Atlantic Flyway Cooperative Banding Programs
Atlantic Provinces
1983

compiled by

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The following is a summary of the 1983 waterfowl banding program in Atlantic Canada. Expenditures and numbers of birds banded are accurately reported. The individual station reports that are appended were prepared by their respective crew leaders and are intended for information purposes without major regard for literary excellence. Any publication or quotation of the contents may require substantial editing in some sections.

Atlantic Flyway Cooperative Banding Programs

Atlantic Provinces - 1983

Twelve cooperative waterfowl banding stations were operational in the Atlantic Region of Canada in 1983. This represents the nineteenth consecutive year of the program which was initiated to (1) determine harvest distribution and define breeding area source of harvest based upon band recovery information; (2) determine changes in harvest pressure on various populations of migratory game birds as measured by recovery and/or harvest rates; and (3) determine annual and/or long term survival and mortality rates for important breeding and wintering population segments of migratory game birds. The program has been supported annually by the Atlantic Flyway States, the USFWS, eastern Canadian Provinces, private organizations and the Canadian Wildlife Service. The period of operation in 1983 extended from July 1 in Labrador to mid-October in Newfoundland and involved a variety of six capture techniques. Summaries by province and station are as follows.

Labrador

Tinker Harbour

A total of 557 ducks was banded at the Tinker Harbour station in 1983. This is slightly fewer than in 1982; however, the species composition of the catch switched favourably to the black duck (231 in 1983 vs. 89 in 1982). The increased catch of black duck can undoubtedly be attributed to the extension of the trapping period into October when larger numbers of black duck are present in the area. The number of males in both hatching year and adult age classes was notably greater than females, particularly

in 1983. During years when banding was terminated by mid to late September, sex ratios in the catch were more evenly distributed. In 1951 Cooch estimated a population of 3000 birds present in the Tinker Harbour area during the banding period August 6 to September 27 and suggested that rapid changes in the population occurred with as many as 25,000 (mainly black duck) passing through the area during that period. The same abundance and movements were not observed during the three-year period 1981-83. Very few blacks were present in August and September although numbers increased to perhaps 2000-2500 in October with a sex ratio heavily weighted toward males. The impression is that possibly as few as one-half the number of black duck (10-12,000) as in 1951 now pass through Tinker Harbour during the fall.

The Tinker Harbour station has operated for eight years since 1947 utilizing bait trapping techniques. The following table compares banding success at that station.

Table 1. Waterfowl banded at Tinker Harbour Labrador - 1947-83.

Species	1947	1948	1949	1950	1951	1981	1982	1983	Total
Black Duck	149	159	252	28	450	3	89	231	1361
G.w. Teal	44	126	24	-	199	27	400	276	1096
Pintail	23	152	33	8	108	42	87	45	498
Other	-	1	-	1	7	-	12	5	26
Total	216	438	309	37	764	72	588	557	2981

Banding was conducted annually from 1947-51 inclusive with the number of black duck increasing consistently except in 1950 when effort and effectiveness were reduced by several known factors. Banding ceased

after 1951 and was not resumed until thirty years later in 1981. Upon resumption the numbers of black duck captured were low due in part to logistical problems but, more importantly, to a lack of black duck during the operation period - August to mid-September. By advancing the banding period into October in 1983, respectable numbers of black duck were captured although sex ratios and total numbers present in the banding area were notably changed from the 1940s and 1950s. Some questions to be pondered are: (1) do significantly fewer black duck stage in the Tinker Harbour area than thirty years ago or do they merely pass through later in the season; (2) can long term changes in climatic conditions account for fewer black duck in August and September; and (3) are females leaving the area earlier thus leaving a preponderance of males in October or are there significantly fewer breeding pairs to begin with?

The operating cost of the Tinker Harbour station was higher in 1983 than during any other season (22592.47). The estimated cost per bird banded was $40.56 and $97.80 per black duck banded. The excessive cost in 1983 is attributed to the replacement of capital equipment lost during a fire in the storage area at Rigolet and the purchase of a new aluminum boat. The operating cost minus the expense of equipment replacement reduces the cost per bird banded to $30.34 and $73.17 per black duck banded, which is significantly less than in 1982 in the case of black duck. The total continuing annual cost for operating the Tinker Harbour station will remain between $16 and $17,000. A summary of waterfowl banded in 1983 is provided in Table 2 and a detailed cost breakdown is shown in Appendix A.

