ATLANTIC FLYWAY COOPERATIVE BANDING PROGRAMS

Atlantic Provinces

1982

compiled by

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The following is a summary of the 1982 banding program in Atlantic Canada including recommendations and estimated costs for 1983. Expenditures and numbers of birds banded are accurately reported. The assemblage of individual station reports was prepared by individual crew leaders possessing varying degrees of writing experience and is included for information purposes without careful regard for literary excellence. Any publication or quotation of the contents will require substantial editing in some sections.

Atlantic Flyway Cooperative Banding Program

Atlantic Provinces - 1982

Preseason waterfowl banding was conducted at sites in all Atlantic Provinces except Prince Edward Island in 1982. Locations included Nain Bay, Snegamook Lake and Tinker Harbour in Labrador; Codroy in Newfoundland; Amherst Marshes, Wallace Bay and Louis Lake in Nova Scotia; and Bathurst Basin, Tintamarre and Shepody NWA's and the Saint John River in New Brunswick. Several trapping techniques were tried including entanglement nets, drive traps, night lights, bait traps, dogs and rocket nets with the most successful being bait traps, night lights and dogs. Banding operations were initiated on July 1 in Labrador and extended through mid-October in Newfoundland and were funded by the Cooperative Banding Program, USFWS, CWS, and some Atlantic Provinces.

The cooperative banding program in Canada was initiated in 1965 and has been conducted annually to provide data to meet the following objectives:

1. To determine harvest distribution and define breeding area source of harvest based upon band recovery information.

2. To determine changes in harvest pressure on various populations of migratory game birds as measured by recovery and/or harvest rates.

3. To determine annual and/or long-term survival and mortality rates for important breeding and wintering population segments of migratory game birds.

Project Costs

The total estimated cost of the 1982 Cooperative Banding Program in the Atlantic Region was $79,106.42 which was shared among the Cooperative Banding Fund ($48,187.03); the Canadian Wildlife Service ($23,170.39) and the U.S. Fish and Wildlife Service ($7,749.00). Additional essential services were provided by New Brunswick and Newfoundland-Labrador in the form of manpower, accommodation and equipment to which monetary values were not assigned. Table 1 is a banding cost analysis for the Atlantic Provinces in 1982.

The expense of air transportation totalled $24,587.00 and was second in amount only to estimated salaries. Since this is a major expense which is not obviously self-explanatory in Table 1, additional information may be warranted. All air transportation costs were for Labrador banding stations and included (1) Commercial airfares ($3,895.22) for state-side and Maritime banders working in Labrador; (2) Air charter for transportation of personnel and equipment from Goose Bay to field camps ($10,803.00); and (3) Aerial surveys ($9,889.50) to establish proper timing for various banding stations, locate new concentrations for banding and determine seasonal changes in distribution and migration chronology. This survey support was absolutely essential to effective establishment of new stations, i.e. Nain, W. Micmac, Flatwater, and adjustment of banding periods at Tinker Harbour and Snegamook Lake. The total cost of air transportation was shared by the Coop Fund ($18,576.00) and the CWS ($6,011.00).

A comparison of banding costs for selected years is shown in Table 2. Since the early 1970's the cost of banding a Black Duck has increased five fold. A large proportion of that increase is attributed to the continually

Table 1. Co-operative Waterfowl Banding Cost Analysis - Atlantic Provinces - 1982

Station	Salaries	Corn	Vehicle Food & Lodging	Commercial Airfares Air Charter Freight-Boats	Supplies & Repairs	Total Cost	No. of Birds	Cost/ Bird	No. of Black Ducks	Cost/ Black Duck
N.B.-N.S.	150.00									
Border Area	3003.00	-	1022.89	-	45.00					
	1497.00*	318.00*	-	-		6035.89	781	7.73	562	10.74
Bathurst, N.B.	75.00	55.80		-	45.00					
	1575.00*	32.50*	624.65*	-	-	2407.95	278	8.66	256	9.41
Codroy, Nfld.	-	-	-	-	195.00					
	3520.00*	162.50*	2788.15*	-	-	6665.65	450	14.81	243	27.43
Tinker Harbour	1857.00	328.10		300.00 F 1773.00 A 2999.12*A 1195.00*A	708.80					
	6853.64*		1859.01*	1857.94*B	185.34*	19916.95	588	33.87	89	223.79
Dog Banding Labrador N.B. & N.S.	1850.00	-	852.80	692.00 A 292.00 F 1773.00 A 128.37*B	114.00					
	-	-	1019.50*	6820.00*A	143.02*	13684.69	109	125.55	97	141.07
Nain	4500.00			1773.00 A 200.00 F 2941.00*A 354.33*B	150.00					
	300.00*		2024.08*	4621.60*A	402.00*	17266.01	12	1438.83	-	-
CWS Airboat	300.00	-	300.00	580.00	235.00					
	2900.00*	-	-	-	65.28*	4380.28	1378	3.18	273	16.04
U.S.A. Airboat	1000.00*									
	5000.00**	-	1754.00**		995.00**	8749.00	1092	8.01	436	20.07
TOTALS	34380.64	896.90	12245.08	28300.36	3283.44	79106.42	4688	16.87	1956	40.44

CWS Funds
*Co-op Funds
**Bureau Sport Fisheries and Wildlife
A (Air charter)
F (Freight) B (Boats)

Total CWS Funds	23170.39
Total Co-op Funds	48187.03
Total BSF&W Funds	7749.00
Total	79106.42

Table 2. A Comparison of Banding Costs

Year	Program Cost	Black Ducks Banded	Cost/ Black Duck	Total Birds Banded	Cost/ Bird
1972	17078.50	2070	8.25	5912	2.89
1973	21766.82	3106	7.00	7067	3.08
1978	26471.41	1264	20.94	3901	6.79
1981	50260.30	1886	26.75	3924	12.84
1982	79106.42	1956	40.44	4688	16.87

rising cost of operation while the movement of operations into Labrador in 1981 added a further significant increase in operating costs. This increase was justified in light of the total lack of information for Labrador waterfowl and the fact that Labrador is a known major breeding area for Black Duck.

Summary of Results

A total of 4688 waterfowl was banded in 1982 with emphasis placed on Black Duck (1956) and Green-winged Teal (1057). Next in importance numerically were Blue-winged Teal, American Wigeon, and Pintail. Special attention was also given to goldeneye and Canada geese in 1982 since those species are produced and harvested in the Region but have very little banding data available for their management. Both goldeneye and geese are difficult to capture; thus, new techniques must be developed and tested as the program continues. Provincial totals by species are illustrated in Table 3.

Table 3. Total species banded by province - 1982

Species	New Brunswick	Nova Scotia	Newfoundland	Labrador	Total
Black Duck	758	769	243	186	1956
Mallard	17	12	4	1	34
Black x Mallard	15	17			32
Green-winged Teal	98	361	198	400	1057
Blue-winged Teal	572	348	1	9	930
American Wigeon	146	30		2	178
Pintail	19	53	4	87	163
Wood Duck	43	16			59
Northern Shoveler	15	4			19
Ring-necked Duck	57	104			161
Ruddy Duck		3			3
Redhead		3			3
Common Goldeneye	6	1		4	11
Barrow's Goldeneye				8	8
Hooded Merganser	2	1			3
Common Merganser	1				1
American Coot	2	26			28
Pied-billed Grebe	1	28			29
Canada Goose	1			12	13
	1753	1776	450	709	4688

The emphasis placed on banding in Labrador required over 60% of the total banding budgets because of the high cost of operating in remote areas. This effort accounted for 38% of the total number of Green-winged Teal banded and 10% of the Black Duck. In addition nearly all of the goldeneye and geese banded in the Region were taken in Labrador. Despite the high costs, banding should continue in Labrador with emphasis on Black Duck, Canada geese and Green-winged Teal. This is particularly important in the face of declining Black Duck populations and the lack of information on northern population segments. Speculations as to the buffering affect of Labrador Black Ducks to Maritime populations cannot be documented without more banding. Certainly the buffering affect is a potential explanation of the fact that declines either have not occurred or have been insignificant in the Maritime Provinces while major declines have been noted further south. Similar importance can be placed on Green-winged Teal and goose banding in northern areas in the future.

Bait trapping at Bathurst, Codroy and Tinker Harbour was greatly affected by an unusually mild fall in 1982. Fall concentrations of Black Ducks did not materialize but large numbers of Green-winged Teal were banded at two of these stations. Only the Border Area bait station reached the Black Duck quota requirement in 1982.

Night-lighting with two airboats accounted for approximately fifty percent of the banded birds in 1982. The new CWS airboat worked flawlessly and contributed significantly to this year's program in the border area. In addition the Port Joli, Nova Scotia and Campbellton, New Brunswick areas were worked with marginal success during early fall. The U.S.A. airboat experienced another successful year banding 1092 birds, however, its Canadian tour was longer this year in order to meet the Black Duck quota. This boat has averaged 585 Black Duck banded over the past three years.

Waterfowl banded by station are shown in table form in Appendix A and detailed activity reports by station are included in Appendix B.

Recommendation for 1983

All 1982 banding stations should be continued if funding is sufficient. If cuts become necessary, dog banding and Nain Bay in Labrador should be discontinued. With the knowledge base established by surveys and experimentation in 1982, the cost of banding Black Ducks with dogs in Labrador will be significantly reduced, i.e. $30-50 per bird in 1983. Potentially both Black Duck and Canada geese can be dog banded but in the case of Black Duck almost all birds will be adult males. The significance of banding adult males should be fully evaluated to ensure that the effort and expense are justified although preliminary indications are that the project should continue. Two wildlife technicians each with a trained pointing dog are available for 1983. This expertise is not often obtainable and should be utilized if at all possible. Reduced costs are attributed to the elimination of supporting aerial surveys and the fact that only Snegamook Lake will be worked thus cutting transportation expenses.

Although banding attempts in Nain Bay were costly and unsuccessful, that station should continue for another season in order to benefit from experience already gained. Efforts in 1982 were highly experimental and were aimed at duplicating work done in 1955. Bird use in the Bay was found to be significantly different from 1955 as a result of greatly increased boat traffic, which forced birds to concentrate in new areas that were less conducive to drive-trapping. In 1983 the program should be expanded to include all of July and August and include bait trapping of Black Duck as well as drive-trapping of goldeneye and geese. Again, expenses will be

significantly reduced as a result of experience gained in 1982. At the same time, it is anticipated that a successful banding station will be established.

Project: Tinker Harbour, Labrador

Duration: August 22 - October 14 (8 weeks)

Justification: The Tinker Harbour station was operated in 1981 for the first time in 30 years. The objectives of the renewed banding program in that area were to improve our knowledge of the most remote and major breeding populations of black duck and Canada geese in the Atlantic Region and to better determine harvest characteristics of Labrador waterfowl. In 1981, banding was terminated in late August due to the opening of the hunting season on September 1. As a result, only 72 waterfowl (42 pintail; 27 green-winged teal; and 3 black duck) were banded. In 1982 a closed season was established around the Tinker Harbour station and banding was continued throughout September. A total of 588 waterfowl was banded; however, only 89 black duck were included in addition to 400 green-winged teal; 87 pintail; 9 blue-winged teal; 2 American Widgeon and 1 mallard. It is believed that the species composition in 1982 should have included primarily black duck; but due to unusually mild fall weather, black duck numbers did not build-up in Groswater Bay as expected based on observations in past years. It is highly recommended that the Tinker Harbour banding station be continued for a 4-5 year period in anticipation of banding much larger numbers of black duck and, thus, significantly improving our understanding of black duck in that important and relatively unsampled breeding area.

Estimated Costs for 1983

Personnel:

1) 2 men for eight weeks	$5000.00
2) 1 local assistant for 8 weeks at $250.00/wk	$2000.00
	$7000.00

Tinker Harbour, Labrador

Materials and Supplies:

1) Wire, net, poles, etc.	$ 800.00
2) Bait (50 bags at $15/bag)	$ 750.00
3) Food, fuel, misc.	$2000.00
	$3550.00

Shipping and Transportation:

1) Freight	$ 500.00
2) Fixed Wing Charter (12 hrs. at $260/hr	$3120.00
3) Commercial Airfare	$2000.00
	$5620.00

Total Cost	$16170.00

Project: Snegamook Lake - Dog Banding

Duration: July 1 - July 20

Justification: During breeding ground surveys conducted in 1980 by the CWS, several important black duck production and molting areas were identified. In 1981 an experimental bait banding station was established at Snegamook Lake which was believed to be one of the more productive breeding and molting areas in central Labrador. The banding crew was unable to attract birds to bait; however, a pointing dog present at the station was able to capture several adult male molting black duck. Having identified this potential, a dog banding crew returned to Snegamook Lake in 1982 as well as locations at West MicMac Lake and Flatwater Brook. Over 100 black duck and Canada geese were banded and many of the logistics of dog banding in interior Labrador were worked out.

Some evidence suggests that the effects of changes in harvest regulations are most readily detected in banded adult male populations. With this potential and the potential contribution of data to the calculation of survival and mortality rates, continuation of this station appears to be justified. In addition, surveys completed and techniques refined in 1982 will ensure increased success (200+ black duck) and reduced costs in 1983.

Estimated Costs for 1983

Personnel: Provided by CWS, Provinces and/or States without cost to Coop Fund.

Materials and Supplies:

1) food, fuel, lodging, etc. for 2 men $1000

Snegamook Lake - Dog Banding

Shipping and Transportation	
1) Fixed Wing Charter (9 hrs at $260/hr)	$2340
2) Freight	$ 150
3) Commercial Transportation	$1000
Misc. and Unforeseen Expenses	$1000
Total Cost	$5490

Project: Nain - Black Duck, Canada goose, goldeneye

Duration: July 1 - August 31

Justification: Aerial surveys conducted from 1980 to 1982 in Nain Bay found large numbers of black duck, Canada geese and goldeneye. Based on that information and the results of banding efforts in 1954-55, the decision was made to attempt goldeneye banding in 1982. Success was almost nil (12 goldeneye) due to changes in location of bird use, human disturbance and a variety of other logistical problems. With the experience gained, however, it is certain that respectable numbers of black duck, Canada geese and goldeneye can be banded in Nain Bay during July and August. Because of the severe lack of data on those populations and their undoubtedly high importance to the Atlantic Flyway, the process of establishing a successful banding station should be continued in 1983. Costs will be significantly reduced in 1983 with the elimination of expensive aerial surveys and transportation costs. Also good success can be expected.

Estimated Costs for 1983

Personnel:

1) Two local personnel to be trained by CWS and provincial staff $2500 each	$5000

Materials and Supplies

1) Wire, nets, poles, etc.	$1000
2) Bait	750
3) Food, fuel, etc.	1000

Nain - Black Duck, Canada goose, goldeneye

Shipping and transportation

1) Freight	$ 300
2) Airfares	$ 700
3) Boat Rental	$1000
Total Costs	$9750

Project: Codroy River Newfoundland

Duration: August 29 to October 8

Justification: The Codroy station is a proven successful black duck banding site and represents the only banding location on insular Newfoundland. This station should receive high priority for at least 2-3 more years.

Estimated Costs for 1983

Personnel: 2 men at $1500/man	$3000
Materials and Supplies:	
1) Bait - 25 bags at $12.00/bag	$ 300
2) Wire, netting, etc. available from previous years	
Transportation and Lodging	
1) Mileage 2000 at $0.35/mi.	$ 700
2) Lodging 6 wks $200/wk	$1200
3) Nfld. Ferry	$ 200
Total Cost	$5400

Project: NB-NS Border Area

Duration: July 25 - September 3

Justification: The Border Area station has operated annually since the initiation of the Coop banding program and is considered essential to flyway banding needs. It has consistently banded high numbers of black duck often, in excess of 500 per year. Costs are also minimal.

Estimated Costs for 1983

Personnel:	
2 men for 6 wks $1500/man	$3000
Materials and Supplies:	
1) Bait - 30 bags at $12.00/bag	$ 360
2) Wire, nets, etc. available from previous year	
Transportation:	
1500 miles at $0.30/mi.	$ 450
Total Cost	$3810

Project: Bathurst Basin, N.B.

Duration: August 29 - Oct. 15

Justification: The Bathurst bait station was initiated in 1978 and has accounted for 1736 black duck banded in its five years of operation for an average of nearly 350 black duck annually. Although this station has fulfilled the immediate needs of the Atlantic Region, its importance to flyway needs as a successful black duck station warrants its continuation. Additionally, it is a low cost site, i.e. $10.00/black duck, that adds only a minor amount to the total Coop expenditure.

Estimated Costs for 1983

Personnel: one experienced bander for 7 weeks	$1750
Materials and Supplies:	
1) Bait - 15 bags at $12.00/bag	$ 180
2) Wire, nets, etc. available from previous year	
Transportation:	
2000 miles at $0.30/mi.	$ 600
Total Cost	$2530

Project: CWS Airboat Nightlighting

Duration: July 15 - Oct. 15

Justification: The CWS airboat has been used annually to band waterfowl at a variety of locations throughout the Atlantic Region. This program has proven to be highly economical and effective accounting for 1000-2000 birds annually. Its objective has been to band in areas where bait trapping was impractical and/or areas where assistance was required to reach desired quotas. It is also one of the least expensive methods in terms of cost per bird banded.

Estimated Costs for 1983

Personnel: 2 men for six weeks during peak banding period	$3000
Materials and Supplies: Available from previous years	
Equipment: supplied by CWS	
Transportation and Field Expenses	$1000
Total Cost	$4000

Project: USA Airboat St. John River

Duration: July 15 - August 15

Justification: The US airboat operates in the St. John river marshes, one of the most important production areas in the Atlantic Provinces. It annually bands in excess of 1000 birds of which more than 500 are always black duck. Quotas are usually reached in two to three weeks and cost per bird banded is low. This station should be continued to fulfill flyway needs.

Estimated Costs for 1983

Personnel: a local assistant is required to guide and assist USFWS personnel.	$1000
Materials, Supplies and Equipment Supplied by USFWS	
Lodging and Transportation	$ 500
Total Cost	$1500

Summary of Costs 1983

Cooperative Banding Program

Newfoundland-Labrador

1. Tinker Harbour		$16,170
2. Snegamook Lake - Dog Banding		$ 5,490
3. Nain Bay		$ 9,750
4. Codroy River		$ 5,400
	Subtotal	$36,810

New Brunswick-Nova Scotia

1. N.B.-N.S. Border Area		$ 3,810
2. Bathurst Basin		$ 2,530
3. CWS Airboat		$ 4,000
4. USA Airboat		$ 1,500
	Subtotal	$11,840

GRAND TOTAL	$48,650

U.S. Banders should be paid in U.S. funds; but all other wages and expenses will be in Canadian currency. Total U.S. funds required is estimated at $40,000.

