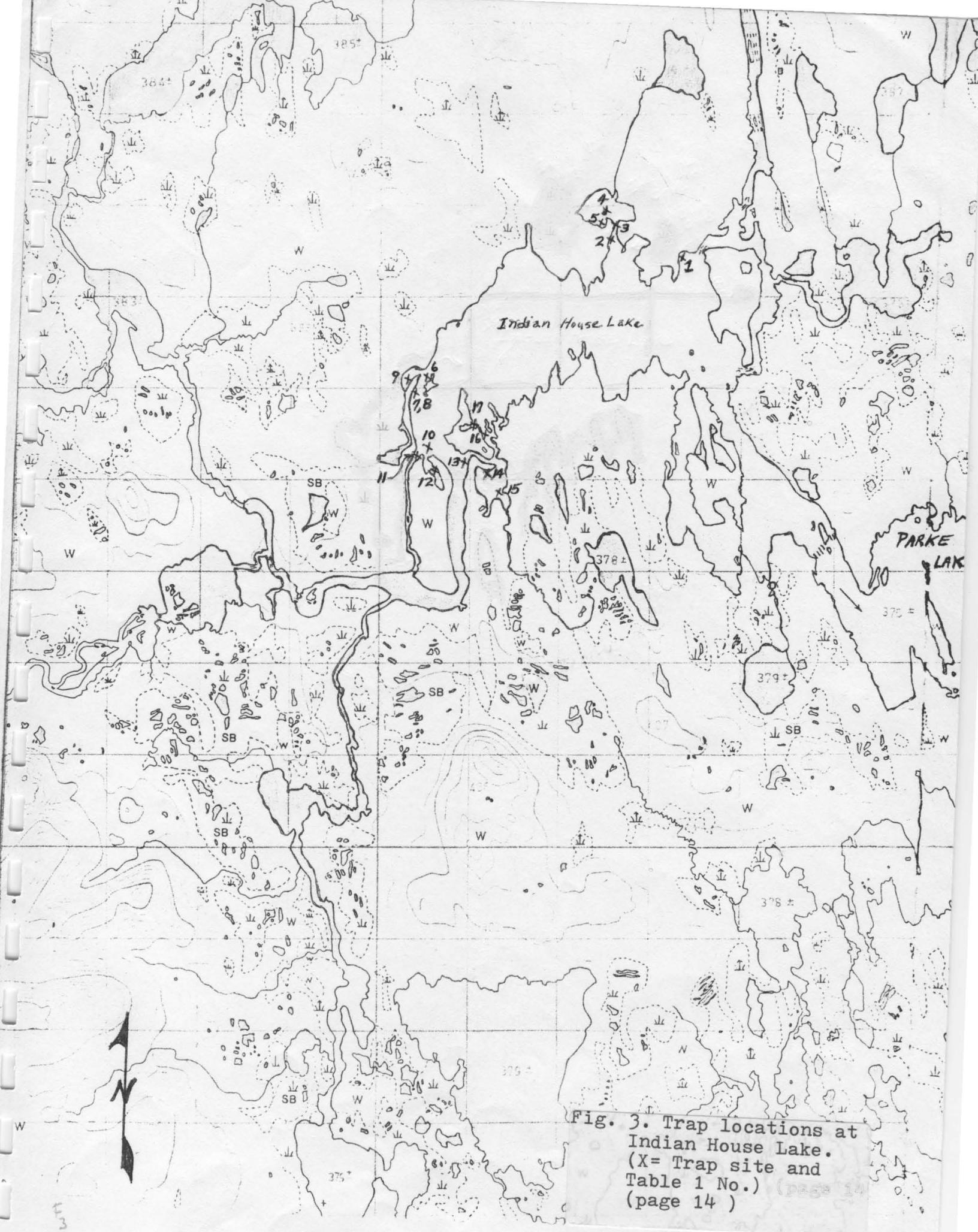

Fig. 3. Trap locations at Indian House Lake. (X= Trap site and Table 1 No.)
(page 14)

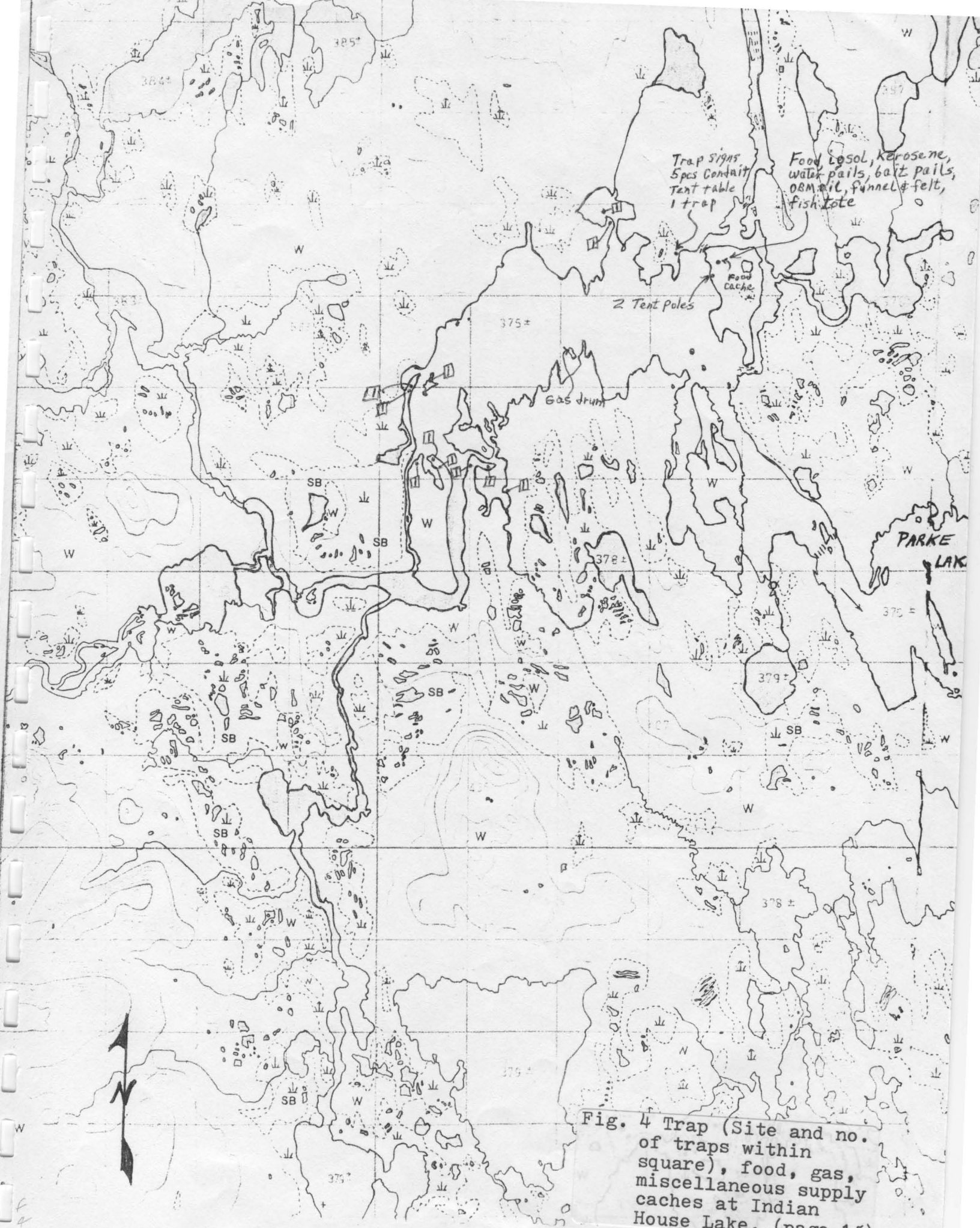

Fig. 4 Trap (Site and no. of traps within square), food, gas, miscellaneous supply caches at Indian House Lake. (page 15)