Table 2. Summary of Waterfowl Banded at Tinker Harbour, Labrador - 1983

Species	Local		Hatch Year		After Hatch Year		Total
	M	F	M	F	M	F	
Black Duck	-	-	97	31	80	23	231
Mallard	-	-	2	0	1	1	4
G.-w. Teal	-	-	113	148	6	9	276
Pintail	-	-	18	15	0	12	45
C. Merganser	1	-	-	-	-	-	1
Total	1		424		132		557

Since resumption of the banding station at Tinker Harbour in 1981, it has operated for three consecutive seasons at an overall cost of $58,614. A total of 1217 birds has been banded at a cost of $48.16 per bird and $181.47 per black duck. Most logistical problems have gradually been solved and the most effective timing of the operating period has been identified as evidenced by a substantial increase in the number of black duck banded. Without unforeseen expenses, i.e. equipment damage and/or loss, it is reasonable to assume that the cost per black duck banded has been stabilized at approximately $75.00, which is an acceptable sum for Labrador bait banding stations. Success and costs, however, are dependent upon the return of experienced personnel to operate the station.

Continuation of the banding station in 1984 is desirable but new personnel will likely be required. Vern Stotts has operated the Tinker station since its revival in 1981 with the help of experienced banders provided by the Maryland Wildlife Department. Mr. Stotts has indicated

that he will not return in 1984 nor is it likely that his Maryland assistants will be willing and/or able to assume the task. Thus, new people must be recruited and trained if the station is to continue. This may reduce success and increase expenses slightly but the station should continue if possible in view of the information that may be gained on northern black duck populations and the fact that most logistical and timing problems have been solved at a significant expenditure of time and money.

Mr. Stotts recommends that a bait banding station be initiated in the headwaters of the Eagle River in southern Labrador in addition to or in place of the Tinker Harbour station in 1984. The former option is most desirable if funds and manpower can be increased. This recommendation is based upon surveys conducted annually since 1980 which have identified the Eagle River headwaters as an important black duck and Canada goose breeding and staging area. The advantages of operating in this area are many, including (1) its location only 60 miles southeast of Goose Bay; (2) its importance as a production area which offers an excellent opportunity to band hatching year and local birds; (3) the presence of 500+ black duck staging in late August and September; and (4) the availability of living facilities within easy access of banding sites. The costs should be minimal and success should be high. A rough estimate of total expense is $8000.00 including wages; commercial and charter aircraft; bait and traps; food and supplies. Vern Stotts has tentatively agreed to operate this station.

Nutak

A total of 356 waterfowl was banded at the Nutak banding station by driving and bait trapping. All moulting birds (103) were captured by dip nets and consisted almost exclusively of adult males. Dogs were not available for this work; however, their presence could undoubtedly improve success significantly. Drive trapping was terminated on August 10 and bait trapping was initiated. A total of 247 waterfowl was banded in bait traps before termination of the project on September 13. Again, almost all black duck banded were adult males. Table 3 summarizes waterfowl banding at Nutak.

Table 3. Sex and Age Breakdown - Nutak Area Banding Station - 1983

Species	Local		Hatch Year		After Hatch Year			Total
	M	F	M	F	M	F	Unk.	
Black Duck	-	-	-	-	214	8	-	222
G.-w. Teal	-	-	45	40	4	5	-	94
Pintail	-	-	9	5	5	1	-	20
Mallard	-	-	-	-	3	-	-	3
B. Goldeneye	-	-	-	-	-	1	-	1
Am. Coot	-	-	-	-	-	-	1	1
C. Goose	3	2	-	-	4	5	1	15
Total	5		99		252			356

The cost per bird banded at Nutak was $58.19 and $93.19 per black duck. This represents the most expensive Cooperative banding station on a cost/bird basis; however, it also provides information on previously unsampled populations and is the most northern banding station in the Atlantic Region. Since the logistics and expenses have been

identified for this station, future operation costs should remain constant while success is increased. In 1984 dogs should be used early in the season in order to significantly increase capture of moulting black duck. In this manner total costs may remain as high as in 1983 but cost/bird will be reduced. Also more Canada geese can be captured as well as goldeneye.