Appendix A. Age breakdown - Co-operative Banding 1982 - Border Area bait trapping*

Species	Local	Hatch Year	After Hatch Year	Total
Black Duck	76	387	99	562
Mallard	0	3	7	10
Black x Mallard	6	5	4	15
Green-winged Teal	3	21	6	30
Blue-winged Teal	9	24	15	48
Pintail	15	25	1	41
Wood Duck			1	1
Ring-necked Duck	28	2	6	36
Pied-billed Grebe	5	15	1	21
American Coot	6	1	10	17
Total	121	481	150	781

*29 were banded by use of a pointing dog (25 Black; 1 hybrid, 3 Pintail)

Appendix A (continued) Codroy River bait-trapping 1982

Species	Local	Hatch Year	After Hatch Year	Total
Black Duck		233	10	243
Mallard		4	-	4
Green-winged Teal		193	5	198
Blue-winged Teal		1	-	1
Pintail		4	-	4
Total		435	15	450

Appendix A (continued) Bathurst Area bait-trapping 1982

Species	Local	Hatch Year	After Hatch Year	Total
Black Duck		148	108	256
Mallard		4	6	10
Black x Mallard		2	5	7
Green-winged Teal		2	-	2
Pintail		2	-	2
Common Merganser		1	-	1
Total		159	119	278

Appendix A (continued) Tinker Harbour Bait trapping 1982

Species	Local	Hatch Year	After Hatch Year	Unk.	Total
Black Duck	2	42	45		89
Mallard	-	-	1		1
Green-winged Teal	-	350	50		400
Blue-winged Teal	-	8	1		9
American Wigeon	2	-	-		2
Pintail	-	80	6	1	87
Total	4	480	103	1	588

Appendix A (continued) Nain drive trapping 1982

Species	Local	Hatch Year	After Hatch Year	Total
Common Goldeneye			4	4
Barrow's Goldeneye			8	8
Total			12	12

Appendix A (continued) Labrador Dog Banding 1982

Species	After Hatch Year		Total
	Male	Female	
Black Duck	97	-	97
Canada Goose	4	8	12
Total	101	8	109

Appendix A (continued) CWS Airboat Night Lighting 1982

Species	Local	Hatch Year	After Hatch Year	Total
Black Duck	39	216	18	273
Black x Mallard	-	3	-	3
Mallard	-	1	1	2
Green-winged Teal	19	217	140	376
Blue-winged Teal	109	223	117	449
American Wigeon	54	9	4	67
Pintail	8	13	2	23
Wood Duck	-	1	32	33
Northern Shoveler	-	2	2	4
Ring-necked Duck	94	16	9	119
Ruddy Duck	3	-	-	3
Redhead	3	-	-	3
Common Goldeneye	-	1	-	1
Hooded Merganser	-	2	-	2
Pied-billed Grebe	8	-	-	8
American Coot	7	1	3	11
Canada Goose	1	-	-	1
Total	345	705	328	1378

Appendix A (continued) USA Airboat Night Lighting 1982

Species	Local	Hatch Year	After Hatch Year	Unk.	Total
Black Duck	212	218	5	1	436
Mallard	1	5	1		7
Black x Mallard	6	1	-		7
Green-winged Teal	33	11	7		51
Blue-winged Teal	309	84	30		423
Pintail	4	2	-		6
American Wigeon	100	3	6		109
Wood Duck	16	2	7		25
Northern Shoveler	13	1	1		15
Ring-necked Duck	5	1	-		6
Common Goldeneye	5	1	-		6
Hooded Merganser	1	-	-		1
Total	705	329	57	1	1092

Summary of Preseason Banding
Atlantic Provinces
July 26 - October 15, 1982
Permit #10417

Agency	Station	Black Duck	Mallard	Blk. x Mallard	G.w. Teal	B.w. Teal	Am. Wigeon	Pintail	N. Shoveler	Wood Duck	R.n. Duck	Ruddy Duck	Redhead	Golden-eye*	Merg**	C. Goose	Misc.*** Sp.	Tota
CWS	NB-NS Border	562	10	15	30	48		41		1	36						38	781
CWS & NBNR	Bathurst	256	10	7	2			2							1			278
CWS	Codroy R. W. Nfld.	243	4		198	1		4										450
CWS	Tinker Hrb. Labrador	89	1		400	9	2	87										588
CWS & Nfld. Va.	Nain Labrador													12				12
CWS	Dog Banding Labrador	122		1				3								12		138
BSF&W USA	USA Airboat	436	7	7	51	423	109	6	15	25	6			6	1			1092
CWS	CWS Airboat	273	2	3	376	449	67	23	4	33	119	3	3	1	2	1	19	1378
	Total	1956	34	32	1057	930	178	163	19	59	161	3	3	19	4	13	57	4688

*Goldeneye total include 8 Barrows Goldeneye and 11 Common Goldeneye
**Merganser total includes 1 Common Merganser and 3 Hooded Mergansers
***Misc. Species total consists of: 28 American Coot; 29 Pied-billed Grebe

"Eight" additional Black Ducks banded at Terra Nova National Park were submitted too late for above table & 1982 report

5 HY F
1 HY M
1 AHY M
1 AHY F

Tinker Harbour
Labrador

LABRADOR

TINKER HARBOUR, BANDING PROJECT, 1982

V. D. STOTTS and R. M. McKEE

LABRADOR

TINKER HARBOUR, BANDING PROJECT, 1982

V.D. STOTTS and R.M. McKEE

This Labrador banding project is a cooperative venture among the Atlantic Flyway states, provinces and federal wildlife services. It is in its second of a 5-year program. The specific objective of the Tinker Harbour project was to duplicate Cooch's (1951) work on black ducks in which 450 birds were banded. During the first year of this program (McKee and Stotts 1981) work commenced and terminated too early.. See these two references for descriptions of the areas worked.

Methods

The 1982 program began with prebaiting during the week of August 9 by W. Whitman followed by partial baiting by M. Michelin early in the week of August 16. These parties also erected the camp at the eastern edge of Kellick Point (Fig. 1).

Stotts arrived at Tinker Harbour on August 19 followed by McKee on August 24. Baiting (using corn, wheat and barley) continued through September 21. The first 2 traps were set to catch on August 26. The last trap was pulled and stored on September 22.

Four traps measuring 2'H x 25'-30' L of welded 1" x 2" mesh, 14 ga. wire were used in pond sites, as were 2 traps of variable design constructed of 2" mesh x 6' W 20 ga. poultry netting. Twelve traps measuring 4' H x 25' L of welded 1" x 2" mesh 12 and 14 ga. wire were set at intertidal sites with water depths of 2' - 3.5' during spring high tides. Two trap tops were of a very dense, dark green nylon which corn penetrated with difficulty while the rest were of 2' mesh poultry netting.

All traps were of "lily-pad" design, having rounded perimeters with the exception of 2 poultry netting traps.

Trap mouths used were essentially of 2 types. Those in the Shag-Kellick Bay sector were all vertical slits, mostly of 14 ga.

about 400 birds when immediate fringe areas were included. Weekly averages ranged from about 170 to 285 birds. The maximum population appeared to be about 600 birds during early September. Resting areas for these birds were the inland lakes/bays SSE of mid Shag-Kellick Bay and south of Mason Island. Cooch (1951) indicated a build-up of 3,000 black ducks, but this was not noted in 1981 or 1982, possibly because of abnormally mild temperatures. Maximum populations of teals and pintails rarely exceeded 300 birds on any 1 day and mild temperatures may have maintained their presence longer than normal. The maximum number of Canada geese noted in 1 day was about 100, but averages were much less.

A stable population of about 4,000 common eiders (young and adult) inhabited the banding sectors and their adjacent boundaries. A few scoters, generally no more than 25-30 surfs, were periodically noted. A few mergansers, probably red-breasted, and goldeneyes were also noted.

Predation was a major problem. Both red foxes and goshawks were the main culprits. Foxes killed 8 greenwinged teal, 6 black ducks, 1 pintail and 3 small sandpipers (probably semi-palmated). Goshawks got 3 greenwings at 1 site and harassed birds at 3 other sites. Two greenwings and 1 greater yellowlegs drowned. Two immature red foxes succumbed in banding traps in the Shag-Kellick Bay sector. In all 5 of the S-K Bay traps were visited by predators; in T.H. 8 traps were depredated.

The condition of primary flight feathers were checked in almost all birds. In general "locals" were detected in black ducks as late as September 20 and many immatures and adults had 1 or more soft primaries through the third week in September. Some immature pintails had 1 or more soft primaries through the second week in September while some adults went through the third week. Young greenwinged teal were found with "green" primaries through the first week in September while some adults still had them in the third week.

During the period in camp the temperature dropped below freezing only thrice (-2°C in all cases) and in 1 of these cases a -2°C reading at 9:30 pm had increased to 2°C by 6:00 am the next morning. It rained (no snow) in every 24 hour period except 3. Winds of 20-30 K were relatively common with about 8 days with 35-55 K.

Recommendations

1. Of utmost importance in this operation is to have a good seaworthy boat capable of reaching certain trapsites and supplies in Rigolet during high winds. Also without such equipment the ability to explore new situations becomes unattainable. It should be sufficient to say that when our guide, Murray Michelin, became concerned about our leaky boats, it becomes too dangerous to use them further, except with extreme care.
2. In the same vein, equipment to be used by the banding crew should be in top working order upon their arrival, since in most instances repairs and equipment are not available locally.
3. This station should be operated between September 1 and October 15 in order to ensure capture of 300-500 green-winged teal and allow the freeze-up of inland lakes and ponds to force black ducks to day-around use of tidal flats. Prebaiting of the ponds and best black duck sites should start between August 20-25 with semi-weekly feedings of corn and barley. With normal weather conditions it should be possible to band 500 black ducks in this region.
4. The area closed to hunting should extend from just east of Cranford Head to the island complex just east of Mason Island. This is a slight expansion over 1982, but high black duck use was encountered at each end of this zone.
5. Black duck use here is tied very closely to dense kelp beds at or near low tide more than it is to crepuscular hours, although the latter are important periods. At least 4 "lily-pad" traps 6' H using 12 ga. 2"x4" welded wire should be tried at these kelp sites. Four 9' T-posts will be needed to anchor these structures.
6. Black ducks may utilize upland habitats at inland sites, since a bird killed in a trap had eaten crowberries. Further exploration is needed for suitable inland trapping sites in the vicinity. Aerial observations have singled out a lake between Snooks Cove and Flatwater Brook, but daily resting areas for Tinker Harbour or Shag-Kellick Bay birds would be best if accessible.

7. Additional traps can be constructed of 2" mesh 16 ga. x 4' H or 1" mesh 18 ga. x 4' H poultry netting. The wire in 2" mesh 20 ga. poultry netting is very flimsy allowing good top use but it permits greenwings to escape at water level. Three steel conduits (3/4" dia. x 6' L) plus spruce sapling (6' - 7' L) are required at each trap site.
8. Trap mouths should all be vertical slit entrances in tidewater. Standard funnels 15"-18" H are fine for pond sites, but so are slits.
9. Clam rakes to scoop rocks and soil out of and surrounding the trap site would permit construction of a permanent sheet water pool at each site, an attractive feature to these ducks at low tide.
10. Trap tops should be of 2' mesh 20 ga. poultry netting, 1' -1.5' mesh (bar) plastic garden netting or similar mesh polypropylene gillnet.
11. An extra Hillary or Pioneer tent for storage of bait and/or other equipment eased problems during perpetual rain. The 12' x 14' Pioneer tent made the difference between comfortable existence and mental depression, expecially with the inclusion of a wood stove (albeit its propensity for smoking). The tent, however, needs a good coating of waterproofing prior to further use. The stove needs at least 8' of 5" stove pipe.
12. The current camping site is difficult to improve upon given local alternatives. A site on the east end of Mason Island would be better for anchorage, but tents would be vulnerable during high winds.
13. The current edition of Tide Tables for the Atlantic Coast of North and South America was invaluable in determining daily tidal cycles as well as the occurrence of neap and spring tides. Copies of the pertinent pages should be part of the supplies provided future banding crews.
14. It may be necessary to control problem foxes in all sectors in order to permit banding with low bird mortality. Also padded traps to catch goshawks may be necessary.

Acknowledgements

Murray Michelin of Rigolet was our guide and primary boatman for obtaining supplies and firewood. His gillnet was invaluable in supplementing our diet.

William Whitman, Charles Gilchrist, John Maxwell and Maria Berger prebaited many of the important sites, erected several tents at the Kellick Point camp site and ensured transport of equipment to Rigolet or the camp.

Maria Berger was especially helpful with volunteer labor and expertise in the last week of the operation.

The Newfoundland-Labrador Air Transport (NAT) radio network was a welcome feature for sending and receiving messages and their transmissions were greatly appreciated.

References

Cooch, F.G. 1951. Banding operations - Tinker Harbour, Labrador, Newfoundland. 6 pp. (mimeo).

McKee, R.M. and V.D. Stotts. 1981. Tinker Harbour Banding Report - 1981, Labrador, Canada. 11 pp. plus 7 p. flora/fauna supplement (mimeo).

(Submitted October 12, 1982)

Table 1. Age and Sex of Ducks Banded in the Tinker Harbour Area, Labrador, 1982.

Species	LF	LM	HYF	HYM	AHYF	AHYM	UU	TOTAL
Mallard						1		1
Black Duck	1	1	19	23	14	31		89
Am. Wigeon[1]	1	1						2
B.W. Teal			1	7		1		9
G.W. Teal			162	188	26	24		400
Pintail			36	44	5	1	1	87
Total								588

1. Relatively certain these wigeon were Americans rather than Eurasians judging from overall color of 1 bird recaptured when awing, the appearance of black eye-rings and of whitish axillars.

Table 2. Time and Place of Duck Bandings in the Vicinity of Tinker Harbour, Labrador, 1982.

TRAP SITE	Black Duck and Mallard 8/26-9/1	9/2-9/8	9/9-9/15	9/16-9/22	Pintail and Am. Wigeon 8/26-9/1	9/2-9/8	9/9-9/15	9/16-9/22	Blue-winged and Green-winged Teal 8/26-9/1	9/2-9/8	9/9-9/15	9/16-9/22	TOTAL
Shag-Kellick Bay													
1. Shag Is. Pd.*					2	5	6	1	17	73	28	1	133
2. W High Pt #2*				1				1				4	6
3. " " " #1*	1	6		14				1		6		12	40
4. E. High Pt.*				2									2
5. Mid-Stream*	6	2		30	1			3		1		2	45
6. Pallet					2								2
7. SE Crk.*											16		16
8. Mid E Puddle*								1			4	4	9
9. Mid E Bay						1							1
10. Little Canoe Bay					2				1				3
11. Canoe Bay							11			3	2		16
Subtotal	7	8	R	47	7	6	17	7	18	83	50	23	273
Tinker Harbour													
12. Camp Pd.*	1						2		43	85	20	16	167
13. Tidal Pd.*													R
14. SW Cove: NW		1											1
15. " " : Is.*													0
16. " " : Mid W#1													R
17. " " : " "#2*													0
18. " " : WSW						5							5
19. " " : SSW													0
20. " " : Mid-stream*		2				3							5
21. " " : S Shoal						1							1
22. " " : SE Crk*													0
23. Cooch Pen. Pd.*					7	8	2			30	1		48
24. SE Cove: NW#1					5	1				1	4		11
25. " " : " #2*													0
26. " " : SW#1		9				7				1			17
27. " " : " #2*													0
28. Blake Is.*				12									12
29. Mason Is. Pd.*				3			1	10			14	20	48
Subtotal	1	12	R	15	12	25	5	10	43	117	39	36	315
GRAND TOTAL	8	20	R	62	19	31	22	17	61	200	89	59	588

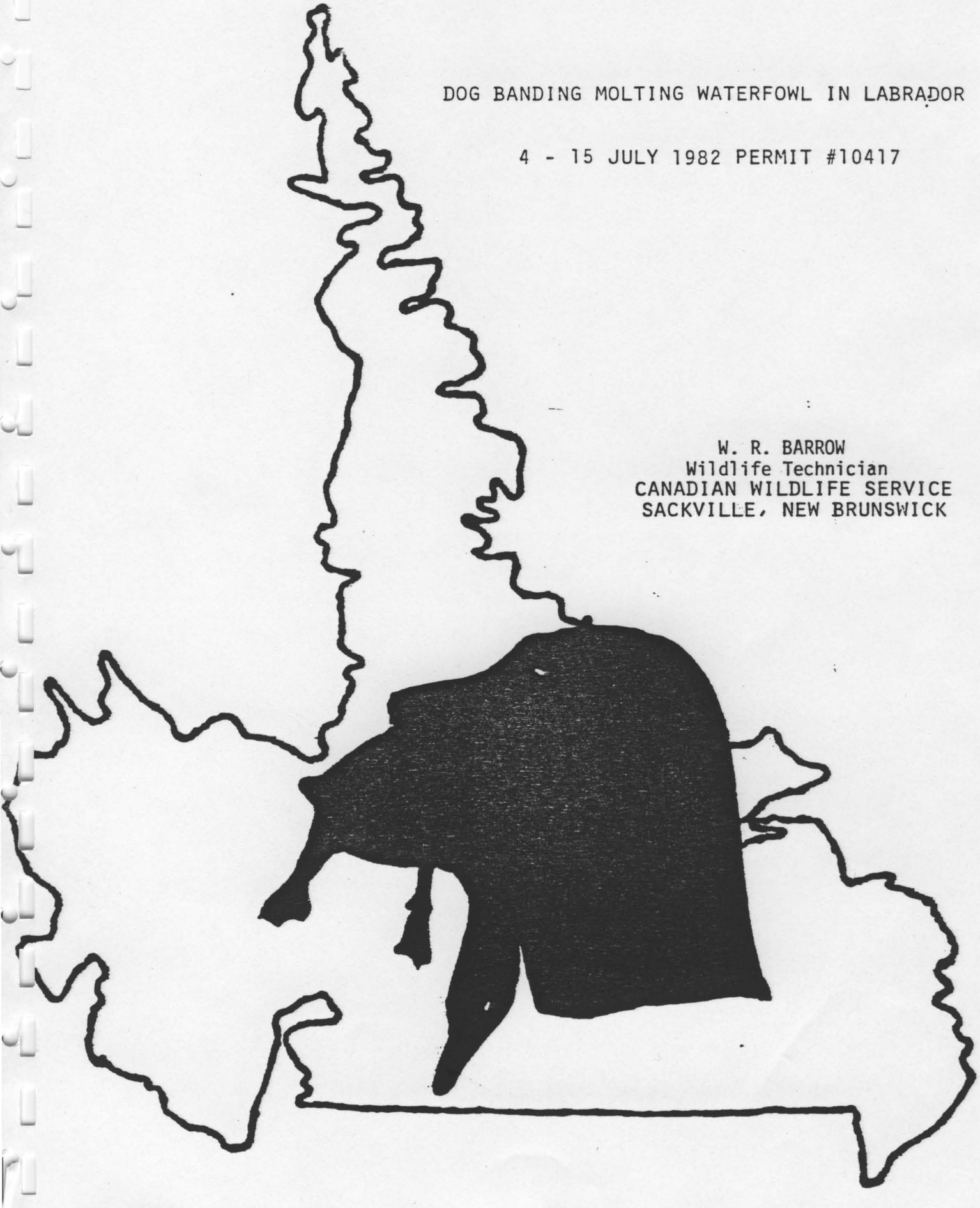
*: Final location of 1 of 18 total traps. Some traps caught only repeats/retraps and final total is designated "R".

Dog Banding
Labrador

DOG BANDING MOLTING WATERFOWL IN LABRADOR

4 - 15 JULY 1982 PERMIT #10417

W. R. BARROW
Wildlife Technician
CANADIAN WILDLIFE SERVICE
SACKVILLE, NEW BRUNSWICK



Dog Banding Molting Waterfowl in Labrador

4 - 15 July 1982 Permit #10417

Introduction

Waterfowl banding and related work in Labrador were sporadic prior to the 1980's. The Northeast Wildlife Station under Bruce Wright initiated banding at Tinker Harbour in 1947 followed by G. North (1950) and F. G. Cooch (1951). In 1954-55 C. P. Gilchrist and E. B. Chamberlain banded in Nain Bay and in 1962 Parker and Brown worked at Lobatick Lake which is now part of the Smallwood Reservoir. Population surveys were also carried out by the United States Fish & Wildlife Service in the early fifties and sixties.

In 1970 Doug Gillespie, Canadian Wildlife Service and Steve Wetmore, Newfoundland Wildlife Division carried out an extensive waterfowl survey in the Lake Plateau area of southwestern Labrador. Ten years later in 1980 Canadian Wildlife Service personnel from Sackville, New Brunswick repeated the "Plateau Surveys" and conducted an aerial strip census in Southeastern Labrador. The following year extensive ground studies of breeding waterfowl were conducted. In 1981 banding attempts were resumed at Tinker Harbour and initiated for the first time at Snegamook Lake in interior Labrador. During bait banding efforts at Snegamook Lake, approximately thirty Black Ducks were captured by use of a pointing dog. As a result, it was recommended and approved that an increased dog banding effort be tried in 1982.