Table 1. Trap days and site catch information for Indian House Lake, 1985

Trap Name and and Site No.	Date Set	First Catch	Date Closed	Trap Days
Indian Mt. Cove-2	9/1	9/2	9/19	18
Beaverdam Is.(N)-6	9/1	9/2	9/28	27
Beaverdam Is.(S)-7	9/1	9/2	9/15	14
Cut-thru (NW)-17	9/1	9/5	9/28	24
Back Gut-11	9/1	9/2	9/28	27
Blueberry Pd-12	9/2	9/7	9/28	26
Back Gut/Ind. R. Panel-10	9/2	9/4	9/28	26
Cut-thru (SE)-16	9/3	9/4	9/28	25
Juniper Pd. (S)-15	9/3	9/7	9/28	25
Juniper Pd. (N)-14	9/3	9/6	9/28	25
Cut-thru/Ind. R. Jctn.-13	9/4	9/5	9/28	24
Ind. Mt. Pd.-5	9/6	9/13	9/23	17
Beaverdam Pd-9	9/12	9/15	9/28	16
Beaverdam Is. panel-8	9/15	9/19	9/28	13
Camp Cove-1	9/16	9/30	10/1	15
Indian Mt. Pd. mouth-3	9/19	9/27	9/30	11
Indian Mt. Pd. Is.-4	9/23	9/27	9/30	7
			Total	340

1. Closed from 9/19 to 9/22 to reduce repeats.

Table 2. Age, sex and species of waterfowl banded at the Indian House Lake bait station - 1985

Species	Local		Hatching Year		After Hatch Year		Total
	L	F	M	F	M	F	
Mallard						1	1
Black Duck	12	14	49	56	23	35	189
Green-winged Teal		1	44	26	8	1	80
Pintail			8	4	1		13
Common Goldeneye	3	1					4
Total	15	16	101	86	32	37	287

Table 3. Total daily duck catches at Indian House Lake, 1985

	New Birds	New Retraps	Repeat Birds	Dead Birds	Total Birds	% New Bandings
9/2	6				6	100.0
3	6			1	7	85.7
4	12		2		14	85.7
5	13	2	6		21	61.9
6	12	1	5		18	66.7
7	15	1	3	1	20	75.0
8	20		10		30	66.7
Wk 1	84	4	26	2	116	72.4
9/9	14	1	24	1	40	35.0
10	9	2	15		26	34.6
11	18	4	13		35	51.4
12	13	2	25	4	44	29.5
13	16	3	26		45	35.6
14	12	1	23		36	33.3
15	16	2	18		36	44.4
Wk 2	98	15	144	5	262	37.4
9/16	25	2	38		65	38.5
17	8		35	1	44	18.2
18	13	2	30		45	28.9
19	4		28		32	12.5
20	5		14		19	26.3
21	8		14		22	36.4
22	3		13	1	16	18.8
Wk 3	66	4	172	2	244	27.0
9/24	2		7	3	12	16.7
25	7		11		18	38.9
26	2		4		6	33.3
27	12		14		26	46.2
28	8	1	17		26	30.8
29	2		19		21	9.5
30	5	1	7		13	38.5
Wk 4	38	2	79	3	122	31.1
10/1	1		4		5	20.0
Total	287	27	425	12	749	38.3

Table 4. Average numbers of ducks and geese noted in the western and southeastern sectors of Indian House Lake in 1985.[1]

Species	8/24-30	9/1-7	9/8-14	9/15-21	9/22-28
Mallard					
Ave.		Tr.	Tr.		Tr.
Range		0-1	0-1		0-1
Black Duck					
Ave.	16	24	40	51	44
Range	0-40	9-61	18-56	5-75	17-119
G.-w. Teal					
Ave.	5	14	23	20	17
Range	0-9	2-26	14-37	5-45	0-46
Pintail					
Ave.	1	9	7	9	10
Range	0-2	0-29	0-22	0-17	0-16
Diver					
Ave.	1	1		3	
Range	0-10	0-9		0-17	
Scaup[2]					
Ave.	Tr.	1		3	3
Range	0-2	0-5		0-8	0-20
Goldeneye[3]					
Ave.	18	6	6	6	4
Range	10-31	0-24	0-13	2-16	1-6
Scoter[4]					
Ave.	2		2	1	4
Range	0-7		0-10	0-5	0-11

.../Cont'd

Table 4. Average numbers of ducks and geese noted in the western and southeastern sectors of Indian House Lake in 1985.[1] (Cont'd)

Species	8/24-30	9/1-7	9/8-14	9/15-21	9/22-28
Merganser[5]					
Ave.	1	1	1		1
Range	0-5	0-7	0-5		0-77
Canada Goose					
Ave.	5		19	11	7
Range	0-20		0-31	0-31	0-26

[1]Data subsequent to 9/28 included only a small portion of the lake and is not shown for the last 3 days

[2]possibly both greater and lesser species

[3]probably all common goldeneye

[4]most were surf and black scoters, but 1 white-winged scoter was noted

[5]believed to be red-breasted mergansers

Table 5. Progression of primary flight feathers from Blood-tipped to Solid[1] for ducks banded at Indian House Lake, 1985

Band No.	No. of Primaries with Blood-Tips on Day Caught																								
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Immature Black Duck																									
5301	10									6															
5302	10							5	5					2			0								
5303	10			10				10	6		4	4	3		2		1	2	1						0
5313	10	10														1								0	
5318	3				2		1		0																
5323	10								10				10	10							8				
5330	3		2		1																				
5335	2		1				1		0																
5337	10		6		4																				
5341	4		4				2				0														
5350	3						1			0															
5352	5		3																						
5354	2			1		1																			
5358	3				2					0															
5359	2	1	1				0																		
5378	2			1											0										
5379	4						1	1								0									
5402	10					5																			
5405	3									1		0													
5414	3		1	1	1	1	1																		
5424	2	1	0																						
Ad. Female Black Duck																									
4541	10								10		6								0						
4782	3		2	1																					
4557	3			2	2	1	1	1		0															
4822	4					2				2															
4641	2					1				0															
Local Goldeneye																									
1803	10											7		5		4	4							2	
1806	10								6					3											

[1]Immature birds with 10 blood-tipped primaries ranged in age from 4.5-6.0 weeks old.

Table 6. Individual trap catches (new birds) at Indian House Lake, 1985

Trap Name and Site No.	Mallard	Black Duck	G.-w. Teal	Pintail	Common Goldeneye	Total Banded
Camp Cove -1		3				3
Indian Mt. Cove-2		6				6
Indian Mt. Pd. Mouth -3		2				2
Indian Mt. Pd. Is. -4		1				1
Indian Mt. Pd. - 5		2				2
Beaverdam Is. (N) -6		12	17			29
Beaverdam Is. (S) -7		16	6	3		25
Beaverdam Is. Panel-8		6	3			9
Beaverdam Is. Pd. -9		11	3	1		15
Back Gut Ind. R. Panel -10	1	45	8	7		61
Back Gut -11		19	6	1		26
Blueberry Pd. - 12		19				19
Cut-thru Ind. R. Jctn. - 13		14	6		4	24
Juniper Pd. (N) -14		8	1			9
Juniper Pd. (S) -15		8				8
Cut-thru (SE)-16		4	28			32
Cut-thru (NW)-17		13	2	1		16
Total	1	189	80	13	4	287

Indian House Lake Bird List, 1985

Common loon	Gavia immer
Canada goose	Branta canadensis
American Black duck	Anas rubripes
Mallard	Anas platyrhynchos
Pintail	Anas acuta
Northern Green-winged teal	Anas crecca
White-winged scoter	Melanitta deglandi
Surf scoter	Melanitta perspicillata
Black scoter	Melanitta nigra
Scaup	Aythya sp.
Common goldeneye	Bucephala clangula
Red-breasted merganser	Mergus serrator
Herring gull	Larus argentatus
Ring-billed gull	Larus delawarensis
Caspian tern	Sterna caspia
Common tern	Sterna hirundo
Arctic tern	Sterna paradisaea
American bittern	Botaurus lentiginosus
Common snipe	Capella Gallinago
Short-billed dowitcher	Limnodromus griseus
Greater yellowlegs	Tringa melanoleuca
Pectoral sandpiper	Calidris melanotus
Spotted sandpiper	Actitis macularis
Dunlin	Calidris alpinus
Least sandpiper	Calidris minutilla
Spruce grouse	Canachites canadensis
Northern goshawk	Accipiter gentilis
Northern harrier	Circus cyaneus
Rough-legged hawk	Buteo lagopus
Red-tailed hawk	Buteo jamaicensis
Bald eagle	Haliaeetus leucocephalus
Golden eagle	Aquila chrysaetos
Osprey	Pandion haliaetus
Merlin	Falco columbarius
Peregrine falcon	Falco peregrinus
Great-horned owl	Bubo virginianus
Black-backed 3-toed woodpecker	Picoides arcticus
Northern raven	Corvus corax
Gray jay	Perisoreus canadensis
Boreal chickadee	Parus hudsonicus
Ruby-crowned kinglet	Regulus calendula
Yellow warbler	Dendroica petechia
Northern waterthrush (Yellow/pale races)	Seiurus nova boracensis
Rusty blackbird	Euphagus carolinus
Slate-colored junco	Junco hyemalis
White-crowned sparrow	Zonotrichia leucophrys
Swamp sparrow	Melospiza georgiana

Appendix I. Total daily catches at Indian House Lake, 1984.