Snegamook Lake

Adult male black duck and Canada geese have been banded at Snegamook Lake in central Labrador annually since 1981 by the use of dogs. Efficiency and thus success have increased since the initiation of that station and both costs and expected success are now known. Approximately 200 moulting birds can be banded at a cost of $30 - $35 per bird. Continuation of this station should be based upon an evaluation of the importance of banding adult birds to the objectives of the banding program. If necessary, it may be desirable to temporarily suspend operations at this station in favour of increased dog banding efforts at Nutak where less banding data are available and good success can be expected. Table 4 summarizes banding of dabbling ducks and Canada geese in the Atlantic area by use of dogs. Both Maritimes and Labrador data are included (160 black duck, 7 pintail, 4 mallards and 15 Canada geese were banded in Labrador).

Table 4. Sex and Age Breakdown, Atlantic Area Dog Banding - 1983

Species	Local		Hatch Year		After Hatch Year		Total
	M	F	M	F	M	F	
Black Duck	9	8	-	-	154	6	177
Mallard	2	-	-	-	2	-	4
Pintail	3	4	-	-	-	-	7
Canada Goose	1 unknown		-	-	7	7	15
C. Eider	-	-	-	-	213		213
TOTAL	27		-		289		619

Eider Banding - Labrador

A total of 246 eider was banded on nesting islands in Melville Inlet, Labrador, by CWS personnel. Both flight-nets and hand-held dip nets were used to capture nesting females. Limited success was obtained in the capture of males using flight-nets set across flight paths. Since this was another first-year attempt at banding, some unexpected problems occurred and experimental techniques needed to be applied; however, a second year should show increased success. Table 5 summarizes results of this station.

Table 5. Age Breakdown - Eider Banding, Labrador, 1983

Species	Local	Hatch Year	After Hatch Year		Total
			M	F	
C. Eider	-	-	10	236	246

Insular Newfoundland

Codroy

Banding operations have been conducted at Codroy, Newfoundland since 1979 accounting for a total of 1938 waterfowl banded. Of that total 1020 were black duck. In 1983 this area was the most productive northern banding station with a total of 813 birds banded of which 371 were black duck. The black duck age ratio was 36:1 immatures per adult indicating good production in that area although the sex ratio favoured males slightly (1.3 to 1). The cost per bird banded was $10.97 and $24.05 per black duck. These costs compare favorably with most other banding stations and are among the least expensive for northern areas. Since this station has a proven acceptable success rate, it should be continued in 1984. Table 6 summarizes 1983 banding at Codroy.

Eastern Newfoundland

Bait-trapping was conducted at two stations in eastern Newfoundland-Carmanville and Terra Nova National Park. Volunteers and personnel with National Parks operated both stations with only material costs supplied by the coop banding program. Although only 161 birds (95 black duck) were banded, those areas probably hold potential for much higher success and should be repeated in 1984 with increased assistance from the Coop banding program. The estimated cost per bird banded including allowances for donated and volunteer labour was $5.59 and $9.47 per black duck. Table 7 summarizes banding in eastern Newfoundland.

Table 6. Age and Sex Breakdown - Codroy River, 1983

Species	Hatching Year			After Hatching Year			Totals		
	M	F	Total	M	F	Total	M	F	Total
Black Duck	207	154	361	4	6	10	211	160	371
Black x Mallard Hybrid	11	3	14				11	3	14
Green-winged Teal	205	195	400	2	13	15	207	208	415
Pintail	5	4	9				5	4	9
Blue-winged Teal	2	2	4				2	2	4
TOTALS	430	358	788	6	19	25	436	377	813

Table 7. Age Breakdown, E. Newfoundland Bait Stations - 1983

Species	Local	Carmanville				Total
		Hatch Year		After Hatch Year		
		Male	Female	Male	Female	
Black Duck	-	27	33	1	-	61
Green-winged Teal	-	24	36	1	5	66
TOTAL	-	51	69	2	5	127
		Terra Nova National Park				
Black Duck	-	2		32		34

Maritime Bait-Banding Stations

N.B.-N.S. Border Area

This area is the longest-operating bait station in the Atlantic Region and has consistently produced good numbers of black duck. In 1983 523 were banded in the N.B.-N.S. border station of which 360 were black duck. Because of its geographic location close to the Regional Office of the CWS, supervision and operating expenses are generally minimal. In 1983 the cost per bird banded was $7.41 and $10.79 per black duck. Table 8 summarizes results of this station.

Bathurst, N. B.