Work Area

Three traditional molting areas for Canada Geese and Black Ducks pre determined by the most recent Canadian Wildlife Service surveys were worked in 1982. Two of these areas (Snegamook and West Micmac Lakes) are

located in the Postville Region, as designated under the Ecological (Bio-Physical) Land Classification of Labrador published by the Environmental Management Service, March 1977. It is described as follows:

Postville (18,140 sq. km: 6% of Labrador). "This region of sand and gravel plains, deltas and rugged hills extends west from Postville to include the Kanairiktok River. Generally only slow growing spruce and balsam fir forests occur in this region. Relatively better growing stands do occur along streams and lower slopes in the hilly districts. The excessively drained sand plains support a dense lichen growth".

Although located within the same region, Snegamook and West Micmac are quite different:

Snegamook Lake is a very large clear water lake located in the Kanairiktok River system as designated on 1:50,000 map sheets 13K11 & 12. The western portion of this lake is a complicated system of bogs, small lakes and ponds, inland bays and river systems which provide an area of unlimited habitat for molting waterfowl. A dog banding crew can easily work two weeks in this area without covering all molting habitat.

West Micmac Lake is a smaller muddy water system which can be worked in one and a half days. It is located in the Kaipokok River system and found on 1:50,000 map sheet 13K9E & W. The inlet island delta system was a very difficult area to work. A thick jungle of alder and willow grow to the waters edge and the muddy water makes any form of travel difficult.

Flat Water Bay is located within the Porcupine Strand Region (1390 sq. km: 5% of Labrador). "Bogs surrounded by forest on well drained sites typify this region which borders Groswater Bay. The many excessively drained sites

support open stands of black spruce with a lichen ground cover. These sites contain soil materials that are either deposited by glacial meltwaters or are remnants of former beaches. Bog development is predominant on poorly drained marine sediments. This Region's coastline, unlike adjacent Regions, becomes ice free as early as April.

The river system emptying into Flatwater Bay is found on 1:50,000 map sheet 131/4E. A large sedge meadow and pond area is maintained by numerous beaver dams and would require several weeks to cover; however, the upper limits of the river can be worked in two days. If important new molting areas are discovered, it would be an excellent area for an extended work period.

The three locations worked by dog in 1982 are shown in Figures 1-4.

Technique

An aerial survey over the work area helped locate bird concentrations after which two methods were used to capture molting waterfowl with a German Wire-haired Pointer.

Driving

During routine travel throughout the work areas small rafts of molting Canada Geese and Black Ducks were encountered. Some of those birds were forced ashore by slow zig zag maneuvers of the canoe and then worked with the dog.

Search

Many miles of fringe habitat had to be walked by the handler and dog. This area of dense sedge grasses interspersed with spiraea, willow

and alder was located between the water line and the spruce forest and was preferred by molting Black Duck as escape cover. Typically, the dog and handler were dropped by boat at a selected point and picked up later at a predetermined distance down the shoreline. Table 1 contains the results of the 1981-82 dog banding program.

Waterfowl behaviour

The gregarious nature of adult molting Black Ducks and Canada Geese in Labrador is favourable for a dog banding exercise. Both species were observed during ground and aerial surveys in small flocks (5-100) or in larger rafts on lake and river systems. Although sociable by nature, these birds never travelled together and their response to pursuit was somewhat different. Black Duck were observed and banded in all types of aquatic and terrestrial habitat. When approached from water a flock would attempt to hide by submerging all of their body, except the head and then fan out as an escape maneuver. By manipulating the boat and concentrating on the greater number of birds some could be forced ashore. Pushing the birds too fast caused some to dive or dispersed the flock too fast. Commonly as many as 20 birds could be forced ashore at one time. Of that number one might hide at the shore edge, five more might hide within fifty feet of the edge while the others would go hundreds of yards inland and circle back to the lake. It was amazing to see how fast those birds travelled and the distance covered over rough and dense terrain. Young birds were found to be as mobile as adults (Addy, Boyer, Cook, 1949). When banding with a Labrador retriever throughout New Brunswick, Nova Scotia and Prince Edward Island, immature birds were observed to travel several hundred yards inland in a

Table 1. Total dog banded waterfowl by area, sex and age class Labrador (1981-82)

Area	After Hatch Year Male	Female	Total	Bands used
Snegamook Lake 1981				
Black Duck	27	-	27	1147-01801-27
Canada Goose	1	-	1	628-75007
Snegamook Lake 1982				
Black Duck	60		60	1147-01835-94
Canada Goose	2	4	6	628-75008-13
West Micmac Lake 1982				
Black Duck	11		11	1147-01895-01900 1237-57401-5
Canada Goose	1	3	4	628-75014-17
Flat Water 1982				
Black Duck	26		26	1237-5746 - 31
Canada Goose	1	1	2	628-75018-19
			137	

matter of a few minutes. If not running, Black Duck are experts at hiding. Birds have been picked up under water, in holes, under tree roots and under massive piles of driftwood which sometimes stretched for hundreds of yards. Birds when pushed from water were difficult to catch unless there was no means of escape. For example, on one occasion a flock of eight Black Duck were pushed ashore at Sand Point on Snegamook Lake. Up-rooted trees at the water edge and a 20' bank made escape impossible and all birds were captured and banded. Also if Black Ducks can be pushed from the water to sedge cover they tend to travel less and hide more readily as demonstrated by a flock of 30 blacks pushed to a forested edge with a moss carpet understory. Only three of those birds were captured of which two were recaptures. It is certain that most travelled long distances whereas the presence of sedge cover would have allowed the birds to hide and thus remain stationary long enough to be found by the dog.

Sedentary does not describe a molting Black Duck as they have been observed swimming across miles of open water to new feeding areas or to satisfy their social requirements. In protected areas, however, it appears that they also spread out for food and cover requirements. This was an ideal situation for both the dog and Black Duck. Neither became excited and when approached the birds usually hid in the immediate cover. Occasionally, ducks were sitting quietly in plain view on shore and it was a simple matter to bend over and pick them up. Many birds were pointed in this situation and retrievals were usually short. Black Ducks seldom struggled when handled by the dog.

Canada Geese were always sighted on water and had to be forced to land before capture and banding. The behaviour of geese when approached by

water was similar to Black Ducks (low profile and dispersal), however, they were less excited and deliberate in their actions and very difficult to push ashore. Some would dive to avoid going ashore but once on land they would either hide immediately or most often head for the horizon and hide when tired. Black Ducks cannot compare to Canada Geese for speed and ability to go great distances over rough terrain. Like Black Ducks, there was no struggle or vocal behaviour when captured by the dog but unlike Black Ducks, Canada Geese could never be worked in the same area on successive days. This was clearly demonstrated by a flock of 150 geese which was worked in a delta of West Micmac Lake but could not be found either by boat or from the air the following day.

Costing

The expenses incurred in the 1982 dog banding effort are shown in the following table:

Salaries	Air fare	Air freight Boat Rental	Vehicles, Food and Lodging
1850.00	692.00	420.32	1872.30

Air charter fee (transportation of men & equip)	Aerial Surveys	Gas & Oil (Mis. supplies)
4990.00	3603.00	257.02

Total Cost	Total Black Ducks	Cost/ Black Duck
13,684.69	97	141.07

The cost ($141.00) to dog band a Black Duck in Labrador is relatively high when compared to other stations in Atlantic Canada. Over the past two years,

however, it has been an economically competitive method to band Black Ducks in Labrador.

Observations

Brood observations were probably the most important sightings. All records occurred during dog banding work and there was no attempt to do early morning or evening brood counts. Brood banding was impossible this year as all duck broods were too young and the adult geese were very aggressive.

Area	Date	Brood	Size and Class
Snegamook Lake	6 July 1982	Canada Goose (pr.)	4-1B
Snegamook Lake	6 July 1982	Black Duck (hen)	4-1B
Snegamook Lake	8 July 1982	Canada Goose (pr.)	3-1C
Snegamook Lake	8 July 1982	Canada Goose (pr.)	4-1C
Snegamook Lake	9 July 1982	Goldeneye (hen)	11-1B
W. Micmac Lake	10 July 1982	Canada Goose (pr.)	4-2A
W. Micmac Lake	10 July 1982	Canada Goose (pr.)	4-2A
W. Micmac Lake	10 July 1982	Canada Goose (pr.)	4-2A
W. Micmac Lake	11 July 1982	Gr.winged-Teal (hen)	4+-1A
W. Micmac Lake	11 July 1982	Canada Goose (pr.)	5-2A
W. Micmac Lake	12 July 1982	Gr.-winged Teal	broody female
Flat Water	12 July 1982	Gr.-winged Teal	2 broody females
Flat Water	14 July 1982	Canada Goose	broody adult
Flat Water	14 July 1982	Common Eider	15-1B (several broods)

Other Observations

Only Canada Geese and Black Ducks were found to be molting on the three work areas. A flock of forty Green-winged Teal were observed at Snegamook Lake and it was believed that they would molt later. Other waterfowl observed in small numbers were Mallards (2), Pintail (4), Goldeneye (2), Red-breasted Merganser (4) and Scoter (50). Two pairs of Osprey and Common Loons frequented the western half of Snegamook Lake.

At West Micmac Lake Red-breasted Merganser (3), Scoter (2), Goldeneye (1) and Am. Bittern (2) were observed and in the Flatwater area large numbers of Common Eider (500+), Red-breasted Mergansers (50+), Am. Bittern (2), osprey, Black Guillimot, loons and numerous gull colonies were seen.

The most spectacular mammal sightings were the Humpback and Minke whales at Flatwater. Other mammals included a cow and calf moose at Snegamook, 1 Black Bear and 2 beaver at West Micmac Lake and 1 otter at Flatwater.

Recaptures

A total of six Black Duck or 4.8% of the birds captured in 1981-82 were recaptures. The banding information is as follows:

Band Number	Age	Sex	Bander	Date(day/mo/yr)	Location
1157-74455	L	M	Maine F & W	27/08/79	Maine
1157-42915	AHY	M	Maine F & W	02/03/79	Maine
1187-80395	AHY	M	Pea Is. Refuge	19/01/81	North Carolina
1237-14981	AHY	M	P.E.I. F & W	05/02/82	P.E.I.
1287-35465	AHY	M	Mass. F & W	29/01/82	Mass.
897-73346	AHY	M	J.E. Forbes U.S. F & W	13/01/82	N.Y.

It is interesting to note that five of the recaptures were males, which were banded at winter banding stations in the southern part of their range. Only one bird was not banded as an adult. American researchers (Bellrose and Crompton 1970) have found that Black Ducks tend to return to their native marshes in the fall and winter. Also many people believe that after breeding, males move northward to secluded molting grounds. While those facts may explain the six recoveries, those birds could be part of the Labrador population. In either case, this population is certainly unique in that there have been no other sites in the Atlantic Region identified as molting areas for large numbers of male Black Duck.

Discussion & Recommendations

Relatively high costs require that future dog banding in Labrador be carefully evaluated by determining the importance of banding adult males to objectives of the banding program. To date dog banding is certainly the most efficient means of capturing Black Duck in Labrador. More birds were captured with a dog in ten days than over a several month period bait trapping. This will hopefully change, however, when the bait trapping technique is perfected at Tinker Harbour. The cost of future dog banding efforts will be nearly halved if volunteer help is used and only one area is worked. If these birds are a unique segment of the Black Duck population and if projected costs decrease, future dog banding efforts should be supported.

A 1983 program should include two dogs. Banding in Labrador is very hard on a dog and full recovery from a two week trip may take over a month. Dogs are required to work in ice cold water all day, travel through impregnable vegetation, experience cuts and bruises to their body, tolerate

stressful aircraft trips, endure over-exposure to inclement weather and suffer loss of appetite while working to the satsifaction of the handler. Two dogs would increase production and eliminate the risk of early termination of an expensive program due to injury to one dog.

A hunting bell should be used to eliminate mortality. If waterfowl (especially geese) are pushed ashore in dense vegetation, a bell will help in following the dog. Two geese were severely injured because of their size and long retrievals when the handler had no idea where the dog was. A frustrating situation occurs when the dog is off on a long track since the handler must be concerned about the return of his dog as well as the condition of the bird after a long retrieve. Also one Black Duck was injured when dug out a rubble pile. In addition to a bell, a good dog whistle is necessary.

As previously mentioned expenses can be cut substantially if only the Snegamook Lake area is worked. Camp site #2 is an excellent area for a base camp (Figure 2). Also it will be necessary to have early field camps at Molt Lake and Chain Lakes. This will save in travelling time and facilitate completion of work in those areas before water levels become too low. A more extensive aerial survey of the banding area just prior to initiation of work is recommended.

A two month period for advanced preparation is required. In addition to personal gear and camping equipment, several permits are required. Forest travel permits, firearm permit, and fishing permits can be obtained from the forestry and wildlife offices. A dog must have a certificate of health and a recent rabies shot obtained from a local vet. Once obtained,an import permit can be issued by the Animal Health Section, Department of Rural Agriculture and Northern Development, St. John's,

Newfoundland. Travel arrangements should be arranged with local airlines as well as the bush plane service.

Proper equipment is a must for any successful field operation. The following listing is your most basic gear requirements with quantity and quality depending on the individual.

(1) 17' canoe & 4 H.P. motor
(2) paddles and life jackets
(3) gas cans (3)
(4) 2 cycle oil & lubricating oil
(5) plywood flooring for canoe
(6) burlap bags (4)
(7) small tool box
(8) 2 - 3 man tents
(9) sleeping bags and mats
(10) tarp & rope
(11) first aid kit
(12) banding kit
(13) shotgun & shells
(14) flashlights
(15) back packs
(16) duffle bag
(17) waterproof maps
(18) cooking & eating utensils
(19) catalytic heater
(20) cooler
(21) UHF radio

(22) binoculars

(23) 1/4" packing boxes and 5 gal pails

(24) wash basin and mirror

(25) matches and candles

(26) warm field clothing and rain gear

(27) fly dope (man and dog)

(28) shovel, hammer, axe and saw

(29) nails, spikes, wire

(30) fibreglass repair kit

(31) gromet repair kit

(32) flagging tape

(33) garbage and plastic bags

The above equipment and food should be packed in durable light weight containers which can be moved, packed easily in small aircraft and also serve as chairs etc. at the camp site.

W. R. Barrow
Wildlife Technician

R. Hicks
Field Assistant

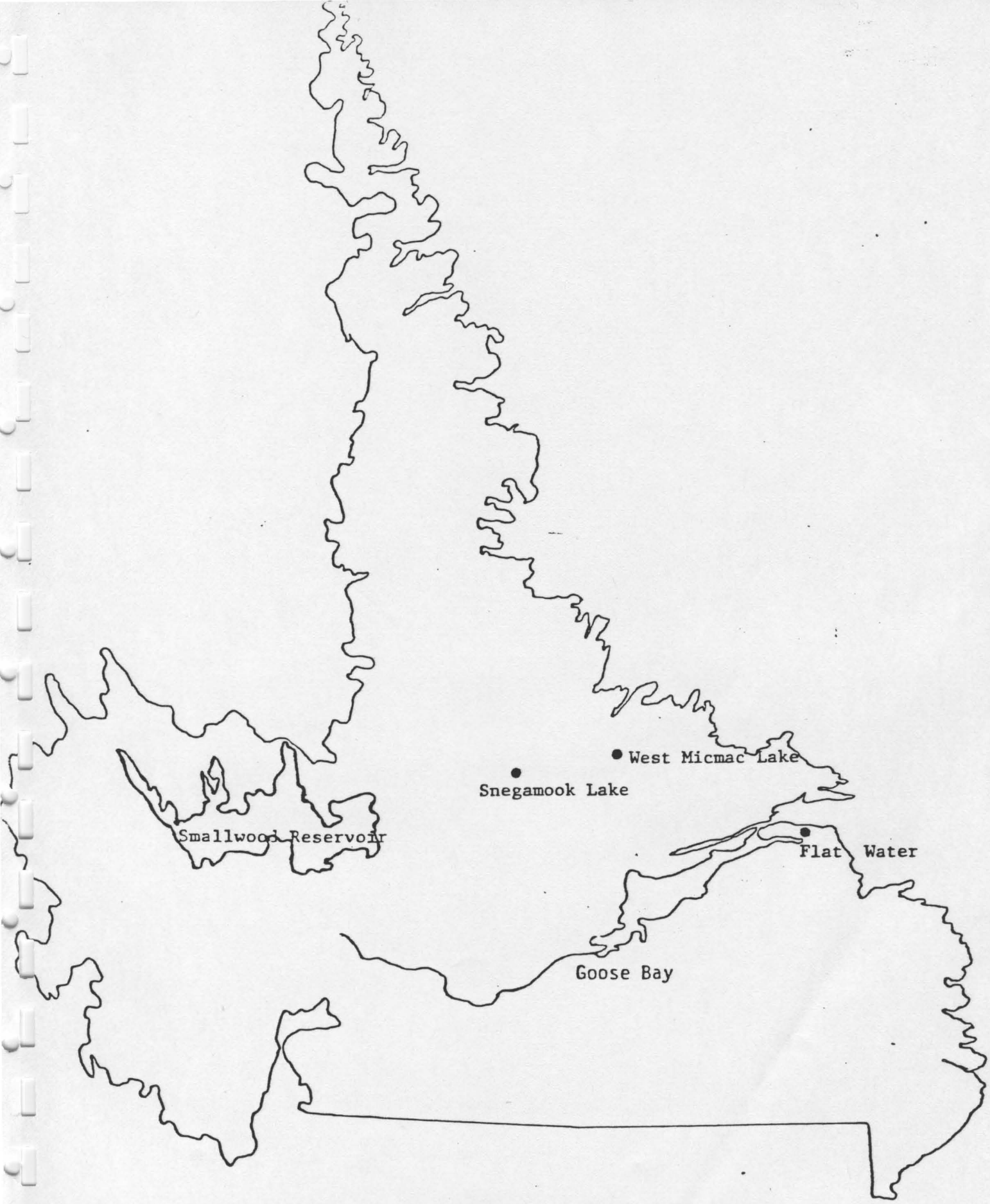


Figure 1. Dog banding locations Labrador 1982— •

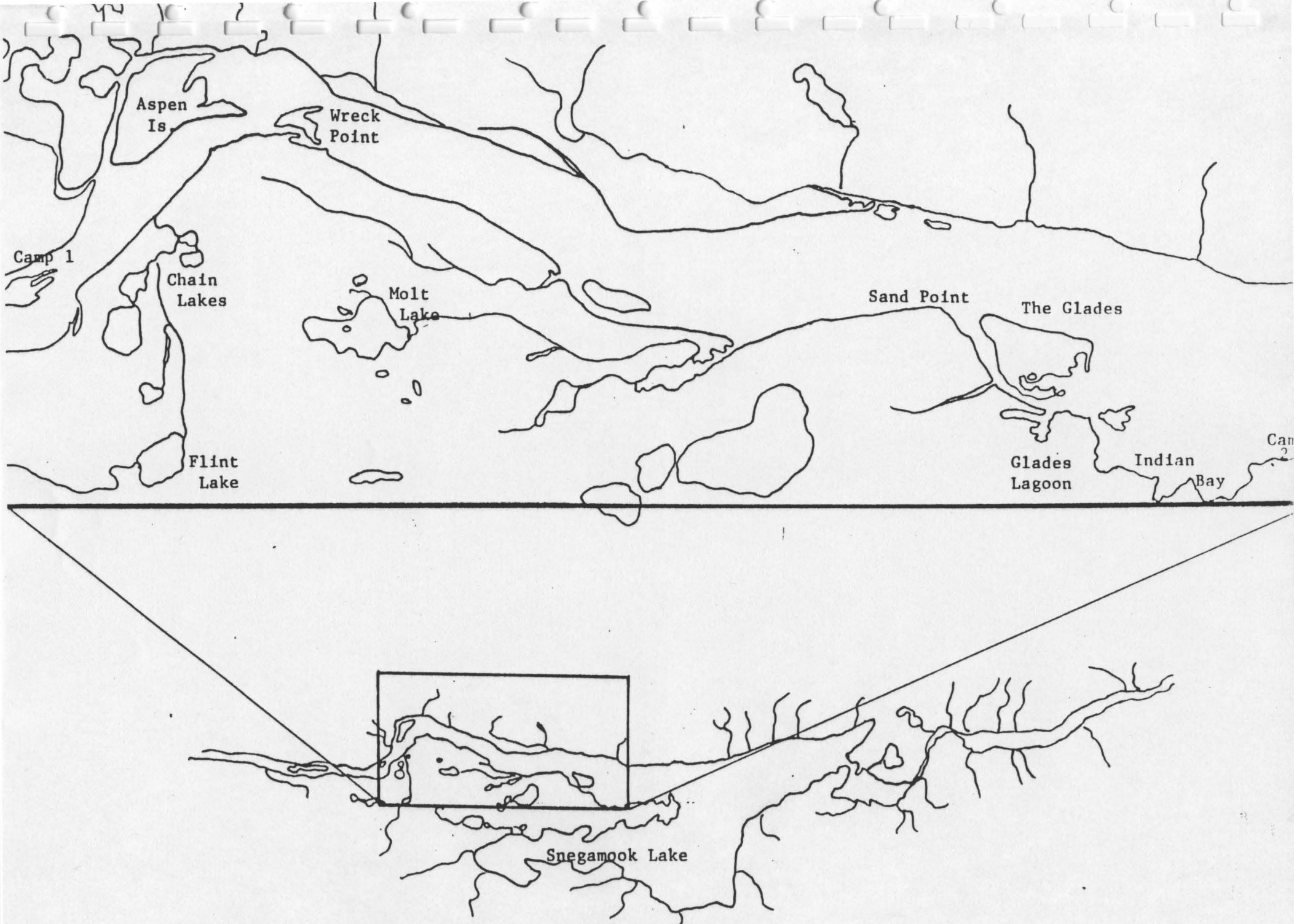


Figure 2. Snegamook Lake and enlargement of work area.