Date	New Birds	Repeat Birds	Dead Birds	Total Birds	% New Bandings
9/2	2			2	100.0
3	7			7	100.0
4	12			13	92.3
5	23	3		26	88.5
6	10	1		11	90.9
7	18	3		21	85.7
8	15	8		23	65.2
Wk 1	87	15	1	103	84.4
9/9	12	2		14	85.7
10	10	3		13	76.9
11	12	7		19	63.2
12	20	16		36	55.6
13	13	6		19	68.4
14	27	20		47	57.4
15	22	17		39	56.4
Wk 2	116	71		187	62.0
9/16	9	20		29	31.0
17	24	18	1	43	55.8
18	12	19		31	38.7
19	5	1		6	83.3
20	2	3		5	40.0
21	21	17	1	39	53.8
22	12	20		32	37.5
Wk 3	85	98	2	185	45.9
9/23	13	15		28	46.4
24	6	9		15	40.0
25	15	32		47	31.9
26	5	9		14	35.7
27	3	17		20	15.0
Wk 4	42	82		124	33.9
Total	330	266	3	599	55.1

Appendix II
Labrador Mousetrapping - Indian House Lake

September 1985 - Stotts, Berger, Yoos, Bateman

Trapline#	M.p.	C.g.	P.i.	N.i.	S.c.
1 Victor		9			2
Water trap	1	5			6
2 Victor	5	9			4
Water		3			4
3 Victor		13			
Water		1			1
4 Victor	2	7			3
Water	1	4			2
5 Victor	5	8			2
Water		5			
6 Victor		13			4
Water		2			2
7 Victor	1	7	1*	1	2
Water		2			
8 Victor		10	1*	1	3
Water		2			

*May have been caught in water trap

M.p. - Microtus pennsylvanicus (Meadow vole)
C.g. - Clethrionomys gapperi (Red-backed vole)
P.i. - Phenacomys intermedius (Heather vole)
N.i. - Napaeozapus insignis (Woodland jumping mouse)
S.c. - Sorex cinereus (Masked shrew)

Appendix III. Flora and Fauna of Indian House Lake, Labrador
August - October, 1985

Animals

Invertebrates

Fish louse (copepod)	*Salminicola sp.*
Black duck louse	Order Mallophaga
Atlantic elliptio	*Elliptio complanata*
Freshwater clam	*Elliptio sp.*
Pill clam	*Pisidium sp.*
Earthworm	Family Lumbricidae
Leech	*Pisciola sp.*
Earwig	Order Dermaptera
Mayfly	Order Ephemeroptera
Mayfly	Family Baetidae
Dragonfly	Order Odonata
Crane fly	Family Tipulidae
Water-boatman	Family Corixidae
Diving beetle	Family Belastomidae
Crawling water beetle	Family Haliplidae
Caddisfly	Order Tricoptera
Whirligig beetle	Family Gyrinidae
Ground beetles (2)	Family Carabidae
Moth	Family Geometridae
Midge	Family Chironomidae
Mosquito	Family Culicidae
Fungus gnat	Family Sciaridae
White-stockinged blackfly	Famly Simuliidae
Dung fly	Family Cordyluridae
Flow-fly	Famly Callilphoridae
Deer fly	Family Tabanidae
Flower fly	Family Syrphidae
Safly	Order Hymenoptera
Ant (small)	Family Formicidae
Bumble bee	Family Apidae
Bee (small black)	Order Hymenoptera
Bee (honeybee-like)	Order Hymenoptera
Spider (several spp.)	Class Arachnida

Fishes

White sucker	*Catastomus commersonii*
Northern pike	*Esox lucius*
Brook trout	*Salvelinus fontinalis*
Atlantic salmon	*Salmo salar*

Mammals

Masked shrew	Sorex cinereus
Little brown bat (myotis)	Myotis lucifugus
Black bear	Ursus americanus
Martin	Martes americana
Mink	Mustela vison
Otter, river	Lutra canadensis
Red fox	Vulpes fulva
Red squirrel	Tamiasciurus hudsonicus
Beaver	Castor canadensis
Red-backed vole	Clethrionomys gapperi
Heather vole	Phenocomys intermedius
Meadow vole	Microtus pennsylvanicus
Woodland jumping mouse	Napaeozapus insignis
Muskrat	Ondatra zibethicus
Snowshoe hare	Lepus americanus
Woodland caribou	Rangifer tarandus

Plants

Submerged

Filamentous green algae	Family Chlorophyeae
Blue-green alga	*Volvox sp.*
Water moss	Class Musci
Water starwart	*Callitriche heterophyla*
Burreed	*Sparganium angustifolium*
Watermilfoil	*Myriophyllum alterniflorum/ exalbescens*
Bigleaf pondweed	*Potamogeton amphlifolius*
Ribbonleaf pondweed	*Potamogeton epihydrus*
Redhead-grass	*Potamogeton perfoliatus*
Fern pondweed	*Potamogeton robbinsii*
Pondweed(s)	*Potamogeton spp.*
Muskgrass	*Nitella flexilis*
Arrowhead	*Sagittaria sp.*
Awlwort	*Subularia aquatica*
Spatterdock	*Nuphar variegatus*
Bladderwort	*Utricularia sp.*

Emergent Mosses/Lichens/Fungi

Reindeer moss	*Cladonia sp.*
Sphagnum moss	*Sphagnum sp.*
Old-man's beard	*Usnea sp.*
Dog lichen	*Peltigera malucea*
Rock lichens	Several species
Mushrooms	ClassBasidiomycetes
Bristly clubmoss	*Lycopodium annotinum*
Ground cedar	*Lycopodium complanatum*
Lichen	*Cladina mitis*
Lichen	*Cladonia gracilis*
Reindeer lichen	*Cladina rangiferina*
Pixie-cup lichen	*Cladonia chlorophaea*

Emergent Herbs

Ferns	Family Osmundaceae
Horsetail	*Equisetum sp.*
Mare's-tail	*Hippuris vulgaris*
Slender spikerush	*Eleocharis acicularis*
Cottongrass	*Eriophorum sp.*
Sedge(s)	*Carex spp.*
Rush	*Juncus sp.*
Iris	*Iris versicolor*
Bunchberry	*Cornus canadensis*
Baked-apple berry	*Rubus chamaemorus*
Fireweed	*Epilobium angustifolium*
Aster (yellow and purple)	*Aster spp.*
Water horebound	*Lycopus sp.*

Three-leaved false solomon's seal	Smilacina trifolia
Violet	Viola sp.
Twin flower	Linnea borealis
Twisted stalk	Streptopus sp.
Two-leaved solomon's seal	Maianthemum canadense
Pepper mint/spearmint	Mentha sp.