The Bathurst station is consistently good for black duck during September and early October. In 1983, 307 birds were banded at that station including 286 black duck. Again, because of its location, supervisory and operating expenses are minimal. A cost of $8.89 per bird and $9.54 per black duck were incurred in 1983. Table 9 summarizes results of that station.

Air Boat Banding

U.S. Fish and Wildlife Service

The USFWS again operated an airboat on the St. John River marshes. On the average about a two week period is required to fill a black duck quota of 500 birds. This year 913 birds were banded including 520 black duck at a cost of $5.79 per bird and $10.16 per black duck. This station should be continued as a reliable and efficient black duck station that accounts for significant numbers of local age birds. Table 10 summarizes USFWS airboat banding for 1983.

Table 8 . Sex and Age Breakdown - Border Area Bait Station - 1983

Species	Local				Hatch Year				After Hatch Year				Total			
	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
Black Duck	21	22	-	43	123	106	-	229	42	46	-	88	186	174	-	362
Mallard	-	-	-	-	2	1	-	3	3	3	-	6	5	4	-	9
Blk X Mal.	-	-	-	-	1	-	-	1	5	1	-	6	6	1	-	7
G.-w. Teal	-	-	-	-	-	1	-	1	1	1	-	2	1	2	-	3
B.-w. Teal	-	-	-	-	1	1	-	2	-	-	-	-	1	1	2	2
Am. Wigeon	1	1	-	2	1	1	-	2	-	-	-	-	2	2	-	4
R.-n. Duck	47	36	-	83	3	10	-	13	1	6	-	7	51	52	-	103
Am. Coot	-	-	9	9	-	-	14	14	-	-	7	7	-	-	30	30
P.-b. Grebe	-	-	3	3	-	-	2	2	-	-	-	-	-	-	5	5
Total	69	59	12	140	131	120	16	267	52	57	7	116				523

Table 9 . Sex and Age Breakdown - Bathurst Area Bait Station, 1983

Species	Local			Hatch Year			After Hatch Year			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
Black Duck	2	1	3	79	46	125	99	59	158	180	106	286
Mallard	-	-	-	2	2	4	1	-	1	3	2	5
Blk. X Mal. X Hyb.	-	-	-	5	2	7	2	1	3	7	3	10
G.w. Teal	-	-	-	2	1	3	-	-	-	2	1	3
B.w. Teal	-	-	-	-	1	1	-	-	-	0	1	1
Pintail	-	-	-	-	-	-	1	1	2	1	1	2
Total	2	1	3	88	52	140	103	61	164	193	114	307

Table 10. Sex and Age Breakdown - U.S.A. Airboat, 1983

Species	Local			Hatch Year			After Hatch Year			Total		
	M	F	T	M	F	T	M	F	T	M	F	T
Black Duck	95	144	239	124	153	277	2	2	4	221	299	520
Mallard	3	1	4	7	6	13	1	-	1	11	7	18
Blk. X Mal. X Hyb.	-	3	3	2	-	2	-	-	-	2	3	5
G.w. Teal	17	14	31	5	3	8	10	2	12	32	19	51
B.w. Teal	92	90	182	6	2	8	31	5	36	129	97	226
Pintail	-	2	2	-	-	-	1	-	1	1	2	3
Wood Duck	2	8	10	4	1	5	14	4	18	20	13	33
Am. Wigeon	22	22	44	-	-	-	4	-	5	27	22	49
N. Shoveler	2	2	4	-	-	-	-	-	-	2	2	4
Goldeneye	3	1	4	-	-	-	-	-	-	3	1	4
Total												913

Canadian Wildlife Service Airboat

The CWS airboat operated at various locations throughout Newfoundland and the Maritime provinces but did not overlap with USFWS operations. A total of 1102 were banded by the CWS Airboat; however, only 436 were black duck. Expenses incurred per bird banded were $5.60 and $14.21 per black duck. The boat was operated periodically from late July through September, the latest efforts being conducted in Codroy, Newfoundland. The nightlighting technique has consistently been the most efficient, selective and least expensive of all banding operations. Table 11 summarizes results of the 1983 CWS airboat operations.

Dog Banding of Nesting Eiders

Initiation of studies in 1983 on eider nesting islands in the Bay of Fundy included banding of nesting females by use of dogs. This technique proved very successful and will be continued next year. A total of 212 adult female eider and one adult male was banded and required only a few hours to accomplish. Expenses for this station were funded entirely by the CWS and are estimated to be $3.46 per bird. This was the least expensive banding effort on a per bird basis.