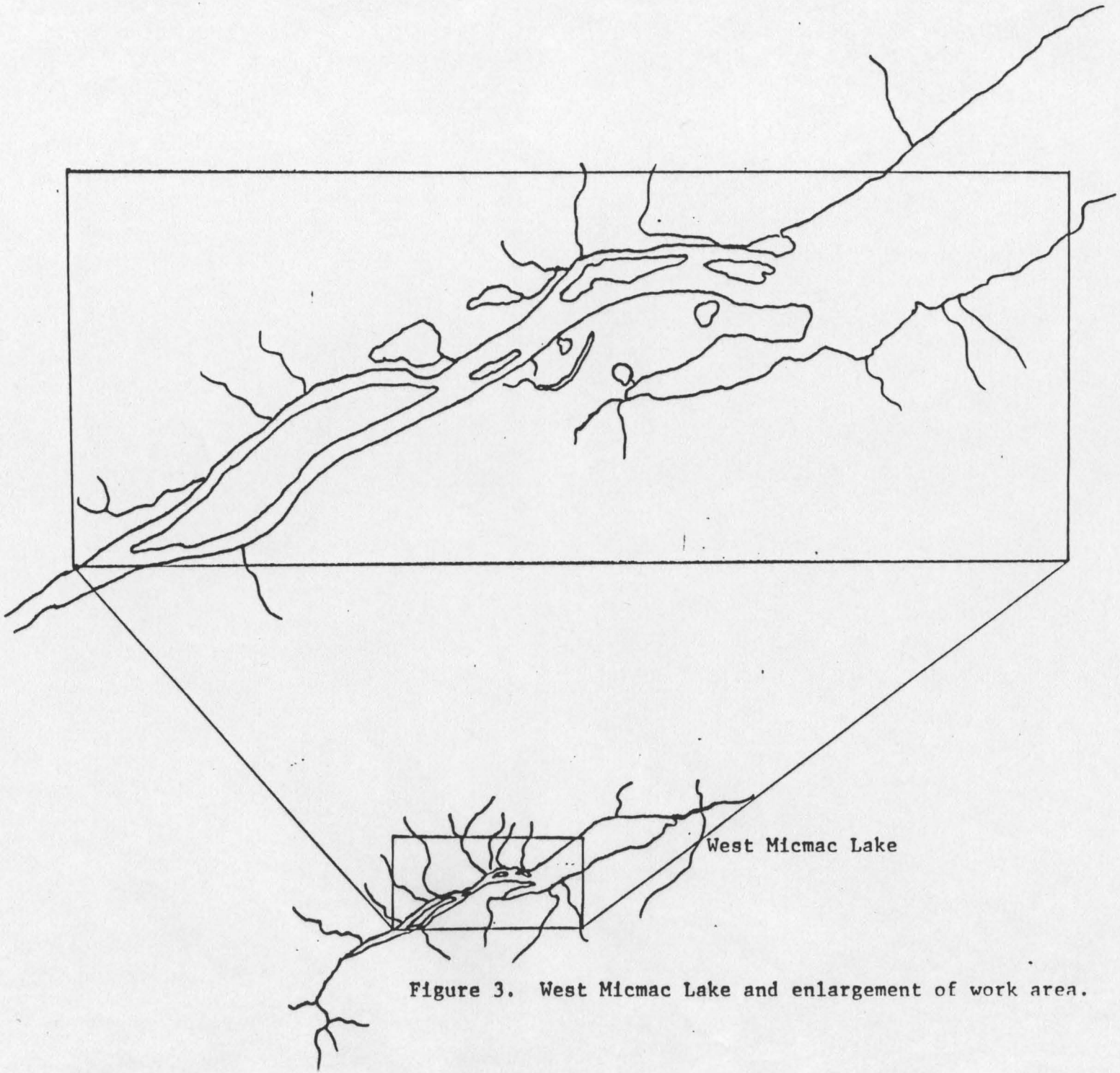


Figure 3. West Micmac Lake and enlargement of work area.

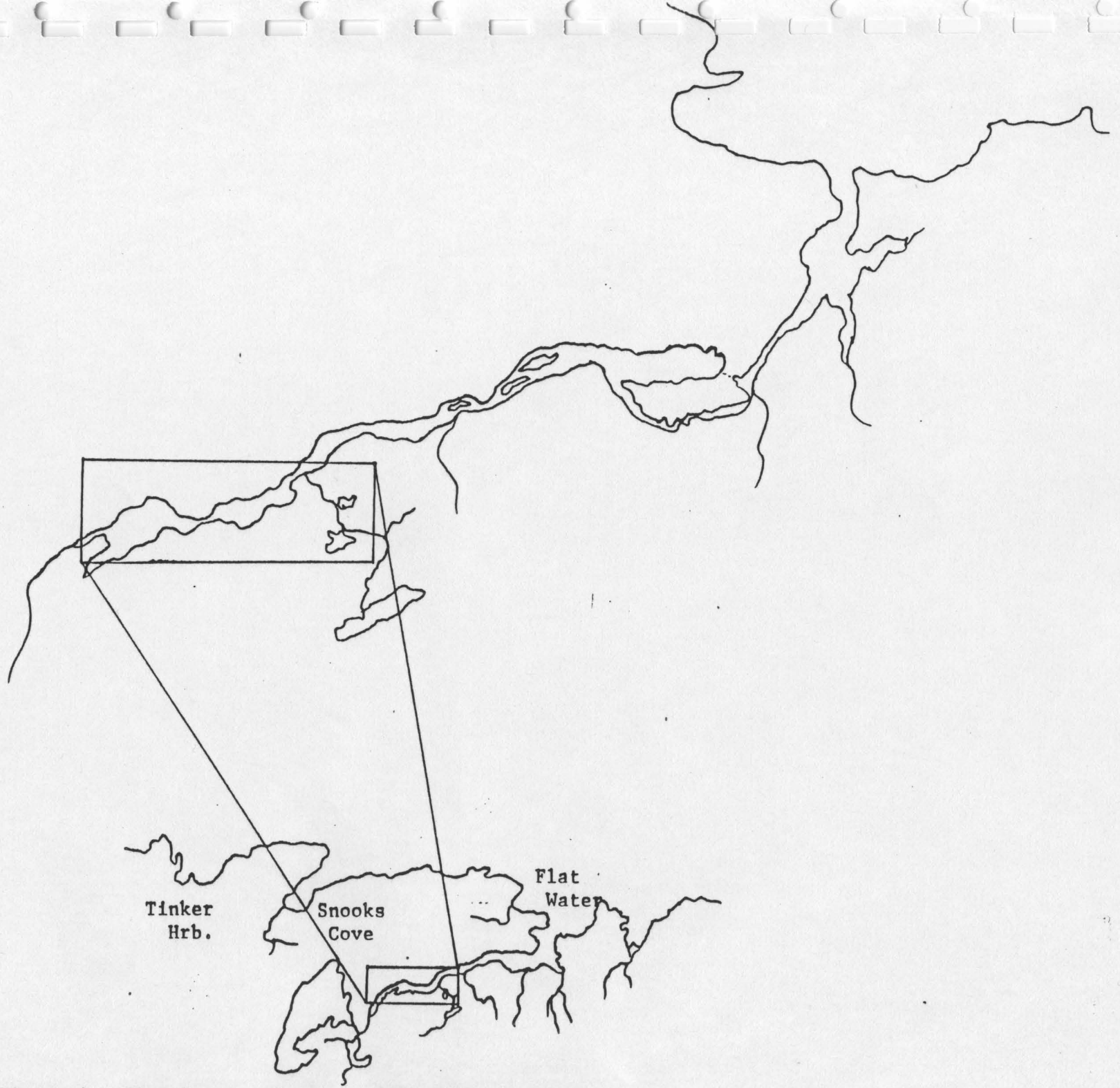
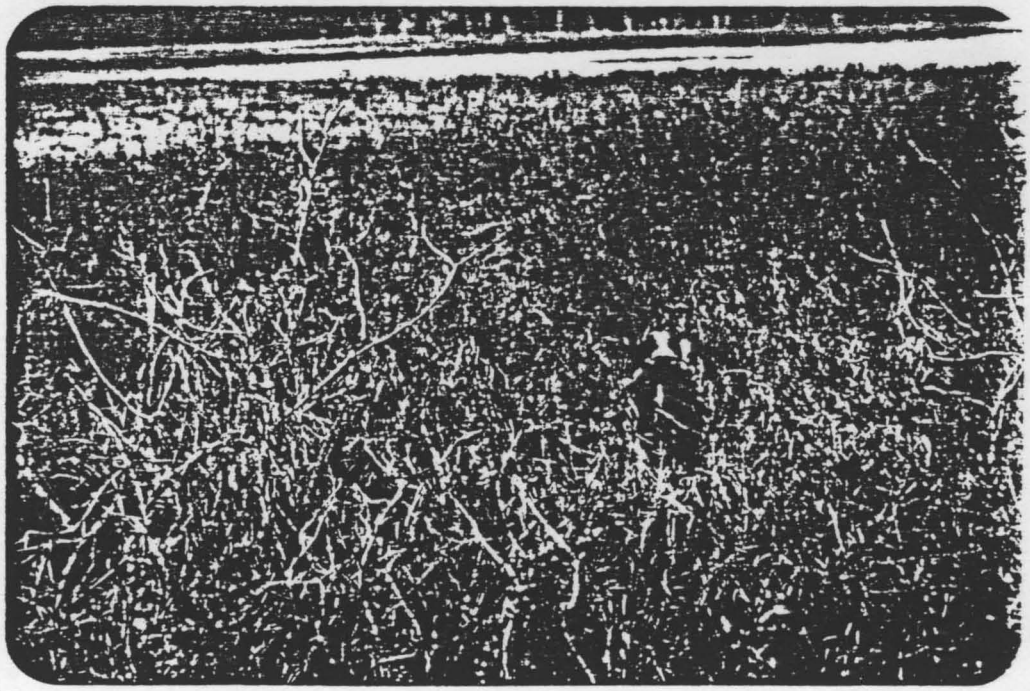


Figure 4. Flat Water and enlargement of work area.



LABRADOR

NAIN BANDING PROJECT 1982

W. R. WHITMAN AND G. P. GILCHRIST

Labrador
Nain Banding Project 1982
W. R. Whitman and G. P. Gilchrist

During early August, 1982 an attempt was made to duplicate and improve upon Gilchrist and Chamberlain's (1955) efforts to band moulting goldeneyes by use of entanglement nets at the mouth of the Fraser River in Nain Bay (Figure 1). This project was funded cooperatively by the Atlantic Flyway states, the U.S. and Canadian Wildlife Services and the Province of Newfoundland. Personnel operating the station included W. R. Whitman, J. Maxwell and A. R. Lock from the Canadian Wildlife Service; C. P. Gilchrist from the State of Virginia Wildlife Division; W. Anderson III from the Newfoundland Wildlife Division and M. Berger, a wildlife student volunteer. Particularly valuable to the project were the services of Mr. Charles P. Gilchrist who initiated the original banding attempt in 1955 and Mr. William Anderson III, a native of Nain that is intimately familiar with Nain Bay and Fraser Canyon.

Methods and Results

Preliminary aerial surveys for the Nain project were initiated in early July to confirm that sufficient numbers of goldeneye were present in the proposed banding area to justify an attempt to capture and band. Those surveys found 1000+ goldeneye at the mouth of the Fraser River and Nain Bay confirming observations made by Gilchrist and Chamberlain in 1955 and A. R. Lock in 1980 and 1981. At the time of the July surveys all birds were flying indicating that the moult had not yet started.

Based upon this information and the recommendations in the 1955 report, a banding attempt was initiated on August 1, 1982. Personnel arrived in Goose Bay and began organization of equipment and purchase of supplies for the project

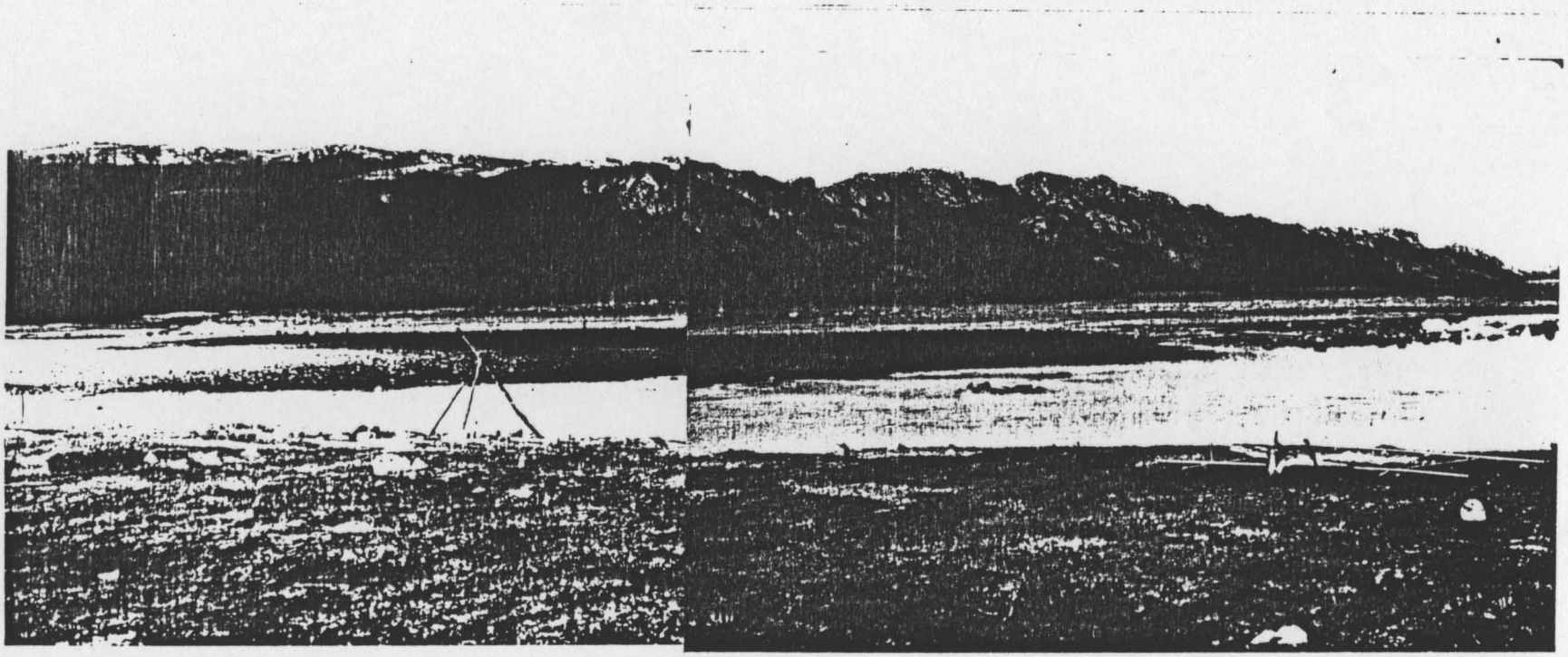


Figure 1a. Pool at Camp Site where molting goldeneye were trapped in 1955.

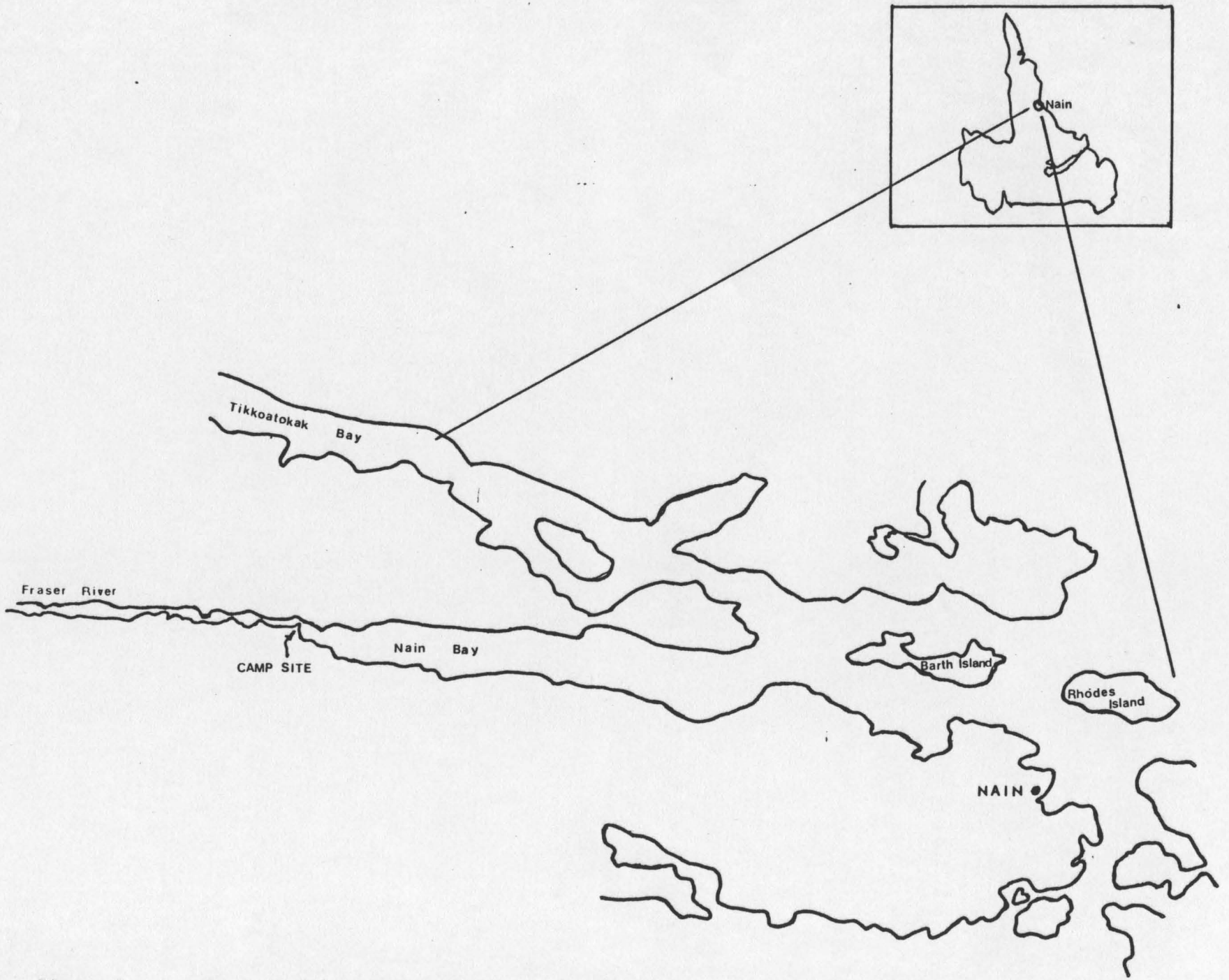


Figure 1. Location of Nain Banding Station - 1982

on August 1-2. On August 3 three CWS staff, a student volunteer and all necessary equipment departed Goose Bay for Nain via a chartered single Otter aircraft. Transportation of personnel and equipment from Goose Bay constituted a major expense to the project; however, the less expensive alternate transportation by coastal ferry would have required several days travel time. Rendezvous with William Anderson III was made by mid-day in Nain and all equipment and supplies were loaded aboard a 24' James Bay freighter canoe powered by a 25hp Mercury outboard motor and a 16' aluminum craft with a 50 hp motor. A 16' rubber Zodiac with a 9.9 hp motor was also available primarily for carrying personnel and driving birds. The five crew members and gear departed Nain early in the afternoon of August 3 enroute to the banding site at the mouth of the Fraser River about 35 miles northwest. Approximately 300-500 flightless goldeneye were observed in the vicinity upon arrival but were not concentrated at the river mouth as noted during earlier surveys and banding attempts. A tent camp was established (Figure 2) and preparations for banding were initiated including sorting of gill nets and hanging of drive trap nets (Figure 3).