Trees and Shrubs

Leatherleaf	Chamaedaphne calyculata
Balsam fir	Abies balsamea
Black spruce	Picea mariana
Tamarack (Hackmatack)	Larix laricina
Quaking aspen	Populus tremuloides
Willow	Salix sp.
Pussy willow	Salix discolor
Sweetgale	Myrica gale
Dwarf birch	Betula glandulosa
White birch	Betula papyrifera
Marsh cinquefoil	Potentilla palustris
American mountain ash	Pyrus americana
Bartram juneberry	Amelanchier bartramiana
Red-osier dogwood	Cornus stolonifera
Labrador tea	Ledum groenlandicum
Redberry	Vaccinium vitus-adiea
Low sweet blueberry	Vaccineum angustifolium
Cranberry viburnum	Viburnum trilobum
Mountain alder	Alnus crispa
Speckled alder	Alnus rugosa
Crowberry	Empetrum nigrum
Squashberry	Viburnum edule
Dwarf raspberry	Rubus sp.
Bristly black currant	Ribes lacustra
Skunk currant	Ribes glandulosum

Nutak, Labrador Waterfowl Banding

July 1 - August 27, 1985

Crew Members

Tim Bowman

Maria Berger

Andy Weik

Randy Hicks

Introduction

Tim Bowman, Maria Berger, and Andy Weik arrived at Nutak on July 1. An otter aircraft and a beaver were intially required to transport personnel and most gear, and a return flight to Nain, by otter, was made to pick up the freighter canoe and three drums of gas.

Randy Hicks and Josh (dog) arrived July 7 by Cessna, and returned to Goose Bay by beaver aircraft on July 19. Bowman, Weik, and Berger left Nutak by otter on August 27th.

Banding of molting birds began July 2, and ended August 7. Bait traps were operational from July 30 to August 27. A total of 314 birds was banded, including 245 Black Ducks. In addition, 34 Black Ducks and one Canada Goose were recaptured. A breakdown, by species, age, and sex, is included in Table 1.

Banders lived in the abandoned house at Nutak, as in past years. A new stove pipe was installed, and the roof repaired.

The aquisition this year of an 18' wooden freightor canoe greatly facilitated travel to new, distant areas and in rough water. We used a 25 hp Mercury outboard motor, which worked fine until August 11, when prop damage prevented further use. A 9.8 hp Mercury was used thereafter.

Radio contact was maintained with Goose Bay Air Services on an irregular basis. Radio contact with Henry Webb (Nain) was not achieved this year, even though the proper antenna was provided, and scheduled radio checks were arranged.

Molting phase

Upon our arrival on July 1, most Black Ducks had begun their molt, many having just dropped remiges. Some Black Ducks were still flying at this

time, and flocks of up to 20 were observed. Smaller numbers of flying Black Ducks were noted throughout July, but it was not until early August that larger flocks of flying Black Ducks were again seen regularly.

Most molting Black Ducks were captured by hand or hand net. The vegetation around freshwater ponds was intensively, and systematically, searched by 2-4 persons. Molting Black Ducks usually do not flush. When a molting bird was located, all persons positioned themselves around the bird to prevent escape to open water, then one person grabbed or netted the duck.

Molting Black Ducks and Canada geese were also captured by driving them ashore. When pursued by boat, rafts of ducks and geese would usually fragment into smaller groups and singles, and the largest group was followed until it went ashore. They were then pursued on foot and captured by hand. The most birds driven ashore at one time using this method was 16 (14 Black Ducks, 2 Mallards). All were captured. The most geese captured at one time was 9. Several geese were also captured from the boat, in open water, when they tired from repeated diving. Totals for molting birds banded and breakdowns by age and sex, are included in Table 2.

We were aided in capturing birds this year by Randy's golden retriever. The dog worked well after some training, and was able to capture many birds we would not have captured by hand. A dog allowed us to work several areas that otherwise would not have been searched by banders, especially dense willow thickets where a person cannot see, or move fast enough, to capture molting ducks. The dog was also keen to pick up scent trails of Canada Geese we had driven ashore and into brush. A total of 16 Black Ducks were captured with the dog.

Molting Black Ducks were not as abundant as they had been on the same ponds worked in past years. The high rate of recapture (of birds banded n previous years) however, suggests that older birds that traditionally use

these areas are returning, but there may not be as many young birds molting on these areas. Most of the Black Ducks recaptured as molters were captured on the same pond where they were banded in previous years.

Bait trapping

A total of 175 birds were captured by bait trapping. Of these, 171 were Black Ducks. An age and sex breakdown of bait trapped birds is found in Table 3.

Traps were erected on 7 sites, labelled in Figure 1. Pre-baiting of West Pond began July 11, and at other sites from July 24 to July 26. Bait was first taken at all trap sites from July 29 to August 2. Traps were erected without top netting until ducks began taking bait from within the enclosure, usually 1-3 days later.

Trapping success was high for several days, then dropped off (this was also noted in 1984). During late August, many Black Ducks (flocks of 50-100 were common) were observed in the Goose Island area. Because several good trapping sites exist on Goose Island and along the shoreline between West Pond and Goose Cove, it may be wise to direct trapping efforts to these areas after mid-August in future years, even if it requires setting up a temporary camp outside the Nutak channel, and discontinuing bait trapping in the immediate Nutak area.

All traps but House Pond and Gull Brook were pulled up and stored on August 25. House Pond and Gull Brook were pulled up August 27, the day we left. Trap caches are labelled in Figure 4. Several other areas that have potential for bait trapping are also idicated.

Other Research

Orange nasal saddles, marked with an X on each side of the saddle, were attached to all flightless male Black Ducks not previously banded, and to bait trapped birds with blood in at least one of the primary feather sheaths, indicating it had recently regained its flight ability. The purpose of these nasal saddles is to aid in the identification of paired male Black Ducks on the breeding grounds to determine the breeding location of males molting in the Nutak area.

Radio transmitters were attached to 12 flightless black ducks. These birds were tracked by radio telemetry daily, or as often as possible, for a total of 132 bird tracking days. Of these 12 black ducks, two were killed by unknown predators, and one duck slipped out of the elastic harness immediately after release. Radios were tracked down and recovered before the birds regained flight ability. Two transmitters were not recovered and remain on birds. Radio transmitters were attached to the ducks by means of two adjustable elastic straps that fit around the base of the ducks wings with the transmitter resting on the center of the back. Some abrasion of the underwings was noted on ducks with tight harnesses, and softening of the epoxy used to attach harness tubes caused three transmitters to fall off the birds after about 2 weeks. Thus, a modification of the harness design is necessary if used in the future.

Recommendations

1. Two working outboard motors, of at least 18 hp should be provided, one of which may be used as a spare. A 9.8 hp motor is not powerful enough for the freightor canoe.

2. Extend bait trapping season to October 1st. Discontinue bait trapping on popular hunting spots (House Pond, West Pond, Goose Island) one week prior to the opening of hunting season, Sept. 1.

3. Bait trap on Goose Island, Goose Cove, and shoreline areas between West Pond and Goose Cove.

4. 150-200 feet of trap wire, and additional netting is required.

5. If bait trapping is extended until October 1, 30 bags of bait (whole corn) is required. Twenty bags is sufficient if trapping ends late August.

6. A canvas tent (about 8 x 10 ft) would be useful as a secondary camp.

7. Use of a dog, during July, for capturing molting birds should be continued.

8. An additional frequency should be added to the radio that would allow us to contact Fisheries in Nain.

Table 1. Nutak Waterfowl Banding - 1985

Species	Local M	Local F	After Hatch Year M	After Hatch Year F	Total
Black Duck			231	14	245
Black X Mallard Hybrid			1		1
Mallard			4	1	5
Canada Goose			16	18	34
Green-winged Teal	5	2	19		26
Pintail			3		3
Total	5	2	274	33	314*

*34 black ducks with old bands were also recovered (33M, 1F), and one Canada Goose

Table 2. Molting Waterfowl Banded - Nutak, 1985

Species	After Hatch Year M	After Hatch Year F	Total
Black Duck	72	2	74
Mallard	2		2
Canada Goose	16	18	34[2]
Green-winged Teal	19		19[3]
Pintail	3		3
Total	112	20	132

[1] 19 black ducks with old bands, all AHY M were also captured

[2] One Canada Goose with an old band was also captured

[3] Seven local Green-winged Teal were also captured during this molt period but are not shown in the above total

Table 3. Bait-trapped Waterfowl - Nutak, 1985

Species	After Hatch Year M	F	Total
Black Duck	159	12	171
Black X Mallard Hybrid	1		1
Mallard	2	1	3
Total	162	13	175