Prince Edward Island Canada Goose Banding

Rocket netting of migrant Canada geese was attempted on P.E.I. in 1983. Borrowed equipment from the Pennsylvania Game Commission was used and unfamiliarity with its operation and limited knowledge of goose distribution and movements resulted in poor success. Only 24 birds were banded; however, additional nets have been purchased which when coupled with the experienced gained should lead to valuable numbers of Canada geese being banded in 1984. The estimated cost of this year's program was $39.17 per bird.

Table 11. Age and Sex Breakdown - CWS Airboat - 1983

Species	L				HY				AHY				Total			
	M	F	U	T	M	F	U	T	M	F	U	T	M	F	U	T
Black Duck	27	31	-	58	203	154	1	358	6	14	-	20	236	199	1	436
Mallard					2	-	-	2	2	-	-	2	4	-	-	4
G.w. Teal	5	13	-	18	49	56	-	105	55	21	0	76	109	90	-	199
B.w. Teal	22	24	-	46	90	62	-	152	25	10	-	35	137	96	0	233
Am. Wigeon	7	4	-	11	9	12	-	21	3	2	-	5	19	18	-	37
N. Pintail	-	-	-	-	1	-	-	1	-	2	-	2	1	2	0	3
Wood Duck	-	-	-	-	-	-	-	-	28	1	-	29	28	1	-	29
N. Shoveler	-	-	-	-	-	2	-	2	-	-	-	-	-	2	-	2
R.-n. Duck	39	47	-	86	15	18	0	33	-	2	-	2	54	67	-	121
Ruddy Duck	1	2	-	3	-	-	-	-	1	-	-	1	2	2	-	4
H. Merg.	-	-	-	-	1	-	-	1	-	-	-	-	1	-	-	1
Am. Coot	-	-	5	5	-	-	4	4	-	-	-	-	-	-	9	9
P.-b. Grebe	-	-	12	12	-	-	8	8	-	-	2	2	-	-	22	22
TOTAL	101	121	17	239	370	304	13	687	120	52	2	174	591	477	32	1100

Appendix A summarizes all preseason banding in the Atlantic provinces in 1983 by species and station. Appendix B shows species banded by province and percentage composition of total catch while Appendix C provides a cost breakdown by station.

Appendix A. Summary of Pre-Season Banding - Atlantic Provinces - 1983 - Permit #10417

Station	Black Duck	Mallard	Blk X Mal Hybrid	G.-w. Teal	Blue-w. Teal	American Wigeon	Northern Pintail	Northern Shoveler	Wood Duck	R.-n. Duck	Ruddy Duck	Eider	Golden-eye	Merg.	Can. Goose	Misc. sp.	TOTAL
N.B.-N.S. Border Area	360	-9	7	3	2	4				103						5 30	523
Bathurst, NB	286	-5	10	3	1		2										307
Dog Banding Atlantic Prov.	177	-4					7					213			15		416
CWS Airboat	436	4		199	233	37	3	2	29	123	4			1		22 9	1102
USA Airboat	520	-18	5	51	226	49	3	4	33				4				913
Okak Bay Labrador	222	-3		94			20						1		15	1	356
Bait trapping Tinker Harb. Labrador	231	-4		276			45							1			557
Sea Duck Banding Melville Inlet, Lab.												246					246
Terra Nova E. Nfld.	34																34
Carmanville E. Nfld.	61			66													127
Codroy, Nfld.	371		14	415	4		9										813
PEI Rocket Netting															24		24
Totals	2698	47	36	1107	466	90	89	6	62	226	4	459	5	2	54	67	5418

Appendix B. Total species banded by province and percentage 1983

Species	New Brunswick	%	Nova Scotia	%	Newfoundland	%	Labrador	%	P.E.I.	%	Total*	%
Black Duck	969	52.6	639	53.9	443	44.8	649	48.1			2698	49.8
Mallard	26	1.4	10	<1			11	<1			47	<1
Blk x Mal x Hyb.	15	<1	7	<1	14	1.4					36	<1
G.w. Teal	98	5.3	134	11.3	505	51.0	390	27.5			1107	20.4
B.w. Teal	348	18.9	107	9.0	11	1.1					466	8.6
Am. Wigeon	52	2.8	35	2.9	3	<1					90	1.6
Pintail	5	<1	3	<1	9	<1	72	5.4			89	1.6
Wood Duck	50	2.7	12	1.0							62	1.1
N. Shoveler	6	<1									6	<1
Ring-n. Duck	54	2.9	168	14.1	4	<1					226	4.1
Ruddy Duck			4	<1							4	<1
G. Goldeneye	4	<1									4	<1
B. Goldeneye							1	<1			1	<1
H. Merganser	1										1	<1
G. Merganser							1	<1			1	<1
C. Eider	213	11.5					246	18.3			459	8.5
Am. Coot			39	3.3			1				40	<1
Pied-b. Grebe			27	2.2							27	<1
Canada Goose							30	2.2	24	100	54	<1
	1841		1185		989		1345		24		5418	