Since the birds were not concentrated in the camp site pool as in the past, the most effective location for setting nets could not be used. As a result, nets had to be set at extreme low tide from 0.5 to 1 mile down stream from the camp site. Nets were stretched among rocks along the shoreline toward the river channel as far as water depth permitted (Figure 4). Strong currents made anchoring and holding nets in place difficult and caused significant bowing at the best of times. The period during which birds could be effectively driven lasted no more than 45 minutes before the tide submerged the nets. The birds rested in broad open water about 0.25 miles from where the nets were set making it nearly impossible to herd large numbers to the vicinity of the nets. Most

Figure 2. Tent camp at mouth of Fraser River

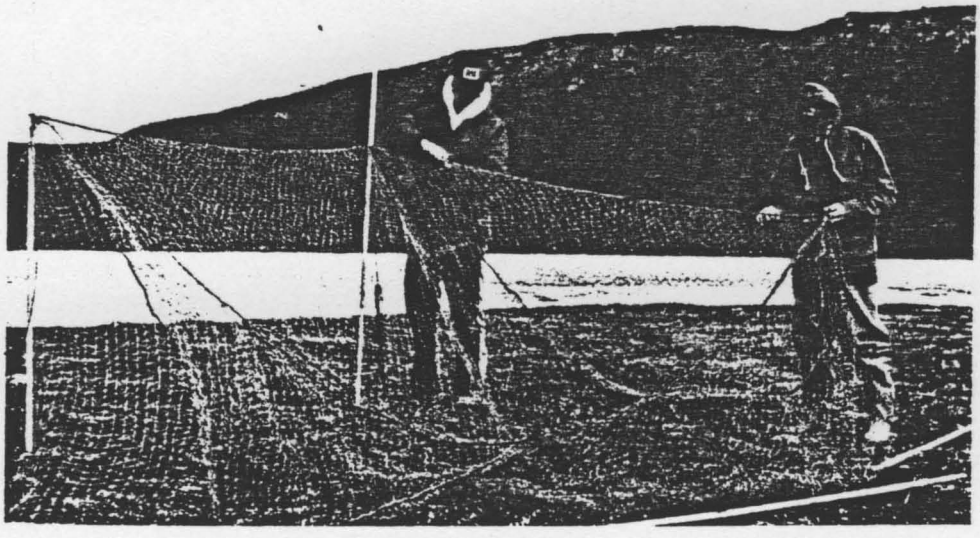


Figure 3. Hanging gill nets in preparation for drive-trapping

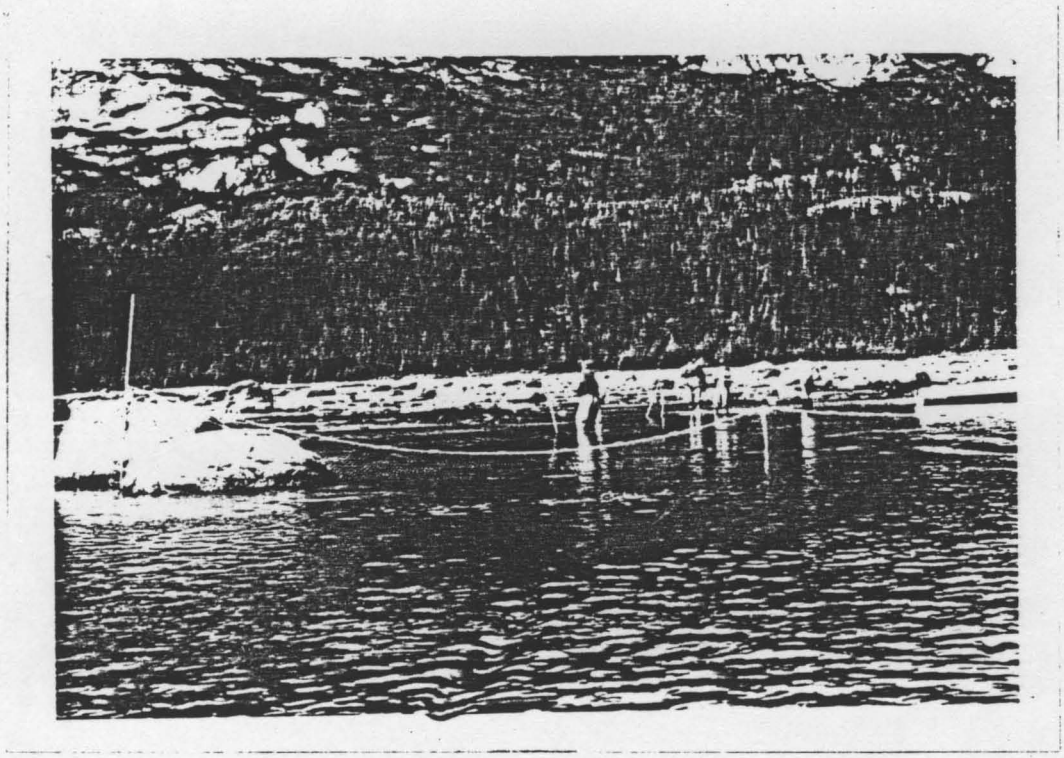


Figure 4. Setting nets for drive-trapping

birds would dive and swim under or past the drive boats surfacing behind; however, about 25-50 birds usually reached the shallow water where escape by diving was impossible. By the time that those birds could be driven to the location of the gill nets, the tide level had increased allowing birds to swim around or over the gill nets. Use of bag-type drive net was completely impractical due to the time involved in setting it up and the presence of strong currents.

Gill nets were set a total of five times during periods of low tide from August 4-6 in attempts to capture goldeneye. With each set fewer and fewer birds appeared to be available for driving suggesting that some movement to other parts of the bay was occurring. Frustrated by the lack of success, an excursion was made into Nain on August 7 with the objective of chartering a float plane to search for other concentrations of waterfowl. Nain Bay and surrounding environs from Voisey Bay to the South to Okak Bay in the north were surveyed. No significant concentrations of goldeneye were found outside of Nain Bay; but concentrations there were observed as much as ten miles from the camp-site. Obviously, goldeneye within the Bay were highly mobile moving in response to disturbance and tidal action. Based upon results at this point and aerial observations, it was concluded that trapping of flightless goldeneye was not possible at that time. The survey crew proceeded back to the camp site with the intention of terminating the project; however, when approaching the trapping area, significant numbers of goldeneye were again observed moving slowly ahead of the boat. With this new encouragement, it was decided that one more attempt should be made to drive-trap birds. The sixth and final attempt was made at low tide on Sunday August 8, 1982, without success.

On August 9, camp was dismantled and the crew began the return trip to Nain. Enroute it was necessary to pass close to steep cliffs on the south side

of Nain Bay. At the base of those cliffs (Figure 5) approximately 200-300 goldeneye were found in a broken string formation extending for nearly 0.5 miles. As the crew approached the birds hugged tightly to the cliffs while moving along in front of the boats. Obviously a potential for drive-trapping existed and the return to Nain was temporarily interrupted to take advantage of the situation. Nets were anchored at the base of the cliff and extended perpendicularly into the water as far as depth would allow which was not more than 15-20' due to a steep drop off. Two boats proceeded to drive the birds toward the net from both east and west directions along the cliff while the third boat anchored offshore from the net observing progress with binoculars. As the birds approached the net alternately from the east and west, the drive boat and the observation boat rushed toward the site causing the birds to panic and hit the net. On each of four drives, three to four birds were retrieved from the net and banded. A total of twelve birds were captured, banded and released in this manner before flocks became scattered seeking the safety of the broad open Bay. Whether or not this situation could be repeated at this site or at several other similar sites around the Bay with regularity is unknown. It does, however, appear to be the only circumstances under which moulting goldeneye can be captured.

The following table shows a breakdown of goldeneye captured by species, sex and age.

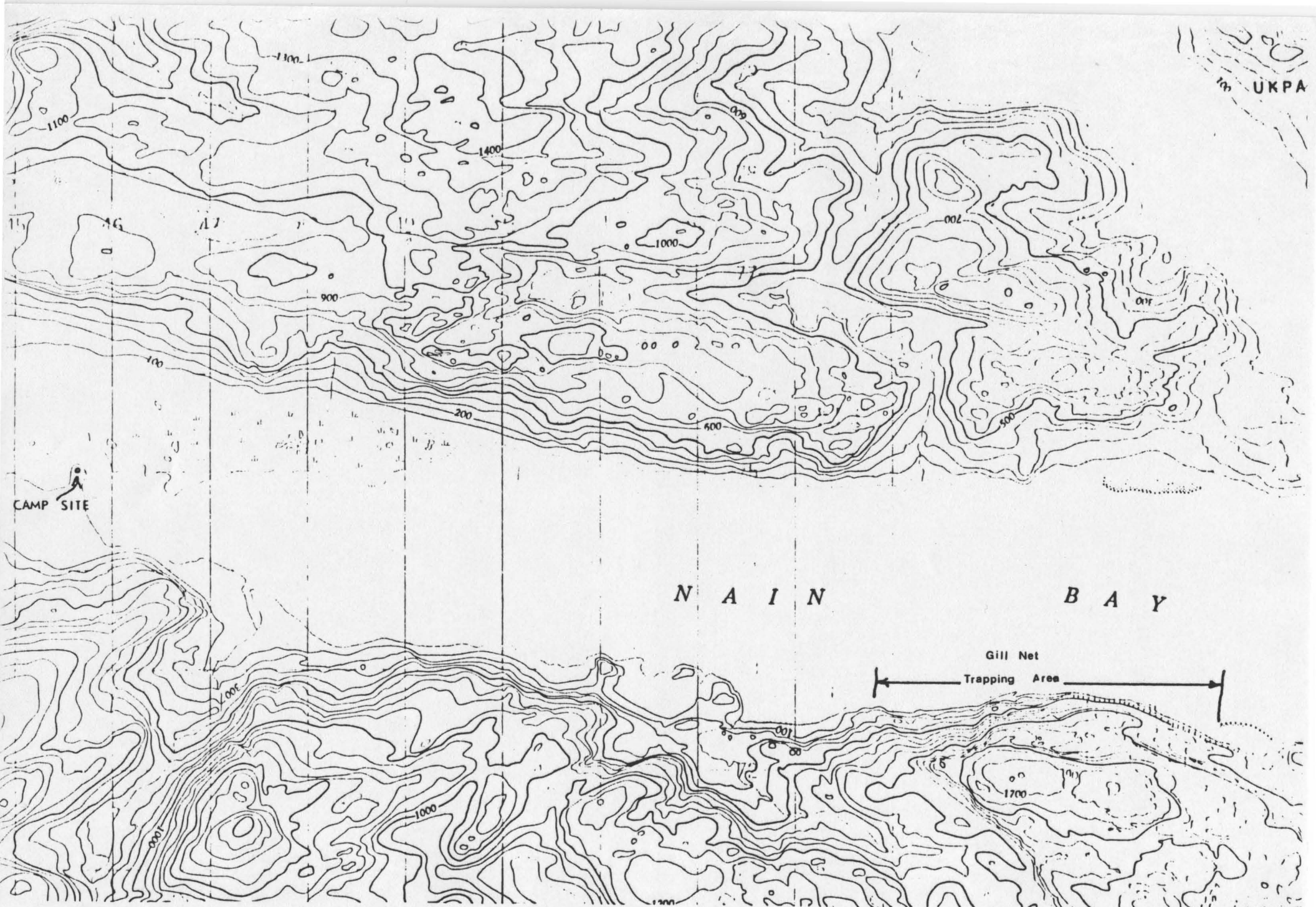
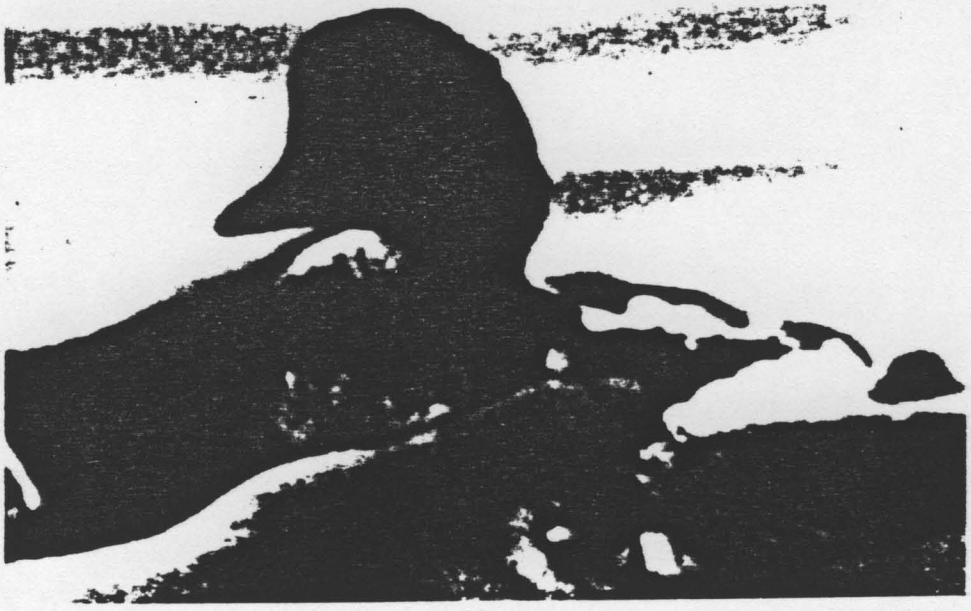


Figure 5. Location of Potential drive-trapping site at base of cliffs.

Species	Sex	Age	Band Number
Common Goldeneye	M	Adult	876-01418
Common Goldeneye	M	Adult	876-01419
Barrow's Goldeneye	M	Adult	876-01420
Common Goldeneye	M	Adult	876-01421
Barrow's Goldeneye	M	Adult	876-01422
Barrow's Goldeneye	M	Adult	876-01423
Barrow's Goldeneye	M	Adult	876-01424
Barrow's Goldeneye	M	Adult	876-01425
Barrow's Goldeneye	M	Adult	876-01426
Barrow's Goldeneye	M	Adult	876-01427
Common Goldeneye	M	Adult	876-01428
Barrow's Goldeneye	M	Adult	876-01429

The ratio of Barrow's and Common goldeneye in the banded sample appeared to approximate that in the total molting male population observed in Nain Bay. Identification of the two species based on bill and head shape (Figure 6) was relatively easy for birds in the hand as well as for those observed at short distances with binoculars. Of the birds examined in hand, several possessed plummage characteristics that confirmed identification. It can be stated with confidence that at least 50% and perhaps as much as 75% of the moulting male goldeneyes in Nain Bay in early August are Barrow's. This confirms an observation by E.B. Chamberlain of a 50-50 ratio in a flock of 1500 goldeneye at the head of Nain Bay (from Bellrose, 1976).

Common



Barrow's

Figure 6. Head contours of Common and Barrow's Goldeneye

The initial cost of establishing banding operations in Nain Bay was high in terms of birds banded. This can be attributed to the high cost of transportation, materials and supplies in the North; the experimental nature of the first year; and constant inflation. Considerable survey time by chartered aircraft was necessary to locate bird concentrations and document movements to and from potential banding sites. Together with the cost of transporting personnel and equipment to the banding area, those activities accounted for more than 50% of the project costs. With the background and experience established in 1982, the total cost of any future banding attempt in this area can be greatly reduced while insuring increased success. The following table lists 1982 costs for the Nain Banding project.

Item	Co-op Funds	CWS	Total
Salaries	300.00	4500.00	4800.00
Meals and Lodging	1805.00	0.00	1805.00
Vehicles	219.08	-	219.08
Boats	354.33	-	354.33
Planes	2941.00	1773.00	4714.00
Travel (airfares, freight, etc.)	4621.60	200.00	4821.60
Miscellaneous (Repairs, expendable equipment, etc.)	402.00	150.00	552.00
TOTAL	10643.01	6423.00	17266.01

The above represents an over expenditure in Co-op Funds of $2023.01. In addition it should be noted that the Newfoundland Wildlife Division indirectly supplied funds to the project by providing equipment and manpower. Without their cooperation and assistance, the project could not have been conducted as thoroughly.

Recommendations

High costs and low success are often characteristic of new banding sites in the north; however, once background data and experience are established expenses can usually be significantly reduced while increasing success. After the first one or two seasons, expenses and the number of birds banded should remain constant. With the background and experience gained in 1982, a second attempt to band in the Nain area is considered feasible. Information on goldeneyes and Canada geese is lacking in the Atlantic Region where significant numbers of both species are produced. Aerial surveys in recent years and banding attempts in 1954, 1955, and 1982, confirm that large numbers of flightless birds are present during July and August. In addition, black duck, the target species of the Co-op Program, are also present in large numbers during the same period and were successfully banded by Gilchrist and Chamberlain in 1955. A second attempt should be geared to the banding of all three of the above species. The following recommendations and costs should be applied to the continuation of the Nain banding project.

1. Banding at Nain should be second in priority to other eastern Canadian stations that have demonstrated a high degree of success.
2. Two local personnel from Nain should be hired and trained to operate the banding project.

3. Both bait and drive-trapping should be conducted throughout July and August.
4. Target species should include black duck, goldeneye, and Canada geese.
5. Estimated cost to the Co-op Fund is $5000.00 salaries (2 men for 8 weeks) and $3000.00 for training, shipment of freight, materials and supplies.

Literature Cited

Bellrose, F. C. 1976. Ducks, Geese and Swans of North America. Wildl. Mgmt. Institute, Stackpole Books, Harrisburg Pa. 543 pp.