Nutak Bird List 1985

Common Loon
Red-throated Loon*
Black Guillemot
Canada Goose*
Black Duck
Mallard
Pintail
Green-winged Teal*
White-winged Scoter
Black Scoter
Oldsquaw*
Harlequin*
Common Eider*
Greater Scaup*
Common Goldeneye
Red-breasted Merganser*
Common Merganser
Glaucous Gull
Herring Gull
Greater black-backed Gull*
Arctic Tern
Semi-palmated Plover*
Common Snipe
Short-billed Dowitcher
Greater Yellowlegs
Solitary Sandpiper
Pectoral Sandpiper
Spotted Sandpiper
Least Sandpiper*
Northern Phalarope*
Willow Ptarmigan*
Rough-legged Hawk*
Golden Eagle
Merlin*
Peregrine Falcon*
Gyrfalcon*
Horned Lark*
Water Pipit*
Raven
Gray Jay
Boreal Chickadee
American Robin
Northern Shrike
Rusty Blackbird
Lapland Longspur
Common Redpoll
White-crowned sparrow*
American Tree Sparrow*
Savannah Sparrow*
Lincoln's Sparrow

*Confirmed Breeding


Newaktanna Point
Gull Brook
Newaktanna Point
Nutak
House Pond
Woody Bay
West Pond
Little Pond
East Pond
New Pond
NoName Cove
OKAK
ISLANDS
MOORES ISLAND
TICKLE
KANGEKLUAKSU
MAKKAK HILL
© - Trap Caches
( ) - Potential Trapping Sites

Waterfowl Banding

Groswater Bay, Newfoundland

June 16 - July 12, 1985

Crew Members

Ian Goudie

Pierre Ryan

Introduction

An extremely late spring in the Newfoundland-Labrador area delayed eider nesting by at least 4 weeks relative to the breeding phenology of 1982 and 1983. Pierre Ryan and I arrived at Rigolet on 9 June 1985. We spent 10-15 June 1985 on preparation of boats and equipment for the banding operation. We rented a 17 ft. wooden boat from Mrs. Patricia Berube but quickly realized that it would not be adequate to transport the 2000 lb. of equipment to the Mason's Island site. The excessive weight was due to the steel conduit poles we hoped to use in the eider 'mist nets'. The 18 ft. wooden boat that I had purchased in 1982 and used in successive years in that area had been abandoned by the Tinker Harbour banders in 1983 and had been sunk in the land-wash in Rigolet Harbour for two winters. We refloated the boat and after some extreme rehabilitation, felt it was seaworthy. We were assisted by Henry Broomfield who supplied us with most materials on the condition that he would have use of the boat in the fall. Weather conditions during this week were poor, as well, there was a lot of loose ice moving through the narrows. Local opinions on whether or not the Masons Island area was free of land fast ice were varied. It seemed likely that even if the area had thawed, the ice shelves (belly canter) would still be attached to the island and would prevent landing.

We arrived at Masons Island on 16 June 1985 without any mishaps. The tickle was still frozen but we successfully landed on the southeast corner of the island by pushing our way through the broken ice pans. As we suspected there was no evidence of nesting but substantial numbers of pairs were flying in the area. P. Ryan and P. Berube visited the Sisters (2 islands) during a test run on the 15 June 1985 and found eight active eider nests (3 to 5 eggs)