Gilchrist, C. P. and E. B. Chamberlain. 1955. Summer banding in Labrador, 1955. Unpublished report. 26 pp.

Codroy River
Newfoundland

1982 Banding Project Report

Codroy River, Newfoundland

Banders:

Eric Wade

Tim Bowman

Codroy River Newfoundland - Bait Trapping Project 1982

A total of 450 birds of 5 species were banded in the Codroy River (Newfoundland) area between August 23 and October 8. Traps were situated in the small cove below Cormier's Chicken Farm, and also at the mouth of Brooms Brook. A map showing trapping areas is shown in Figure 1.

Bait trappers Wade and Bowman arrived at Gillis' Cabins in Great Codroy on August 23 with full complement of gear. Equipment was stored away. A survey of the area revealed that there were few birds using the river at least in the day time.

On August 24 several spots in the cove above Martins Cabins were pre-baited and the next day a small grassy island below the school was pre-baited. Approximately 50 Green-winged Teal had been seen using this area on a regular basis.

On August 27 the first trap was erected without netting. Netting was placed on the trap on August 29, and the first birds were trapped on August 30.

Trapping continued quite productively until the night of September 6 when the trap above Martins Cabins was raided and an unknown number of birds removed. The following Thursday the small trap below the school was also visited by poachers. The trap was closed and removed a few days later.

It was decided at this point to abandon trapping sites on that side of the river. Another area was found approximately 2 miles below Gillis' Cabins at the mouth of Brooms Brook. Three traps were set in this area and trapping continued successfully until September 23 when a mink visited 2 of the traps resulting in the loss of 22 GWT. The scene of this massacre was unfortunately visited by an elderly local by the name of Bill O'Quinn who

who became very upset and called Roy MacIssac the district Wildlife Officer who informed us of a serious problem brewing. We quickly decided to meet with Mr. O'Quinn and a Mr. Walter Gale. Once the details of the mishap were explained and the purpose of the project outlined the two gentlemen appeared to be satisfied and their minds were put at ease.

Banding continued with the traps being checked before the low tides to avoid predation by mink and this appeared to solve the problem.

Recommendations

1. The people of the Codroy area would probably view the banding project more favourably if advance meetings were held to discuss the methods of trapping, reasons for banding and what can be learned from the information. This would be a good chance to meet with the locals and answer some of their questions. We spoke to Roy MacIssac as well as a few other people in the area and they all seemed to agree that it would be a good idea and would be willing to help in any way they could.

It would require a slide show, some handouts and a good oral presentation to be given at the school or at the Lion's Club.

2. Banders should be equipped with a few small live-traps to be set in areas where mink might be present and have easy access to the traps.

3. Some consideration should be given to changing the dates of the project for another year. It seems that the birds congregate there in larger numbers later in the season. As stated at the beginning of this report, there were very few birds in the area when we first arrived but numbers began to increase by the second week of September. It might be worthwhile keeping in

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Banding continued with the traps being checked before the low tides to avoid predation by mink and this appeared to solve the problem.

Recommendations

1. It appears that the people of the Codroy might be more co-operative in regards to leaving the traps along if a presentation were given, prior to the commencement of the banding project, dealing with methods of trapping, reasons for banding and what can be learned from the information. This would be a good chance to meet with the locals and answer some of their questions. We spoke to Roy MacIssac as well as a few other people in the area and they all seemed to agree that it would be a good idea and would be willing to help in any way they could.

It would require possibly a slide show, some handouts and a good public speaker to be given at the school or at the Lion's Club.

2. Also, banders should be equipped with a few small live-traps to be set in areas where mink might be present and have easy access to the traps.

3. Some consideration should be given to changing the dates of the project for another year. It seems that the birds congregate there in larger numbers later in the season. As stated at the beginning of this report, there were very few birds in the area when we first arrived but numbers began to increase by the second week of September. It might be worthwhile keeping in

touch with Roy MacIssac as he spends a lot ot time in the area and could give you a good idea of the numbers of birds using the area at any time. It seems, from what we have seen, and what some of the local residents have told us that birds gather in the river, when cold weather freezes the smaller ponds in the mountain area.

4. More netting is required in order that more traps be built for ducks and to facilitate the construction of traps for geese. Along with the netting, some full length poles are required to anchor the traps in mud and loose gravel.

5. Trapping in the Brooms Brook area should be a priority due to the large numbers of birds which congregate there and also the fact that the traps can be checked from the road by using binoculars. By keeping a close eye on the traps in this manner, traps can be emptied at times when other birds in the area would not be disturbed. It would also be a deterent to poaching. Traps placed on the other side of the river, above Martins Cabins are always in danger of poachers as they can easily be reached by wading or using a boat.

Conclusion

All in all the 1982 Banding Project seemed to be quite successful and the cooperation given us by the Federal Department of Fisheries was extremely helpful. However, the Migratory Bird Division of the RCMP showed little interest in the project even when called upon for assistance during our time of need i.e. poaching problems. It is understandable that their responsibilities in other areas may have prevented them from being of any help but their failure to touch base with us upon two requests seems a little strange. Possibly, this could be easily remedied next year.

As stated before, the assistance of the Federal Fisheries Officers namely Doug Rowe - Cornerbrook, Mike Wall - South Branch and Doug Butt - Port Aux Basques proved invaluable. Their assistance came in the form of storage space at their warehouse in South Branch and access to any equipment that they had on hand. It should be noted here that the equipment left in Newfoundland is at the South Branch Warehouse and can be picked up by calling Mike Wall whose phone numbers is included below.

People who should be contacted upon arrival in Codroy area:

George Pardy - Federal Enforcement Officer - St. John's CWS Office

Office: 772-5585
Home: 368-9020

Mike Wall - Federal Fisheries Officer - South Branch

Office: 955-2214
Home: 955-2340

Roy MacIssac - Provincial Wildlife Officer - South Branch

R.C.M.P. - Cornerbrook

Office: 634-4357

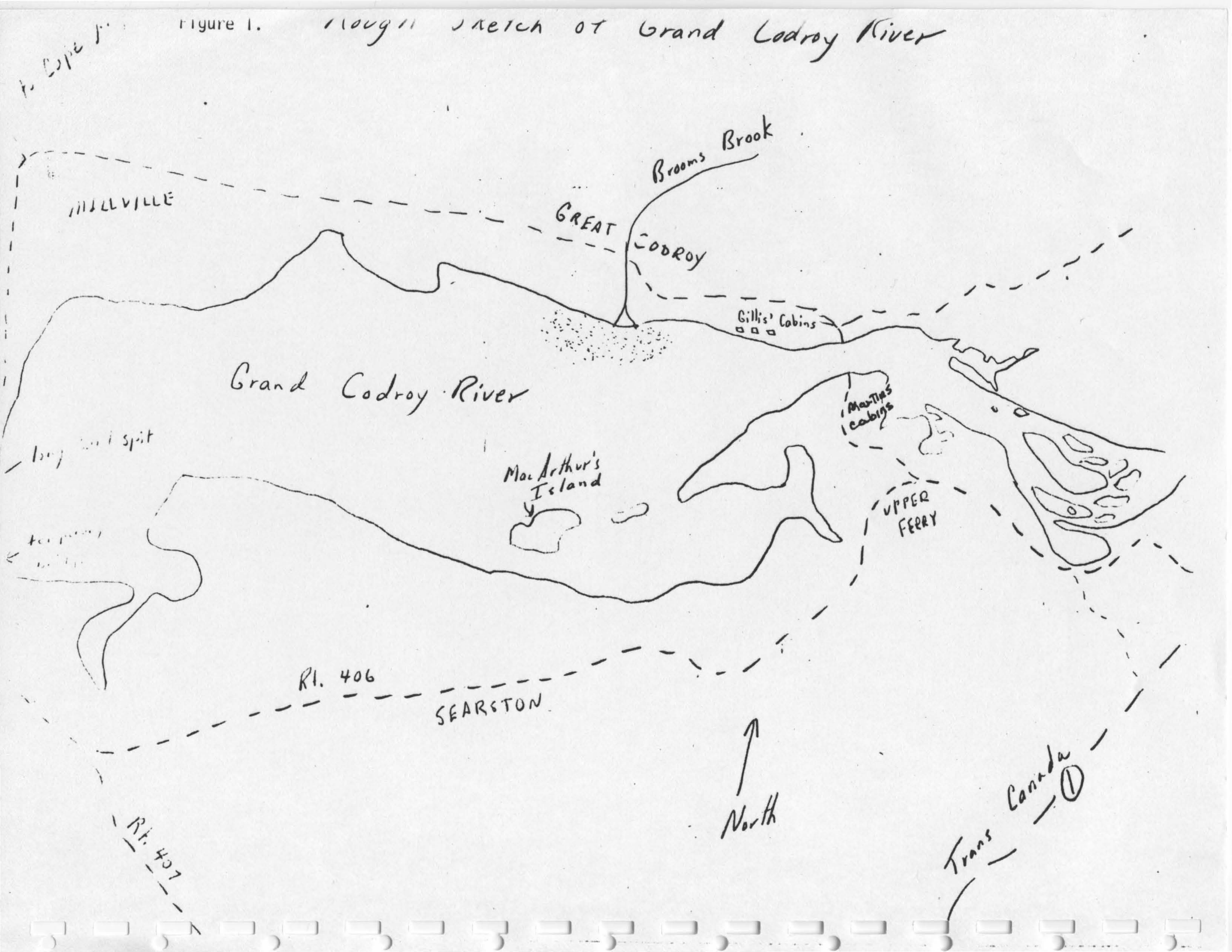
R.C.M.P. - Port Aux Basques

Eric Wade
Tim Bowman

Table 1. Age and Sex Breakdown - Co-operative Banding, 1982 - Codroy River

Species	Hatching Year				After Hatching Year				Totals			
	M	F	U	Total	M	F	U	Total	M	F	U	Total
Black Duck	134	99	-	233	1	9	-	10	135	108	-	243
Mallard	1	3	-	4	-	-	-	-	1	3	-	4
Green-winged Teal	90	103	-	193	2	3	-	5	92	106	-	198
Blue-winged Teal	-	1	-	1	-	-	-	-	-	1	-	1
Pintail	1	3	-	4	-	-	-	0	1	3	-	4
TOTALS	226	209	0	435	3	12	0	15	229	221	0	450

Figure 1. Rough Sketch of Grand Codroy River



Border Area
NB/NS Bait Trap

Waterfowl Bait Trapping Report
Border Region
27 July - September 3, 1982

Banders:
Robert Watt
Tim MacDonald
Doug Hounsell

INTRODUCTION

A waterfowl banding operation was undertaken for a period of approximatly six weeks, from July 27 through September 3 1982. Waterfowl were captured in baited wire funnel traps, aged, sexed, banded, and finally released with as little resulting trauma to the birds as possible. Two seperate areas were trapped for a total of 338 trap days. The two areas trapped were; the waterfowl impoundments located in the Amherst Point Bird Sanctuary, and the impoundments located in the John Lusby Salt Marsh. Both areas are in the vicinity of Amherst Nova Scotia.

A total of 752 individuals were banded representing 10 different species of waterfowl. Of the 752 individuals banded, the most predominant species was the black duckwith 537 banded birds. All other species were banded in much fewer numbers.

OPERATIONS

OBJECTIVES

The aim of the waterfowl banding program was to capture, band, and release as many waterfowl as possible. Highest priority was given to the banding of black ducks and green-winged teal.

METHODS

Identification of potential trap sites

Potential trap sites were identified on the basis of three criteria; 1) Presence of shallow water from 6 inches to 18 inches in depth, 2) Evidence of feeding on previously applied cracked corn, 3) A geographic location advantageous to the widespread coverage of the impoundments. Some sites noted in previous years as being 'traditional' trapping sites were used, but only if the above three criteria were met.

Construction of Traps

Traps were constructed on identified trap sites as soon as evidence of feeding on corn was noticed. Traps were of the simple wire funnel type, and constructed to the basic design specifications given in the 'Guide to waterfowl banding': U.S. Fish and Wildlife Service publication. Funnel widths were set at approximatly 4 inches and considerable flexibility was maintained to allow for the passage of large ducks into the trap. The trap cover was firmly secured and all loose netting was tied down to avoid the possibility of flapping material scaring ducks away from the trap site. All sharp edges were removed to prevent injury to captured waterfowl.

Trap maintenance

All traps were visited once each day to remove captured waterfowl. At each of these occasions the traps were inspected for gaps between the trap sides and the bottom of the impoundment. Any gaps were plugged with mud and rocks to prevent the escape of captured birds. Trap

bottoms were constructed for those traps found to be susceptable to the formation of gaps. Trap bottoms were constructed from the same material as trap sides. Funnel width was checked and reset if necessary at each visit. Trap covers were also examined for tears and holes. Regular trap maintenance was carried out at each trap on each visit.

Trap repositioning

Trap positions were changed when the capture of unbanded ducks was reduced to zero over several consecutive days. If large numbers of black ducks were observed in the vicinity, the trap was maintained despite reduced catch, in the hope of trapping more black ducks. The movement of traps to more rewarding areas was considered necessary to meet the quantitative objectives of the operation.

Predator control

Upon any indication of predator activity in the vicinity of a trap location, a wire box trap was set on the shore within 20 feet of the waterfowl trap. The box trap was baited with an opened can of sardines, and placed along the most likely route of access to the trap. Predator traps were checked each day from as far away as possible. Care was taken to reduce the amount of human scent near the predator trap. Any predators caught were removed from the area and released unharmed in alternative habitat. Identification of predator activity was based on any one of three criteria; 1) Abnormally high in-trap mortality of waterfowl with no obuious predator caused wounds. 2) Dismembered or decapitated waterfowl carcasses in waterfowl trap. 3) Proliferations of mammal tracks in the vicinty of waterfowl traps.

BANDING OPERATIONS

Removal of captured waterfowl

All traps were visited once aech day. Small portions of the top cover were lifted, and waterfowl were removed with dip nets. Unbanded birds and recaptures were placed into burlap bags, retakes (those birds wearing bands from our operation) were immediatly released. When all birds had been removed and bagged, the top cover was resecured, daily trap maintenance was carried out, and cracked corn was applied to the funnels and trap interior. (approx. 3/4 bucket per trap).

Aging and sexing of waterfowl

The age of an individual was determined through examination of; the central retrices, primary wing feathers, and genitals. Table 1. shows the criteria involved in the three different age categories. Birds were assigned to one of three age classes; (L) local, (HY) hatch year, or (AHY) after hatch year.

Age determination of the American coot and Pied-billed grebe did not follow the same criteria as that of the ducks. Differentiation between local and hatch year birds followed that shown in table 1, however afterhatch year coots were identified by the presence of red callus on the proximal portion of the upper mandible, and AHY grebes were identified by a lack of prominant striping on the head.

The sex of an individual duck was determined by cloacal examination of the genitals. Colouration of plumage in some species is a possible identification tool, however this may be misleading with immature ducks and adults in eclipse plumage. The presence of speckling at the edges of the bill was found to be reliable in identifying an individual as 'female', however the lack of speckling did not always denote a 'male'. No reliable method for field determination of sex in coots and grebes was available. Individuals of these two species were assigned a value of 'U' unknown for sex

Table 1. Criteria used in field determination of waterfowl age excluding American Coot and Pied-Billed Grebe

Age	Retrices Form	Primary Flight Feathers	Genitals
L	Presence of at least one retrice with a forked tip	Blood present in the shafts of 3 or more primaries/wing-- gives blue colour	M- penis without large white sheath F- presence of bursa (extre oriface)
HY	Same as local	Blood in no more than 2 primaries/ wing	Same as local
AHY	Tips of all retrices not forked- should be pointed (square in wood duck)	Not applicable - adult may be moulting	M- penis with large white sheath F- enlarged vaginal opening, no bursa

BANDING

Once the age, sex, and species of an individual bird had been determined and recorded on the correct field sheet for that species, a numbered metal band was fitted above the hind claw but below the knee joint. the band was secured such that it presented no rough edges and was capable of some movement. Great care was taken to ensure that the band number placed on the bird matched that which was assigned to it on the field sheet. Any indivual not large to wear the assigned band size was released unbanded. Birds wearing bands from previous years or other operations were aged, sexed, and the band number recorded on the recapture sheets. Bands lost or destroyed were noted as such.

MORTALITY

Any indivals found dead in the traps were removed. If the bird had been previously banded by our operation the band was removed and destroyed. The band was recorded as being destroyed and the bird either put in the CWS freezer, or discarded far from the trap, depending on the physical condition of the carcass. Unbanded mortalities were either saved or discarded in the same manner.

BANDING RESULTS

John Lusby Salt Marsh

Burgess Impoundment

Two traps (B 1 and B 2) were set in the Burgess impoundment for a total of 40 trap days. Banding operations in this impoundment were delayed until mid- August by impassable roads. A total of 60 Black ducks were banded (1.5 per trap day). The impoundment was noted to be choked with algea and did not appear to harbour any large number of ducks. Figure 1 shows the location s of all traps.

Russel Impoundment

Two traps (R 1 and R 2) were set in Russel impoundment for a total of 62 trap days. This was by far our most productive, with 282 banded birds (4.5 per trap day) of which 255 were black ducks. Trap R-1 was our most productive trap, catching 222 bandable birds. By mid to late August all traps in the John Lusby Salt Marsh were attracting large numbers of previosly banded ducks, however daily catches of new unbanded birds were sufficiently high to warrant continued operation of the bait traps.

AMHERST POINT BIRD SANCTUARY

Impoundment 1

Five traps were operated in impoundment 1 for a combined sum of 140 trap days. Not all traps were operated simultaneously. Trap 1e replaced 1b after productivity of 1b fell to zero over 4 consecutive days. Table 2 shows the relative sucess of each of each of these five trap locations. A total of 223 birds were banded in Impoundment 1 (1.5/trap day) of which 132 were Black Ducks. This impoundment offered a larger varity of different trap sites with varying degrees of openess, water depth, and vegetative communities. Those trap locations in water depths of 1 foot or more had a tendency to catch a higher percentage of Ring-Necked ducks, American Coots, and Pied-Billed Grebes than did shallow water traps. No differences were noted between open vs. closed or cattail vs. other vegatative communties. Traps in this impoundment were reduced to low productivity early in the

season by large numbers of trap prone birds.Repositioning of traps did not appear to alleviate the problem.

Table 2. Relative success of five different trap locations in impoundment 1, Amherst Point

Trap #	Characteristics	#Trap days	#Blk	#other	#/trap day
1A	14 inches of water	36	56	21	2.14
1B	16 inches of water	16	12	30	2.63
1C	20 inches of water	36	36	35	1.97
1D	21 inches of water	32	16	4	.63
1E	6 inches of water	20	12	1	.65

Low catches in 1D and 1E may be directly attrubutable to predator activity near the trap site. Both locations suffered predator caused mortality during the banding season.

Impoundment 2

Two trap locations were operated in impoundment 2 for a total of 64 trap days. A total sum of 110 birds were banded (1.72/trap day), of which 62 were black ducks. This impoundment offered very few potential trap sites due to high water levels and dense vegetation. Open water was often confined to cookie cutter paths which were too deep for trapping operations. Large numbers of ducks were observed in the impoundment but were not attracted to our traps. Silty bottom sediments were common in this impoundment and required the construction of wire bottoms for the waterfowl traps.

Impoundment 3

Only one trap was set in impoundment 3, and was operated for 32 consecutive trap days. Fifty nine birds were banded(2.25/trap day), of which 32 were black ducks. Pintails were observed in large numbers throughout this impoundment and many proved to be quite trap prone. Deep water and dense vegetation restricted the number of potential trapping locations in this impoundment.

PREDATION AND MORTALITY

A total of 31 ducks were found dead in our traps. Twelve of these were believed to have died as a result of predator activity. Eight birds were dismembered or decapitated and 4 birds were found dead but not externally damaged, however large amounts of scattered feathers and abundant raccoon tracks suggested harassment by predators. One Hy black duck was believed to have died from starvation. This was indicated by the emaciated condition of the bird in question. Twelve ducklings were believed to have drowned after becoming entangled between the trap sides and supporting poles. Smaller ducks were often battered by larger birds caught in the same trap.

Live trapping for predators was carried out at 4 sites. Two sites in impoundment 1 each caught 1 raccoon each, while one of the two traps in the Russel Impoundment was successful in catching a raccoon. All three raccoons captured were released in alternative habitat. No predator caused mortality occured after the commencement of predator trapping.

MATERIAL STORAGE

All wire and poles were returned to the barn in Jolicure except for those used in the John Lusby Salt Marsh. The wire and poles used in the Burgess impoundment were stored about 30' up the fence line behind the shack situated in the south corner of the impoundment. The materials used in Russell were stored at the edge of the woods in direct line with the small foot bridge which connects the peninsula to the mainland. All trap covers were returned to the barn in Jolicure. Live traps were returned to the barn near the Trans-Canada highway.

Table 3. Breakdown by sex age and species of all waterfowl banded during the 1982 banding season

Species	Local			Hatch year			After hatch year			Total
	M	F	U	M	F	U	M	F	U	
Black Duck	29	23	-	225	160	1	39	50	10	537
Mallard	-	-	-	1	2	-	4	3	-	10
MallXBlack	4	1	-	3	2	-	4	-	-	14
Pintail	9	4	-	11	13	-	-	1	-	38
Ring-Necked Duck	13	15	-	1	1	-	-	6	-	36
Wood Duck	-	-	-	-	-	-	1	-	-	1
Green-winged teal	1	2	-	11	10	-	4	2	-	30
Blue-winged teal	6	3	-	12	12	-	8	7	-	48
American Coot	-	-	6	-	-	1	-	-	10	17
Pied-Billed Grebe	-	-	5	-	-	15	-	-	1	21
								GRAND TOTAL		752

Table 4. Breakdown of Recaptures by species and sex.

Species	Male	Female	Unknown	Total
Black Duck	11	11	15	37
Mallard	2	--	2	4
Blue-Winged Teal	--	1	2	3
Pintail	--	--	1	1
			Grand Total	45

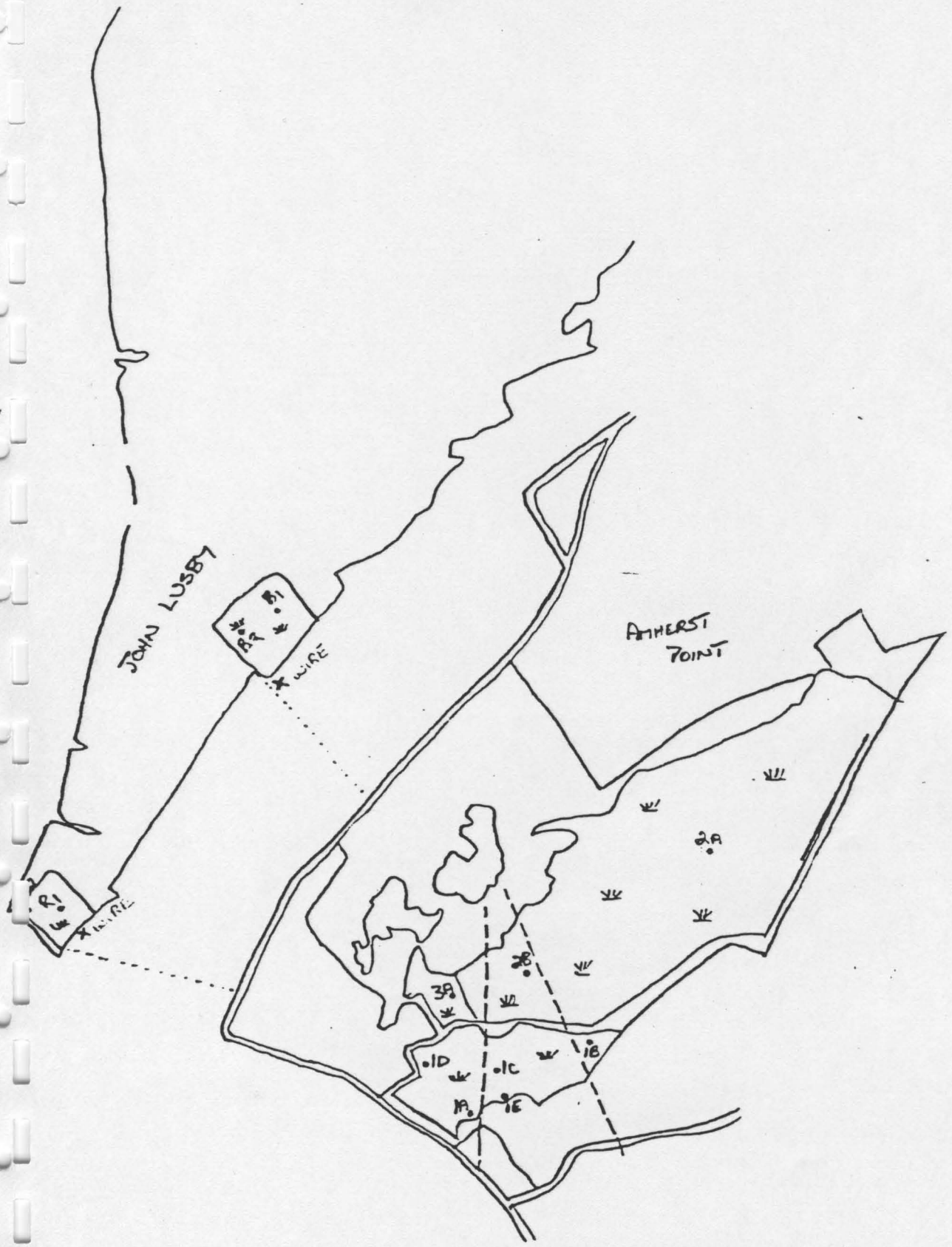


Figure 1. Map of Border Area Bait Trapping Station Showing locations of traps and stored wire

RECOMMENDATIONS

1. Prebait a large number of areas several days prior to the commencement of trap constuction. This should ensure a large pool of alternative trap sites.
2. Place trap poles flush against the sides of the trap to prevent ducklings and small ducks from getting caught and drowned.
3. Trap sites with mucky bottoms are prone to the formation of gaps at the bottom. Care should be taken to not step to near to the trap sides.
4. The bottom of all traps should be checked daily for entangled ducks which get caught up while trying to escape.
5. After very windy nights the impoundments in the John Lusby Salt Marsh should be checked first as they are very open to the wind. Ducks may be quite exhausted and close to collapse in the traps.
6. At the start of the banding season a list of the bands to be used by the airboat should be obtained for crosschecking possible recaptures.
7. A can of WD 40 should be included in every banding kit to prevent pliars from seizing.
8. The activity of the airboat in the vicinity of our traps was observed to result in lower trap catches the following day. Frequent visits to these areas by the airboat are not reccomended.
9. Traps should not be approached directly from land if at all possible as this may lead predators to the waterfowl traps
10. Traps situated near the shoreline should have predator traps set near them as a preventative measure.
11. It may be advisable to bait trap the wild rice in impoundment 1 during the latter part of the season as large numbers of teal were observed in the area at the end of August.

Bathurst
New Brunswick

WATERFOWL BAIT-TRAPPING REPORT

BATHURST, NEW BRUNSWICK REGION

1982

Waterfowl Bait-trapping Report - Bathurst, New Brunswick Region

September 1 - October 13, 1982

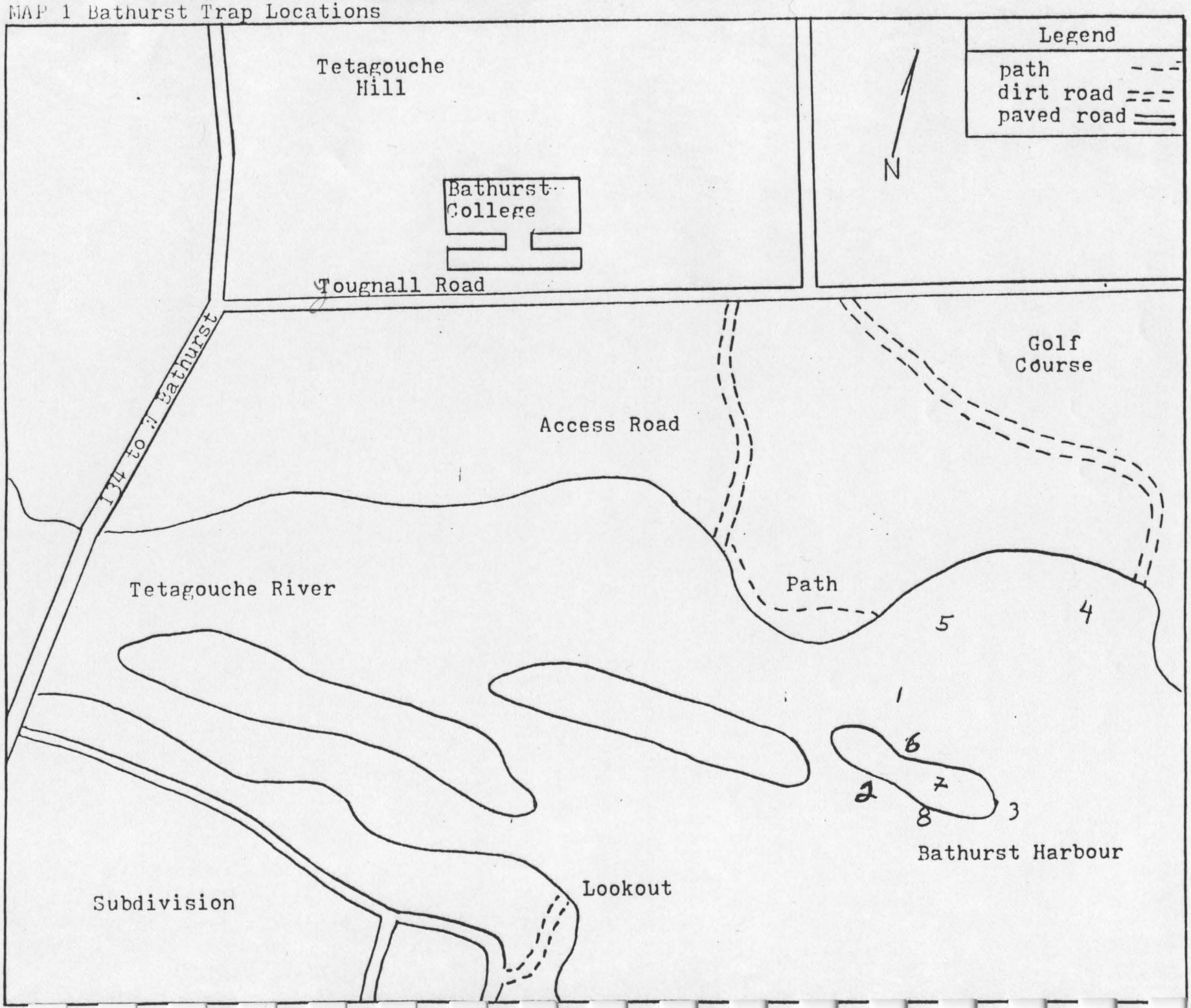
A total of 278 birds were banded in Bathurst harbour this fall. The species breakdown is as follows: Black Ducks - 256; Mallards - 10; Mallard X Black Hybrids - 7; Pintail - 2, American Green-winged Teal - 2; Common Merganser - 1. There were 52 recaptured Black Ducks, 5 recaptured Black X Mallard Hybrids, 2 recaptured Mallards, and 1 recaptured Pintail.

Banding took place between 1 September and 13 October.

The Bathurst banding site is located on the mouth of the Tetagouche River in Bathurst Harbour. Bonnie Brae golf course and a mixed 40 year old hardwood/softwood stand provide the northeastern boundaries while a mixture of subdivisions and wooded lots provide the southwestern boundary.

Black Ducks were most commonly found along the grassy knolls and edges of the northeastern side of the estuary during the rising tide. This is the most protected estuary area and the cover provided by the grassy channels seems to lure the ducks in. Trap number four located in this area consistently caught more birds than any other trap. Trap #5 appears to be in a prime location also but without the grassy cover. This trap however had the worst success rate. As the tide was coming in, the ducks also favoured the edge of the main island, preferring the inside edge by traps 3 and 6 over the outside edge with traps 2 and 8. The majority of birds followed the rise of the water while entering the area, but however approximately 20% of the birds flew into the western edge of the main island by traps 2 & 3 before the tide. These birds would usually commence feeding on corn instantly but however did not enter the traps until the water had covered the gravel.

MAP 1 Bathurst Trap Locations



During extremely high tides the birds followed their normal entrance patterns but fed entirely in the grassy areas towards Route 134. This resulted in few captures. During the entire banding period the weather was beautiful. Initially the majority of birds in the harbour would feed around the traps regardless of the weather. However beginning in the third week of September the birds stayed out on the sand bars and in the coves along the northeast edge of Bathurst harbour (extending from the Tetagouche estuary to Toughall Beach) all the time. They were feeding on molluscs and crustaceans and preferred this to the corn. I was always waiting for a little breeze to bring the birds into the protection of the trapping area but was continually disappointed.

Traps were set up and baited as follows: 1 & 2 on 1 September, 3 on 3 September, 4 on 16 September, 5 & 6 on 24 September and 7 & 8 on 26 September. This area normally only utilizes 3 or 4 traps however I thought the extra traps would result in more captures. This indeed was true and after all eight traps were set up my daily average of ducks caught increased to approx. 27.

Initially large numbers of new ducks and new recaptures were caught but however without a constant influx of new migrants this diminished. Ducks banded as early as 8 September were recaptured at the end of the banding season. This led me to believe that most ducks upon entering the area stayed on instead of migrating. The ideal weather appeared to inhibit the migratory urge. My daily totals of the number of birds observed also reinforces this idea.

Canada Geese first appeared on 20 September. From that point on their numbers gradually increased until 13 October, there were between 550-650 geese in Bathurst harbour. The geese refused to take the corn as bait and appeared to mainly feed on reed canary grass tuburs. The geese frequent the same areas in the golf course during the latter part of October and the possibility

of cannon netting should be considered. The club usually closes for the season during the second week in October.

Other species of ducks & geese utilizing the harbour include: American and Green-winged Teal approx. 25, Common mergansers and Red-breasted Mergansers approx 100, Common Goldeneye approx. 25, Mallards approx. 25,Pintails occasionally 1 or 2, Hooded Merganser 5 - 15, Bufflehead 1, Snow Goose 1.

Sharp-shinned hawks and raccoons occasionally made the ducks a bit nervous but were of no harm. Besides these the trapping area was virtually undisturbed except for the occasional boater or golfer. (1 golf ball was found around trap #4).

Residence was provided at the Ranger cache in Petit Rocher, approximately 12 miles from the banding site. The access road across from the Bathurst vocational school provided a parking area while checking the traps. Trap wire and poles were stored at the ranger cache in Petit Rocher.

Recommendations

1. A total of 8 traps were used this year. This increase in the number of traps improved the efficiency of trapping and eight traps should be used in the future.

2. Trap number 4 was located in the grassy channel area. It had the greatest success rate and the possibility of placing more traps in similar locations should be considered. These areas are muddy and traps with hard bottoms may be needed.

3. Bathurst is typically a late area for ducks while Campbellton has more ducks earlier on in the year. I would recommend bait trapping in Campbellton

beginning the first or second week in September and continuing until the duck season opens. Then this station should shift over to Bathurst and set up there. I do not feel that many birds will have come into and then out of Bathurst before this so essentially no birds would be missed by a later start.

4. The weather and the tides greatly affect the trapping area. The potential for trap submergence is present with high tides and an easterly wind. Therefore the bander should be prepared to close down the traps whenever deemed necessary.

Acknowledgements: Special thanks is extended to Mr. Charlie McAleenan for his helpful advice, friendship, and assistance throughout the entire banding operation.

Table 1. Species and numbers banded

Species	Number banded
Black Duck	256
Mallard	10
Black X Mallard hybrid	7
Pintail	2
Am. Green-winged Teal	2
Common Merganser	1

Table 2. Age and Sex breakdown

Species	Hatching Year			After Hatching Year			Totals		
	M	F	Total	M	F	Total	M	F	Total
Black Duck	88	60	148	60	48	108	148	108	256
Mallard	3	1	4	6	0	6	9	1	10
Bl.X Mal. Hyb.	1	1	2	5	0	5	6	1	7
Pintail	1	1	2	0	0	0	1	1	2
G.-w.Teal	0	2	2	0	0	0	0	2	2
C.Merganser	1	0	1	0	0	0	1	0	1
Totals	94	65	159	71	48	119	165	113	278

CWS Airboat

CWS AIRBOAT

NIGHT-LIGHTING

1982

CWS Airboat, Night-lighting - 1982

Introduction

The following report summarizes the banding success of the Canadian Wildlife Service's 1982 airboat night-lighting operation, conducted as part of the Atlantic Flyway Cooperative Waterfowl Banding Program in Eastern Canada.

This year's crew consisted of Tim Bowman, John Lortie, and Andrew French. Banding began on July 26th and was terminated on August 20th. A total of 21 nights were worked on five areas in New Brunswick and Nova Scotia.

The 1982 CWS airboat night-lighting operation was highlighted by the acquisition of a new 250 h.p. Panther airboat, which proved to be an efficient machine with enough power to get into and out of otherwise inaccessible areas due to low water levels. Airboat maintenance was minimal.

Included in this report are: 1) a discussion of the banding results, with recommendations, 2) a tabular cumulative summary of banding success by species and age class, 3) tabular summaries of banding success by species and age class for each province, and for each banding location, 4) tables showing the average number of birds banded per airboat hour, and per working night, by banding location.

Discussion

A total of 1275 birds, and 16 species, were banded with a nightly average of 61 birds. Table 1 shows the breakdown, by species and age class, of all birds night-lighted. A provincial breakdown is included in Tables 2 and 3. A total of 262 Black Ducks were banded, of which 222 were banded in Nova Scotia.

Table 4 shows the cumulative percentage breakdown per species. Blue-winged Teal, Green-winged Teal, and Black Duck were the major species banded, accounting for 34%, 24%, and 21% respectively, of the total birds banded. A percentage breakdown for each province is shown in Tables 5 and 6.

The banding results are summarized for each of the five banding locations in Tables 7 to 11. The most productive area this year was certainly Wallace Bay. In only four nights, efforts at Wallace accounted for 56% of total birds banded, and 67% of all Black Duck banded. Although very productive in past years, Missiquash Marsh was a disappointment this year. This may have been due, in part, to disturbance caused by DU's cookie cutter which was operating in the marsh this year.

As an indicator of the productivity of each area, two values may be useful. Table 12 shows the average number of birds banded per night, for each banding location, while Table 13 shows the average number of birds banded per airboat hour for each location. The Wallace Bay and Shepody Bay areas were the most productive using both of these values.

Recommendations

One of the problems encountered was a lack of suitable areas in which to launch the airboat. As a result, some areas were worked excessively and may have put a great deal of stress on the habitat there. One of the priorities for future years should be the improvement and/or construction of boat launches that would allow access to several areas now inaccessible by the airboat. Suggested areas include Tintamarre impoundment 4, Shepody impoundment C, and the newly constructed marshes at the New Horton section of Shepody. A set of portable ramps may be useful in some areas.

Unless there is a strong priority to band local birds, it may be more efficient to start airboat operations later in future years. This would allow birds too small to band a chance to mature, and allow time for hatch year birds to move around and concentrate in areas where they can be night-lighted in greater numbers. Judging from the migration chronology of past years, waterfowl seem to start appearing in large numbers around the second week of August. Prior to that time, night-lighting efforts are not very productive, and inefficient. From July 26 to August 9, birds banded per airboat hour averaged 15, while from August 9 to August 19, birds banded per airboat hour averaged 39.