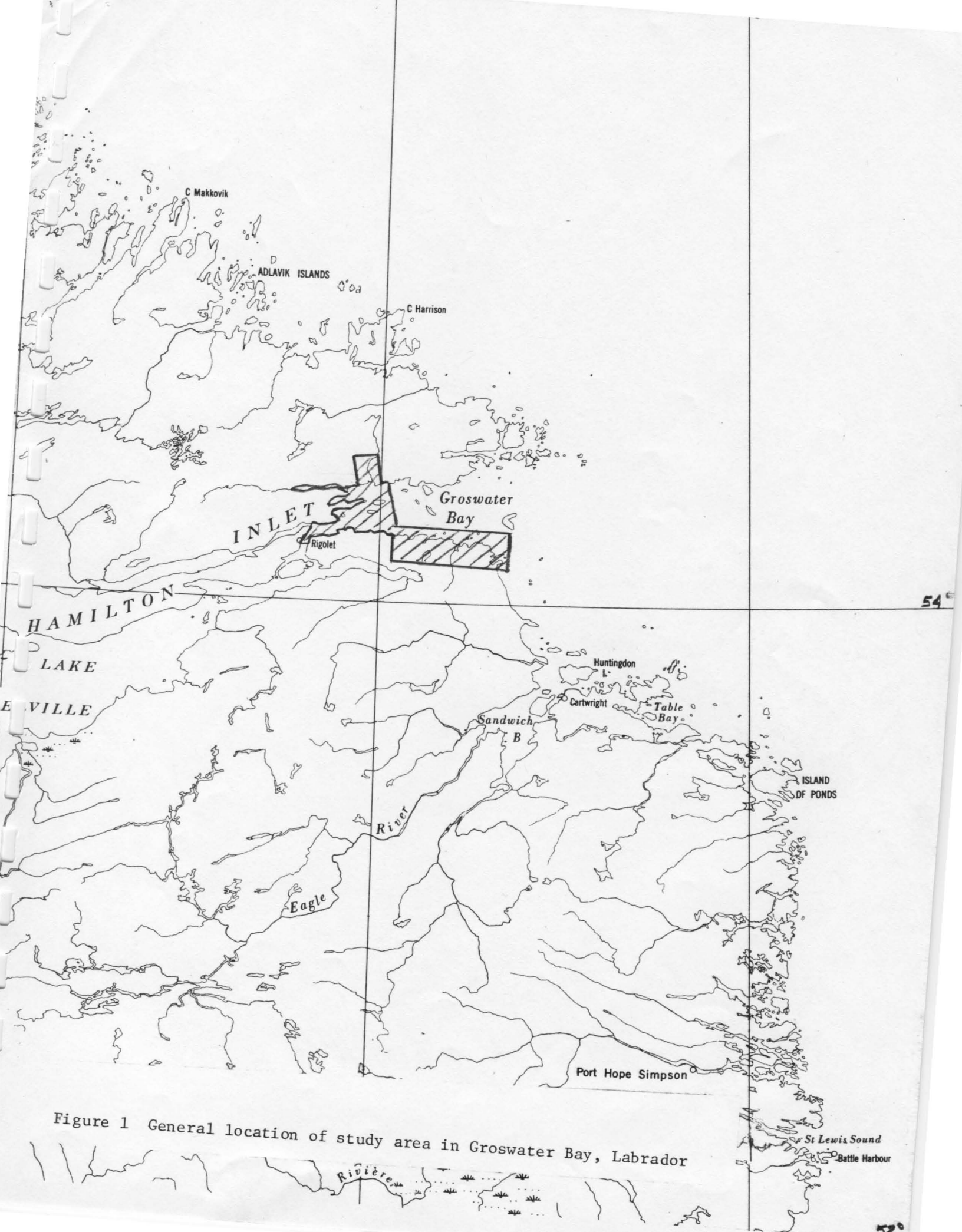

Figure 1 General location of study area in Groswater Bay, Labrador

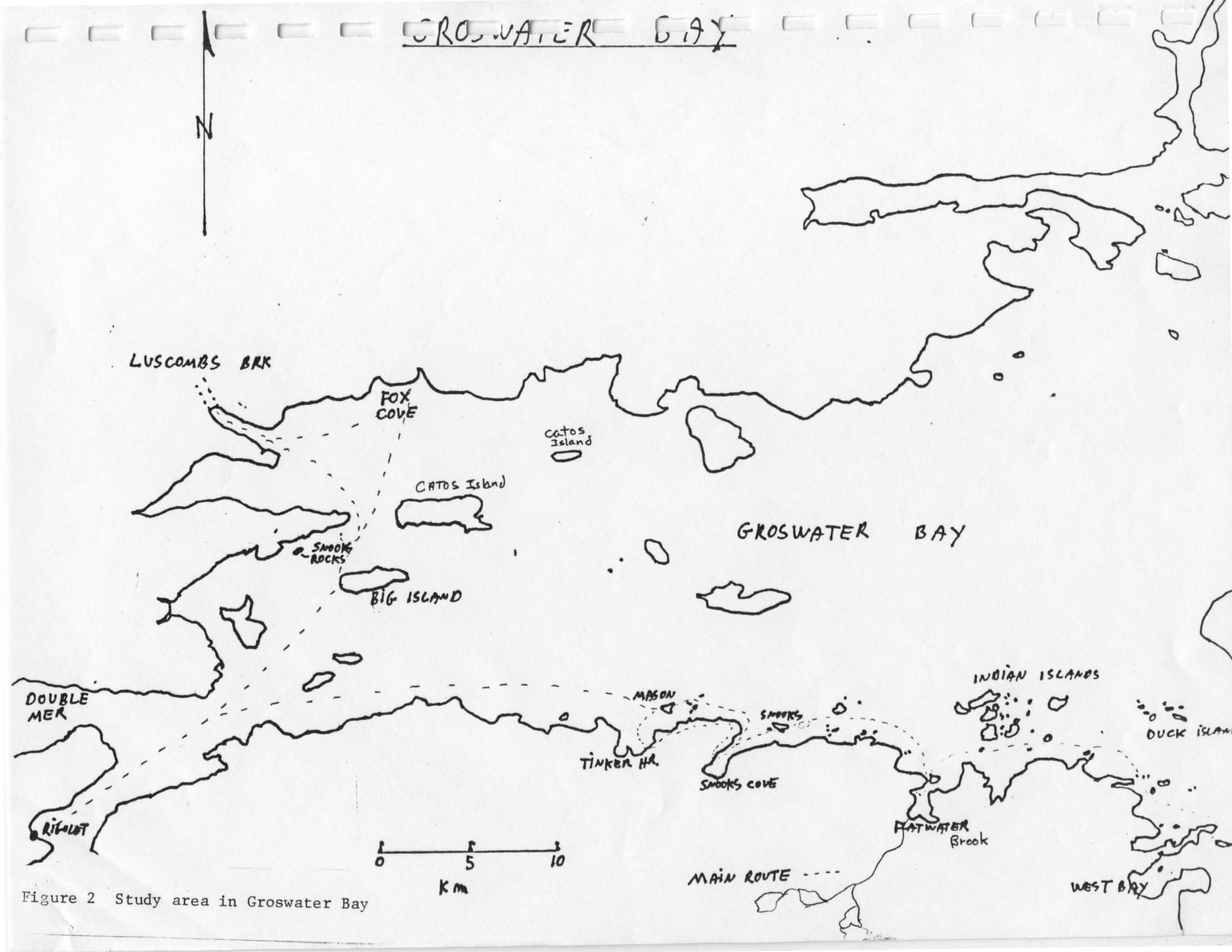

Figure 2 Study area in Groswater Bay

and estimated a total of at least 30 nests. These islands had been free of ice for several weeks.

On 3-10 July we searched the fluvial marsh areas of Flatwater Brook (approx. 6 km upriver from the mouth) for molting male Black Ducks using the retrieving dogs. Five days were actually spent on the marsh sites. We chose to stay at T. Williams cabin at the mouth of the brook rather than camp further upriver. This resulted in 3.5-4h of travel time to and from camp each day. We discoverd a suitable site for camping near the inlet of the pond north of the marsh site but this was toward the end of our field excursion. The extensive marshes adjoining Flatwater Brook 6 km upriver appeared to harbour the largest concentrations of molters although some were present on the ponds immediately north of this site. The delayed spring phenology appeared to also delay the Black Duck breeding cycle as several large groups of individuals (15-20) were observed on the sites but immediately took flight when we came in sight. No significant numbers of Canada Geese were present this year as had been the case in 1982. We suspected that there were still more individuals that would be arriving later.

Materials

We spent all day 17 June 1985 erecting a 50 fathom (300 ft.) mist net for eiders on the southwest corner of the island. The nets were two fathoms (12 ft.) deep and we joined two to effectively result in a net that was four fathoms (24') deep. The nets were suspended from 20' steel conduit poles, i.e. 2-10'poles joined together. This resulted in approximately 4' of net at the bottom in which the ducks would tangle if they fell from the net after collision. Poles were spaced at approximately 30' (10m) intervals. At least

two guide wires (cod line) were necessary to support the poles and suspended nets especially when ducks were colliding into the net with a strong tail wind.

Results and Discussion

Initial success of the nets was poor. Good numbers were colliding with the net but many escaped from the back of the net after collision especially by actually breaking completely through the mesh during windy days. Once panels of net became weakened the problem was worse especially since certain sectors of the net were hit more frequently. We estimated that during the 17-22 June 1985 at least 100 eiders were lost in this manner. On the evening of the 22 June 1985 we improved the efficiency of the net by doubling the gill net over the most important panels and placing a 4' backup net 109' back from the base of the main net. Note that most capture approaches were from the island heading seaward. There was a small (0.5 ha) freshwater pond adjacent to the net. Success of the net immediately improved, and we estimated that captures were about 90% that of net collisions. Especially apparent was the scissor effect of the doubled mesh. Many eiders were tangled in the exact location of impact rather than falling from the net. Those that did were successfully captured by the backup net. Table 1 provides the daily data on successful eider captures. A total of 199 Common Eiders were successfully captured and banded using the mist nets. Additionally we used dogs to capture and band 51 adult females on nests. Eleven adult females were captured and banded using a dip net. Because disturbance is considerable when employing retrievers and/or dip nets during the incubation period, this method was used primarily when we visited other islands, namely Snooks Cove Island and Catos Island.

There appeared to be considerable asynchrony in clutch initiation within the colonies. The majority of eider nests were established by 1 July 1985. This was the case for Snook's Cove Island as well, so it was unlikely due to our presence on the Mason's Island site. Obviously some individuals were considerably earlier because we saw a recently hatched group of three ducklings accompanied by a hen on 12 July 1985 on the eastern end of Mason's Island.

Fourteen eiders were recaptured, nine of these had been banded by our operation in this area in 1983. Of the remaining five recaptured only one was recaptured in the mist net while the remaining four were initially captured in the mist net and later recaptured on the same island by the retrievers. This suggested that the mist nets were not too great a disturbance to prevent the birds from initiating nests. The low number of mist net recaptures was surprising and suggested that either the captured individuals were immediately wary of the nets or that there was a considerable turnover of eider ducks in this area at this time in the breeding season. Conceivably birds destined for further north could join in courtship flights over these islands while migrating through this area. We suspected that the captured individuals were wary of the nets. The one mist net recapture was in a different location from the initial capturing. We estimated a breeding population of about 200 pairs for Mason's Island based on numbers of adult males as well as later by numbers of adult females after the island had been disturbed. Conceivably, we should then have banded approximately 50% of the population if those we banded were in fact residents of Mason's Island. We carefully observed 30 individuals which were resting and courting on the north side of the island. These individuals could be viewed while standing on the ice shelves on the edge of the island. We had banded all individuals on the left leg. Only five banded

individuals were observed (17%), suggesting that individuals migrating through the area and/or individuals from adjacent islands did participate in flights over the Mason's Island site.

Fifty-nine adult male Black Ducks, two Black-Mallard hybrids (recognizable), and one Adult Female Mallard (total 62) were successfully captured and banded in Flatwater Brook in 1985 (Table 2). Additionally, there were eight recaptures of which two had been banded by us in the previous few days. The remaining six recaptures were foreign bands although two or three were from Canadian Wildlife Service banding efforts in 1982. Success rate increased daily because the dogs became more experienced at finding individuals, as well, we were better able to locate waterfowl concentrations. Hence the last day resulted in 33 successful captures. This may have been partially augmented by recent arrivals to the molting site. We discontinued banding efforts there after the fifth field day. At least two field days had to be terminated because of hot weather and extremely horrid fly conditions, i.e., the dogs even refused to work!! We suspect that 200 adult male Black Duck captures is certainly feasible for this site.

Table 2 presents morphological data on the Black Ducks that were handled.

Table 1. Age & Sex Breakdown of Common Eider banded in Groswater Bay 1985

	Immature (SY)		Adult (ASY)		
Species	M	F	M	F	Total
Common Eider	6	24	84	147	261*

*Identified Common Eider subspecies include: 133 borealis, 57 dresseri, and 57 intergrade.

Table 2. Age and Sex Breakdown of Waterfowl Banded at Flatwater Brook, Labrador, 1985

		Hatch Year	After Hatch Year		
Species	Local		M	F	T
Black Duck	-	-	59	-	59
Mallard	-	-	-	1	1
Black X Mallard Hybrid	-	-	2	-	2
Total	-	-	61	1	62

Waterfowl Banding Project

Codroy Valley Bait Trapping

August 29 - October 17, 1985

Crew Members

David Morrow

Pierre Ryan

A total of 655 ducks of four species and five hybrids were banded during the 1985 banding project on the Grand Codroy River. Banders David Morrow and Pierre Ryan arrived at Gillis' Cabins on August 29. Gear left there was found to be in good order, and a survey of the river showed waterfowl numbers to be particularly low this year. A survey conducted on August 30 showed numbers as follows: Black Duck - 115, Green-winged Teal - 130, Canada Goose - 83, Pintail - 15, Blue-winged Teal - 9, American Wigeon - 60, Ring-necked Duck - 15. We began baiting sites on August 30, but with the low numbers of waterfowl on the river, they seemed to be feeding in a lot of different areas during the next few days and it took some time to attract these birds. The first traps were erected on September 2 and made operational on September 5, and the first birds were banded that evening.

During the next few weeks banding went very slowly, we concentrated our traps in the Cormiers Pond and McArthurs Island Areas (3 traps in each) with one more on a peninsula further out the river below Andrew Gales property. After initial success the Black Ducks were very shy of the traps, they would take bait outside the traps but not go in. We think this may have been due to low numbers and possibly mostly adult birds frequenting the river. Certainly our overall statistics showed a higher proportion of adults than in 1983 and 1984 (See Table 1).

Waterfowl numbers increased somewhat during mid-September but were still low. Counts during that period showed 100-150 Blacks, 200-250 Green-winged Teal, 250-300 Canada Geese. We banded small but consistent numbers of Green-winged Teal during this period, but only a trickle of Black Ducks.

Our first trouble with poachers occurred on September 12 when the top

was stolen off Trap 6 in Cormiers Pond, sometime between dark and 11 p.m. No birds were taken, as the trap was empty when checked at dusk.

The next day, we took down this trap, and #9 in Cormiers, since further problems seemed likely, and neither of these traps had produced any birds. They were later moved to the mouth of Brooms Brook.

During late September and early October waterfowl numbers continued to icrease, but total numbers (except Green-winged Teal) were still much lower than at comparable dates in 1983 and 1984. Counts showed 200-250 Black Duck, 250-300 Green-winged Teal, and 450-550 Canada Geese frequenting the river. Our most successful period for banding was September 22 to October 10 (see Table 2, Table 3). September 29 was our best day for Green-winged Teal, with 70 banded, and October 3 was our best day for Black Ducks with 21 banded.

On October 5 Trap 13 in Cormiers Pond was attacked by dogs, fortunately we witnessed this attack and drove the dogs away, although 1 Green-winged Teal was killed in the attack. We closed this trap immediately due to fear of further problems.

Following a consultation with Sackville Office on October 7, it was decided to extend the program for an extra week, since we had been doing well from September 22 to that date. The weather was getting much colder at that point, and waterfowl numbers had been showing a slow but steady increase. Unfortunately the extra week only resulted in a net gain of 16 Black Ducks and 26 Green-winged Teal. Surveys conducted during the week of October 10-17 showed only an increase in Canada Geese. Surveys were as follows during that week: Black Duck 180-225, Green-winged Teal 250-300, Canada Goose 550-1100. October 13-16 showed dramatic declines in catch rates and dramatic increases in recaptures (Tables 2 and 3).

On October 12 we had our second raid by poachers and details are enclosed in Appendix 3.

Traps were dismantled and stored in the old shed at Gillis Cabins on October 16. An equipment list was prepared - Appendix I.

Observations and Comments

In addition to waterfowl numbers noted earlier the following observations were made during the period August 29 to October 17 with maximum daily counts and comments (if appropriate)

Common Loon	2	
American Wigeon	60	(much more numerous than 1983, 1984 D. Morrow)
Blue-winged Teal	12	(similar 83, 84)
Pintail	15	(similar 83, 84)
Shoveler	2	(seen in Wigeon Pond Sept. 1 - Blake May Bank)
Ring-necked Duck	20	
Greater Scaup	20	(seen Oct. 7, 8 none seen 83, 84)
R.b.Merganser	27	(probably locals - mostly flightless young)
C. Merganser	2	
C. Goldeneye	4	(Oct. 4, Oct. 10)
Black Guillemot	1	(Aug. 31 - Flightless Juvenile)
D. C. Cormorant	3	(less numerous than 83, 84)
Black-backed Gull	50	
Ring-billed Gull	30	(mostly juveniles)
Herring Gull	12	
Caspian Tern	5	
Common Tern	2	
Great Blue Heron	12	(more numerous - Dr. Betts Reports present during summer)

American Bittern	5	
Osprey	5	
Northern Harrier	3	
Merlin	5	(less numerous than 83, 84)
Kestrel	1	
Sharp-shinned Hawk	2	
Bald Eagle	1	(juvenile)
Greater Yellowlegs	30	
Black-bellied Plover	30	
Semi-pal. Sandpiper	80	
Sanderling	25	
W.-rumped Sandpiper	5	

NOTE: Coverage of the beach near the gut (the best area for shorebirds) was minimal, consequently shorebird observations noted here are at best sketchy. We had virtually no time to observe warblers, sparrows etc., so no observations are noted here.

One particularly noteworthy observation was the numbers of male Green-winged Teal we caught in traps that were in fairly advanced stages of moulting into breeding plumage. The first of these were an adult and a hatch year male trapped on September 29. We caught two more adults and several HY birds in breeding plumage after that date (including recaptures of our own birds). This is interesting, since no breeding plumage males had been sighted in 1983 or 1984 (David Morrow - personal comment).

Information and Education

Efforts to inform the public about the banding program were continued this year. Suzanne Richards, a reporter for the loccal newspaper "The Gulf News" visited us on September 12, went out to the traps with us and wrote an article with a photo spread, which appeared in the September 18 issue, and was reprinted in The Number Log (Corner Brook) and The Georgian (Stephenville) the following week. A radio interview with David Morrow about the banding program was broadcast on CBC "On The Go" on October 14, province-wide.

On September 27 Pierre Ryan made a presentation to the Junior High School in Port Aux Basques, and on October 2 David Morrow made a presentation to the High School in Port Aux Basques. Both were well received. Unfortunately efforts to organize a public meeting with the Codroy Valley Development Association while we were in the area proved fruitless due to scheduling problems, however, Wayne Turpin (CWS Enforcement Coordinator) and Const. Neil Parnell (R.C.M.P. Migratory Birds Corner Brook) are still trying to arrange such a meeting.

We also took several local residents out to the traps and others watched us banding at the cabin. In general, the public seems better informed about our work than in previous years but much remains to be done.

Additional Data

Following a request by Ian Goudie - CWS St. John's we collected additional data on as many banded birds as feasible. This consisted of the following: weight, wing measurement, and the following bill measurements - culmen midline, culmen extension, bill width, bill height.
A summary of this data is contained in Appendix 4.

Strategy Re-poaching Problems

Because of poaching problems in the past we took special measures to forestall this problem at the outset this year. This included the following:

(1) Attempting to get local residents to help watch traps

(2) Being especially diligent in checking traps - this began before dawn on most days and continued until just before dark. Checks were made from the road using binoculars and a 9-30X Spotting scope on a car window mount. Sometimes the strategy included splitting up and using two vehicles (CWS Truck and D. Morrows truck).

(3) Splitting the crew to clear traps - most of the time we adopted the strategy of removing birds as quickly as possible by splitting the crew - (one person in canoe - another in truck for example) and bringing birds back to cabin to band. This was done particularly in the evening when poachers are likely to take advantage of darkness.

(4) Setting traps in open areas - all traps were set in areas easily viewed from the road, with the possible exception of the Cormiers Pond traps which are a bit harder to view from the road.