Tim Bowman

1982

Table 1. Species breakdown by age class - 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	39	205	18	262
Blue-winged Teal	109	209	114	432
Green-winged Teal	19	153	132	304
Ring-necked Duck	94	16	9	119
American Wigeon	54	9	4	67
Wood Duck		1	32	33
Pintail	8	11	2	21
American Coot	7	1	3	11
Pied-billed Grebe	8	-	-	8
Shoveler	-	2	2	4
Ruddy Duck	3	-	-	3
Redhead	3	-	-	3
Black X Mallard Hybrid	-	3	-	3
Mallard	-	1	1	2
Hooded Merganser	-	2	-	2
Canada Goose	1	-	-	1
TOTALS	345	613	317	1275
September Banding effort				
Black Duck	-	11	-	11
Green-winged Teal	-	64	8	72
Blue-winged Teal	-	14	3	17
Pintail	-	2	-	2
Goldeneye	-	1	-	1
Total				1378

Table 2. Species Breakdown by age class. Nova Scotia, 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	28	177	17	222
Blue-winged Teal	56	148	79	283
Green-winged Teal	5	145	111	261
Ring-necked Duck	47	16	5	68
American Wigeon	22	4	4	30
Wood Duck	-	1	14	15
Pintail	6	7	2	15
American Coot	7	-	2	9
Pied-billed Grebe	7	-	-	7
Shoveler	2	2	-	4
Ruddy Duck	3	-	-	3
Redhead	3	-	-	3
Black X Mallard Hybrid	-	3	-	3
Mallard	-	1	1	2
Hooded Merganser	-	1	-	1
TOTALS	186	505	235	926

Table 3. Species breakdown, by age class. New Brunswick, 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Totals
Black Duck	11	28	1	40
Blue-winged Teal	53	61	35	149
Green-winged Teal	14	8	21	43
Ring-necked Duck	46	1	4	51
American Wigeon	32	5	-	37
Wood Duck	-	-	18	18
Pintail	1	4	1	6
American Coot	-	1	1	2
Pied-billed Grebe	1	-	-	1
Canada Goose	1	-	-	1
Hooded Merganser	-	1	-	1
TOTALS	159	108	80	347

Table 4. Cumulative percentage breakdown per species - 1982 CWS Airboat

Species	% Total
Blue-winged Teal	34
Green-winged Teal	24
Black Duck	21
Ring-necked Duck	9
American Wigeon	5
Wood Duck	3
Pintail	2
American Coot	3
Pied-billed Grebe	
Shoveler	
Ruddy Duck	
Redhead	
Black X Mallard Hybrid	
Mallard	
Hooded Merganser	
Canada Goose	

Table 5. Percentage breakdown per species, New Brunswick - 1982 CWS Airboat

Species	% Total
Blue-winged Teal	43
Ring-necked Duck	15
Green-winged Teal	12
Black Duck	12
American Wigeon	11
Wood Duck	5
Pintail	3
American Coot	
Pied-billed Grebe	
Canada Goose	
Hooded Merganser	

Table 6. Percentage breakdown per species. Nova Scotia - 1982 CWS Airboat

Species	% Total
Blue-winged Teal	31
Green-winged Teal	28
Black Duck	24
Ring-necked Duck	7
American Wigeon	3
Pintail	2
Wood Duck	2
American Coot	3
Pied-billed Grebe	
Shoveler	
Ruddy Duck	
Redhead	
Black X Mallard Hybrid	
Mallard	
Hooded Merganser	

Table 7. Species breakdown, by age class, Wallace Bay NWA - 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	10	153	13	176
Blue-winged Teal	33	135	63	231
Green-winged Teal	4	141	103	248
Pintail	1	4	1	6
Ring-necked Duck	7	15	1	23
Shoveler	2	2	-	4
Black X Mallard Hybrid	-	3	-	3
Mallard	-	1	-	1
Wood Duck	-	-	8	8
American Wigeon	4	4	-	8
Hooded Merganser	-	1	-	1
TOTALS	61	459	189	709

Table 8. Species breakdown, by age class. Missiquash Marsh - 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	6	5	4	15
Blue-winged Teal	4	4	6	14
Green-winged Teal	1	1	6	8
Ring-necked Duck	14	-	-	14
American Wigeon	13	-	4	17
Wood Duck	-	1	6	7
Pintail	2	-	1	3
Mallard	-	-	1	1
Grebe	3	-	-	3
TOTALS	43	11	28	82

Table 9. Species breakdown, by age class - Amherst Point NWA - 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	12	19	-	31
Blue-winged Teal	19	9	10	38
Ring-necked Duck	26	-	4	30
Pintail	3	4	-	7
American Coot	7	-	2	9
Green-winged Teal	-	3	2	5
American Wigeon	5	-	-	5
Grebe	4	-	-	4
Ruddy Duck	3	-	-	3
Redhead	3	-	-	3
TOTALS	82	35	18	135

Table 10. Species breakdown, by age class - Shepody Bay NWA - 1982 CWS Airboat

only noted as Slop WWA

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	3	21	-	24
Blue-winged Teal	39	47	19	105
Ring-necked Duck	36	-	3	39
Green-winged Teal	2	5	5	12
Wood Duck	-	-	14	14
American Coot	-	1	1	2
Pintail	-	1	-	1
Pied-billed Grebe	1	-	-	1
Hooded Merganser		1		1
TOTALS	81	76	42	199

Table 11. Species breakdown, by age class - Tintamarre NWA. 1982 CWS Airboat

Species	Local	Hatching Year	After Hatching Year	Total
Black Duck	8	7	1	16
Blue-winged Teal	14	14	16	44
American Wigeon	32	5	-	37
Green-winged Teal	12	3	16	31
Ring-necked Duck	10	1	1	12
Pintail	1	2	-	3
Canada Goose	1	-	-	1
Wood Duck	-	-	4	4
TOTALS	78	32	38	148

Table 12. Average number of birds per night by banding location

Banding Location	avg. birds/night
Shepody Bay	66
Wallace	177
Tintamarre	37
Amherst	27
Missiquash	16

Table 13. Average number of birds banded per airboat hour, by banding location

Banding location	avg. birds/airboat hour
Shepody	27
Wallace	53
Tintamarre	20
Amherst	16
Missiquash	10

CREW LEADER
REPORTS

CREW LEADER REPORTS

BANDING 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: W. R. Whitman

Banding Station Location: Nain Labrador

Co-ordinates: 563-0621 Period Operated: August 1 - 10, 1982

Names and Addresses of Crew:

W. R. Whitman
John Maxwell
Canadian Wildlife Service
Sackville, New Brunswick
EOA 3CO

Charlie Gilchrist

A. R. Lock
Canadian Wildlife Service
Dartmouth, Nova Scotia

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	*	*	Total
C. Goldeneye			4			4
B. Goldeneye			8			8
Grand Total			12			12

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

Drive-trapping goldeneye at Nain was a repeat of the 1955 U.S.A. banding effort. Poor success was attributed to heavy boating traffic and the peak molt period was missed.

Station: Nain, Labrador

Period covered: Aug. 1 - 10, 1982

Reporter's name: W. R. Whitman

ACTUAL DIRECT COSTS (at Station only)

	Name and/or item	Cost
A. Salaries (Leader and crew)	W. R. Whitman	4500.00
	T. Lock	
B. Volunteer Labour (Name and hours)	W. Anderson 3rd	
	Nfld. Wildlife Division	
C. Subsistence		
1. Travel to job area (names)		
2. Meals (names)		
3. Lodging (names)		
	TOTAL	2024.08

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles		
2. Boats	rental	354.33
3. Planes		9335.60
4. Helicopters		
5. Other (list)		

E. Materials and Supplies (Expendable) (Prorate where necessary)

freight	200.00
supplies	402.00
gill net	450.00

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes _____ no

Date prepared November 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: W. R. Barrow

Banding Station Location: Labrador/Newfoundland & Border Area, Dog Banding

Co-ordinates: Period Operated: 4 July - 16 July 1982

Names and Addresses of Crew:

W. R. Barrow
R. Hicks
P. O. Box 1590
Canadian Wildlife Service
Sackville, N.B.
E0A 3C0

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	*	*	Total
Black Duck			97			97
Canada Goose			12			12
			Labrador total			109
Black Duck	24		1			25
Pintail	2		1			3
Blkx Mallard	1					1
			Border Area total			29
Grand Total						138

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

This was the first full scale effort to dog band molting adult birds in Labrador. Ten days were worked on three areas with two objectives. (1) to band as many birds as possible and (2) determine if a more concentrated effort is practical

Station: Labrador dog banding

Period covered: 4 July - 16 July 1982

Reporter's name: W. R. Barrow

ACTUAL DIRECT COSTS (at Station only)

	Name and/or item	Cost
A. Salaries (Leader and crew)	W. R. Barrow	$600.00
	R. Hicks	500.00
	B. Whitman	750.00
B. Volunteer Labour (Name and hours)		
C. Subsistence		
1. Travel to job area (names)	Airfare	
	freight	
2. Meals (names)	restaurants	
	groceries	
3. Lodging (names)	lodging 1 day	
	TOTAL	1872.30

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles	
2. Boats	128.37
3. Planes	8885.00
4. Helicopters	
5. Other (list)	292.00

E. Materials and Supplies (Expendable) (Prorate where necessary)

gas cans & gas	74.00
pack box, repellent	34.00
oil	6.00

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes _____ no

Date prepared September 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: V. D. Stotts

Banding Station Location: Tinker Harbour, Labrador

Co-ordinates: 541-0575 Period Operated: August 26 - Sept. 22, 1982 (capture period)
Aug. 13 - Sept. 22, 1982 (baiting period)

Names and Addresses of Crew:

M. Michelin, Rigolet, Labrador
R. McKee, Chestertown, MD
M. Berger, Goose Bay, Labrador
V. Stotts, Queenstown, MD.

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	UU	*	*	Total
Mallard			1				1
Black Duck	2	42	45				89
Pintail		80	6	1			87
A. Wigeon	2						2
B.-w. Teal		8	1				9
G.-w. Teal		350	50				400
Grand Total	4	480	103	1			588

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

Black Ducks present. Weather unusually mild (no real frost). Corn and barley best bait mixture. Try for G.-w. Teal by prebaiting by August 20 and setting traps by September 1. Try for Black Ducks by extending banding period to October 15.

Station: Tinker Harbour

Period covered: Aug. 26 - Sept. 22, 1982

Reporter's name: V. D. Stotts

ACTUAL DIRECT COSTS (at Station only)

	Name and/or item	Cost
A. Salaries (Leader and crew)		6853.64
B. Volunteer Labour (Name and hours)	Maria Berger Nfld. Wildlife Division	
C. Subsistence		
1. Travel to job area (names)		2999.12
2. Meals (names)		965.29
3. Lodging (names)		611.81

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles 281.91
2. Boats 1857.94
3. Planes 1195.00
4. Helicopters
5. Other (list)

E. Materials and Supplies (Expendable) (Prorate where necessary)

Misc. Supplies 185.34
wire-wood, rope, anchor etc. 708.80
cor & grain 328.10

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes ____ no

Date prepared November 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: E. Wade

Banding Station Location: Codroy River, Newfoundland

Co-ordinates: 475-0591 Period Operated: Aug. 25 - Oct. 15, 1982

Names and Addresses of Crew:

E. Wade,
Fredericton
New Brunswick

T. Bowman
Webster
New York

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	*	*	Total
Black Duck		233	10			243
G.-w.-Teal		193	5			198
B.-w.-Teal		1				1
Pintail		4				4
Mallard		4				4
Grand Total						450

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

Station: Cordroy, Newfoundland

Period covered: Aug. 25 - Oct. 15, 1982

Reporter's name: E. Wade

ACTUAL DIRECT COSTS (at Station only)

	Name and/or item	Cost
A. Salaries (Leader and crew)	E. Wade & T. Bowman	3520.00
B. Volunteer Labour (Name and hours)		
C. Subsistence		
1. Travel to job area (names)	1.	1010.00
2. Meals (names)		109.15
3. Lodging (names)		1669.00

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles

2. Boats

3. Planes

4. Helicopters

5. Other (list)

E. Materials and Supplies (Expendable) (Prorate where necessary)

Mis. Supplies	45.00
Corn	162.50

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes ____ no

Date prepared November 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: J. Lortie

Banding Station Location: Bathurst, New Brunswick

Co-ordinates: 473-0653 Period Operated: Sept. 1 - Oct. 13, 1982

Names and Addresses of Crew:

John Lortie
7 Atlantic Street
Portland, Maine 04101

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	*	*	Total
Black Duck		148	108			256
G.-w.Teal		2				2
Pintail		2				2
Mallard		4	6			10
Bl. X Mallard		2	5			7
C. Merganser		1				1
Grand Total		159	119			278

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

For the second consecutive year unsually mild weather limited production. An earlier trapping season at Campbellton may boost the waterfowl number.

Station:

Period covered:

Reporter's name:

ACTUAL DIRECT COSTS (at Station only)

	Name and/or item	Cost
A. Salaries (Leader and crew)	John Lortie	1575.00
	W. R. Barrow	75.00
B. Volunteer Labour (Name and hours)	Charlie McAleenan N. B. Natural Resources	
C. Subsistence		
1. Travel to job area (names)		500.00
2. Meals (names)		70.00
3. Lodging (names)		54.65

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles .....
2. Boats .....
3. Planes .....
4. Helicopters .....
5. Other (list) .....

E. Materials and Supplies (Expendable) (Prorate where necessary)

Misc. Supplies	45.00
Corn	88.30

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes _____ no

Date prepared November 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: W. Robert Watt

Banding Station Location: Border Area

Co-ordinates: 454-0641 Period Operated: July 27 - Sept. 3, 1982

Names and Addresses of Crew:

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	*	*	Total
Black Duck	52	386	99			537
Mallard	0	3	7			10
Bl.X Mallard	5	5	4			14
Pintail	13	24	1			38
R.-n.Duck	28	2	6			36
Wood Duck	-	-	1			1
G.-w.Teal	3	21	6			30
P.-b. Grebe	5	15	1			21
B.-w.Teal	9	24	15			48
American Coot	6	1	10			17
Grand Total						752

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

Compared to previous years, total birds banded was low, however number of Black Ducks was quite high, thus this should still be considered a successful season.

Station: Border Area

Period covered: July 27 - Sept. 3, 1982

Reporter's name: W. Robert Watt

ACTUAL DIRECT COSTS (at Station only)

		Name and/or item	Cost Co-op	Cost CWS
A.	Salaries (Leader and crew)	W. Robert Watt	171.00	1329.00
		D. Hounsell	663.00	837.00
		T. MacDonald	663.00	837.00
B.	Volunteer Labour (Name and hours)	NIL		
C.	Subsistence			
	1. Travel to job area (names)	Robert Watt		130.00
		Tim MacDonald		250.00
	2. Meals (names)	Robert Watt, Tim MacDonald		
		Doug Hounsell		125.00
	3. Lodging (names)	Robert Watt		160.00

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles	1 truck	357.89
2. Boats		
3. Planes		
4. Helicopters		
5. Other (list)		

E. Materials and Supplies (Expendable) (Prorate where necessary)

cracked corn	318.00
	45.00

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes _____ no

Date prepared September 3, 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: U.S. Airboat

Banding Station Location: Saint John River

Co-ordinates: Period Operated: 07-29 - 08-16 1982

Names and Addresses of Crew:

Michael J. McMinn
P. O. Box 31
Knotts Is., N.C. 27950
U.S.A.

William R. James
6026 Sour Springs Road
Bason, NY 14013

Eric Wade
c/o Chester V. Wade
Penniac, R.R. # 9
Fredericton, N.B.
E3B 4X9

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	U	*	*	Total
Black Duck	104 M	108 M	1 M	1			436
B.-w. Teal	309	84	30				423
G.-w. Teal	33	11	7				51
Am. Wigeon	100	3	6				109
Bl. X Mallard	6	1					7
Wood Duck	16	2	7				25
Mallard	1	5	1				7
Pintail	4	2					6
Hooded Merganser	1						1
C. Goldeneye	5	1					6
Shoveler	13	1	1				15
R.-n. Duck	5	1					6
Grand Total	705	329	57	1			1092

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

Night-lighting

Station: U.S. Airboat Saint John River

Period covered: 07-29 - 08-16 1982

Reporter's name: M. McMinn

ACTUAL DIRECT COSTS (at Station only)
U.S. Funds

	Name and/or item	Cost
A. Salaries (Leader and crew)	McMinn	$2500.00
	James	2500.00
	Wade	1000.00
B. Volunteer Labour (Name and hours)	NONE	
C. Subsistence		
1. Travel to job area (names)	McMinn & James Air fare	150.00
2. Meals (names)	McMinn	624.00
	James	624.00
3. Lodging (names)		
	mcMinn & James	356.00

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles	4 x 4 truck	$280.00
2. Boats	Airboat	$675.00
3. Planes	None	
4. Helicopters	None	
5. Other (list)	None	

E. Materials and Supplies (Expendable) (Prorate where necessary)

Misc. parts	$40.00

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes _____ no

Date prepared August 17, 1982

CREW LEADER REPORT
1982 Co-operative Banding Program
Atlantic Flyway

1982 Preseason Banding Report by: Tim Bowman

Banding Station Location: CWS Airboat - Maritimes New Brunswick - Nova Scotia

Co-ordinates: Period Operated: July 26 - August 26, 1982

Names and Addresses of Crew:

Tim Bowman
Webster, New York

John Lortie
Portland, Maine

Andrew French
Patuxent, Maryland

Summary of Birds Banded (See Banding Office Instructions)

Species	L	HY	AHY	*	*	Total
Black Duck	39	216	18			273
B.-w.Teal	109	223	117			449
G.-w.Teal	19	217	140			376
R.-n.Duck	94	16	9			119
Am. Wigeon	54	9	4			67
Wood Duck	-	1	32			33
Pintail	8	13	2			23
Am. Coot	7	1	3			11
Goldeneye	-	1	-			1
P.-b. Grebe	8	-	-			8
Shoveler	-	2	2			4
Ruddy Duck	3	-	-			3
Redhead	3	-	-			3
Bl.XMallard	-	3	-			3
Mallard	-	1	1			2
H. Merganser	-	-	-			1
Canada Goose	1	-	-			1
Grand Total	345	705	328			1378

*Blank columns for additional age designations. Please enter Alpha Code which applies at head of column.

Remarks (Birds present, bait, traps, problems, and recommendations):

The new CWS Panther Airboat greatly enhanced this years program. New launch sites are required at several key areas to suit this new outfit and increase production.

Station: CWS Airboat

Period covered: July 26 - Aug. 26, 1982

Reporter's name: T. Bowman

ACTUAL DIRECT COSTS (at Station only)

	Name and/or item	Cost
A. Salaries (Leader and crew)	T. Bowman	
	J. Lortie	2900.00
	A. French	
	W. R. Barrow	300.00
B. Volunteer Labour (Name and hours)		
C. Subsistence		
1. Travel to job area (names)	CWS Personnel	
2. Meals (names)		
3. Lodging (names)		
	TOTAL	300.00

D. Operation of Equipment (Actual Cost, do not figure depreciation)

1. Vehicles 580.00
2. Boats .....
3. Planes .....
4. Helicopters .....
5. Other (list) .....

E. Materials and Supplies (Expendable) (Prorate where necessary)

Airboat Modifications	235.00
Misc. supplies	65.28

F. Other (List and prorate as necessary)

G. Were Co-operative State funds used in any of the above expenditures?

X yes ____ no

Date prepared November 1982

Atlantic Flyway Cooperative Banding Program.
Atlantic Provinces. 1982.

Name
M. Bateman

Date
March 14, 1986

Atlantic Flyway Cooperative Banding
Program: Atlantic Provinces