Recommendations:

(1) Additional equipment for 1986 - Trap wire to construct 6 or 8 foot high traps to be set in deeper water (at least 10 metres wire and fasteners)
- 18 poles (6 or 8 foot lengths) for use in both standard and deeper traps These provide better anchorage in soft bottom locations
- spotlight for truck
- spotting scope - preferably with a car window mount

(2) Delay starting date by one week - we recommend starting on approx. September 7 next year. David Morrow suggests from his three years experience that September 7 to October 19 (or thereabouts) might be a more appropriate time period.

Report submitted by: David Morrow

Pierre Ryan

Acknowledgements:

We would like to thank the following people for their assistance during the 1985 banding season:

Dr. R. Betts - for his generous help in checking traps, procuring corn and other supplies and overall help on many occasions.

Suzanne Richards - for helping to arrange our school visits.

Mr. A. Gillis - for loaning us tools and providing storage space.

Tables and Appendix

Table 1. Age and Sex Breakdown - Codroy 1985

	Hatching Year			After Hatch Year			Totals		
	M	F	Total	M	F	Total	M	F	Total
Black Duck	96	65	161	13	9	22	109	74	183
Black X Mallard Hybrid		1	1	4		4	4	1	5
Pintail	3	4	7		1	1	3	5	8
Ring-necked Duck		1	1					1	1
Green-winged Teal	224	202	426	6	26	32	230	228	458
Totals	323	273	596	23	36	59	346	309	655

% of Total Banded - AHY Birds Comparison 1983, 1984, 1985

	% Total Banded (to nearest 1%)		
	1983	1984	1985
Black Duck & Black X Mallard Hyb.	3%	6%	14%
Green-winged Teal	4%	6%	7%

Appendix 1

Equipment; left at Great Codroy (Gillis's) Old Shed at Gillis' Cabins

- material for 6 - 3 funnel traps and 1 2-funnel trap
- 2 bait cans, 3 dipnets
- 2 live traps (small mammal)
- 2 life jackets
- 5 plastic salt-beef pail
- 1 Coleman lantern (unused '85)
- 3 canoe paddles
- 4 trap signs
- 12 Burlap (BRIN) Bags
- one small tin coleman fuel

Equipment; returned to CWS Sackville

- Grumman square-stern canoe
- 4.5 hp Evirude motor with 2.5 gal. gas tank
- 2 pr. banding pliers, 1 pr. band openers, 1 pr. wire cutters
- 1 halogen flashlight
- unused bands, field sheets etc.
- 2 bait cans, 1 dip net
- 1 canoe paddle

Appendix II

Trap Locations and Active Periods - refer to map supplement

All sites were baited for 2-3 days before traps were erected and baited with no tops, and doors wide open for 2-3 days more. Potential sites were baited first on August 30 with varying degrees of success. One site - #8 in a slough in Brooms Brook where we had trapped in 1983 and 1984 met with no success at all. Other sites varied in success, with birds getting onto the bait the very next day in some locations and taking up to a week in others. Two new sites - number 9 and number 13 were tried in Cormiers Pond, all other sites were very close to those used in 1983 and 1984

Trap Site	Trap Erected	Trap Operational	Trap Closed	Comments
#4 McArthurs	Sept. 2	Sept. 5	Oct. 16	Our most successful Black Trap
#5 Sandspit	Sept. 2	Sept. 5	Oct. 15	Our most successful G.-w.Teal
#13 Cormiers	Sept. 4	Sept. 5	Oct. 5	Closed due to dog attack (very successful G.-w.Teal trap)
#9 Cormiers	Sept. 5	Sept. 9	Sept. 13	Birds well onto bait but this trap produced no birds
#10 Gales Peninsula	Sept. 5	Sept. 9	Oct. 15	Very Spotty for Blacks-Trap poached Oct. 12

Waterfowl Banding

Carmanville, Newfoundland

August 6 - September 7, 1985

<u>Crew Member</u>

George Brinson

Trap Site	Trap Erected	Operational	Trap Closed	Comments
#6 Cormiers	Sept. 6	Sept. 9	Sept. 12	Top of trap stolen Sept. 12 - later moved to Brooms Brk.
#7 McArthurs Marsh	Sept. 4	Sept. 5	Sept. 24	Produced birds only first night - moved to 14
#14 McArthurs Island	Sept. 25	Sept. 27	Oct. 15	Very good site for Blacks
#2 Brooms Brook	Sept. 15	Sept. 17	Oct. 15	Former Site 13 - Spotty for Blacks
#3 Brooms Brook	Sept. 15	Sept. 18	Oct. 15	Former Site 9 - Spotty for Blacks

A waterfowl bait trapping station was in operation in the Carmanville, Newfoundland area, during the period August 6 to September 7, 1985.

As in 1984, banding took place on Middle Arm, the salt water bay east of Carmanville. The area has been described in the 1984 banding data. All banding took place at one location in an effort to eliminate poaching. This procedure was apparently successful as there was no evidence of poaching this year.

Baiting began August 6. First traps were erected August 16, with first birds banded August 19. Baiting continued until September 1, and banding ending September 7, one week prior to opening of hunting season in this area.

A total of 105 Black Ducks, 92 Green-winged Teal, 2 Pintails, 1 Blue-winged Teal and 1 Mallard was banded. In addition, 4 Black Ducks and 3 Green-winged Teal from previous years banding were recaptured. The four Black Ducks were previously banded at Carmanville and the Green-winged Teal banding information is presently unknown.

An interesting comparison in the number of adult Black Ducks trapped this year and in the two previous years exists. In 1984 adults comprised 5% of the total trapped. In 1985 adults make up 18% of the total Black Duck captures, with 18 out of 105 blacks being After Hatch Year. The comparison for Green-winged Teal remains the same as for 1984.

Species, sex and age of banded birds are listed in Table 1.

Table 1. Age and sex breakdown, 1985, Carmanville, Newfoundland Waterfowl banding project.

	Hatch Year			After Hatch Year			Totals		
Species	Male	Female	Total	Male	Female	Total	Male	Female	Total
Black Duck	36	51	87	10	8	18	46	59	105
Mallard	1	-	1	-	-	-	1	-	1
Pintail	1	1	2	-	-	-	1	1	2
B.-w. Teal	1	-	1	-	-	-	1	-	1
G.-w. Teal	39	45	84	2	6	8	41	51	92
Totals	78	97	175	12	14	26	90	111	201

Observations

Waterfowl observations were practically nil in the area until mid-August. From mid month until end of banding 25 blacks and 25 green-wings would be the normal sighting on each of the twice daily visits to the traps. Most successful catches were made during morning visits, suggesting birds were coming to salt water to feed at daybreak, and using nearby ponds during daytime.

Approximately 20-25 Blue-winged Teal were observed in the area, however only one was trapped. In addition, two Snipe were found in one trap,

set on an exposed mudflat, September 2. Both birds were released. A notable exception this year, was the complete absence of Red-breasted Mergansers on the arm. No broods were observed.

A Green-winged Teal, was found dead on August 29 and was the only trap mortality for this year. Bald Eagles and mink, both common in the area and troublesome in previous years, were not a factor in 1985.

Seven traps have been stored here, for further use, if banding should continue in following years.

Conclusions

Comparing the results of this year's banding with the two previous years, it has been most successful. This year's total, 208 birds, is almost the total of the two previous years, combined. Under average conditions, this could be the normal expected, for the area. If freshwater areas were trapped as well, a fair number of Ring-necked Ducks could be banded also, as there are a couple of nearby ponds with fair concentrations of Ring-necked Ducks, the third most abundant species in the area. The total count then, should

approach 300 birds. It must be realized however, that Blacks are the prime objective of the whole program. Again, looking at the results from this specific area of the province, it must be considered a successful year. Hopefully, the program will continue.

Acknowledgements

I would like to thank Wilbert Harvey, Carmanville South, for the volunteer assistance he provided again this year. Mr. Harvey assisted in the erection of some traps, and accompanied me on numerous occasions.

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Atlantic Flyway Cooperative Banding Program:
Atlantic Provinces. 1985.

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Atlantic Flyway Cooperative Banding
Program: Atlantic Provinces