*Six replaced bands - 1 Blue-winged Teal included in totals.
5 Black

Appendix C. Co-operative Waterfowl Banding Cost Analysis - Atlantic Provinces - 1983

Station	Salaries	Bait	Food & Lodging	Trans-portation	Equipment Supplies/Repairs	Total Cost	No.of birds	Cost/ bird	No. of Black Ducks	Cost/ Black Duck
N.B.-N.S. Border Area	$ 1150.00 1850.00*	$360.00*		$450.00*	$73.50	3883.50	524	7.41	360	$10.79
Bathurst, N. B.	1750	180.00		600.00*	200.00*	2730.00	307	8.89	286	9.54
Codroy, Nfld.	3000 2500.00*	300.00*	1871.00	319.30 580.70*	351.57	8922.57	813	10.97	371	24.05
Dog Banding Labrador Border Area	1050.00* 500.00		196.79* 321.75	2317.33* 1428.00	53.40	5867.27	203	28.90	177	33.15
Nutak Bay Labrador	7500.00 450.00*	182.25 523.00*	58.33* 4350.00	18.88* 6891.70	48.88 664.99*	20688.03	356	58.11	222	93.19
Tinker Harbour Labrador	450.88* 3000.00** 4347.47	825.00*	1285.19	5948.53	1047.46 4688.82*	22592.47	557	40.56	231	97.80
CWS Airboat	3000.00		100.00	800.00 1000.00*	1296.10*	6196.10	1102	5.62	436	14.21
USA Airboat	1500.00 1800.00***		520.00***	465.00***	1000.00***	5285.00	913	5.79	520	10.16
Eastern Nfld.	500.00+	350.00			50.00	900.00	161	5.59	95	9.47
Eider banding Bay of Fundy	250.00*		336.80*			736.80*	213	3.46		
Eider Banding Labrador	250.00 500.00*		1000.00*	2000.00*	300.00*	4050.00	246	16.46		

Appendix C. Co-operative Waterfowl Banding Cost Analysis - Atlantic Provinces - 1983 (concluded).

Station	Salaries	Bait	Food & Lodging	Trans-portation	Equipment Supplies/Repairs	Total Cost	No.of birds	Cost/ bird	No. of Black Ducks	Cost/ Black Du
P.E.I. Goose Rocket Netting	500.00*		180.00*	200.00*	60.00*	940.00*	24	39.17		
TOTALS	22997.47	712.25	8077.94	15387.53	1624.81	48800.00				
	7550.00*	2008.00*	1435.12*	7503.71*	8209.91*	2606.74*				
	3000.00**					3000.00*				
	1800.00***		420.00***	465.00***	1000.00***	3785.00***				
	500.00†					500.00†				
Grand Totals	35847.47	2720.25	10033.06	23356.24	10183.15	82791.74	5419	15.28	2698	28.56††

Co-op Funds
* CWS Funds
** Salaries provided by Maryland
*** USFWS Funds
† Salaries provided by Parks Canada
†† Cost based only on operating expenses for black duck banding stations.

Tinker Harbour
Newfoundland

TINKER HARBOUR, LABRADOR BANDING PROJECT, 1983

V. Stotts, R McKee and M. Hooper

This Labrador banding project has been a cooperative venture between the Atlantic Flyway states, provinces and federal wildlife services. It was in its third 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 2 years of this program (Stotts and McKee 1981, 1982) we felt work commenced and terminated too early in order to catch black ducks. See these three (3) references for descriptions of the areas worked and habitats involved.

METHODS

The 1983 program began with pre-baiting at 4 sites on 1 day (4 bags of crushed corn and barley) on August 25 by M. Michelin. All bait was reported to be gone on August 26. Baiting was resumed on September 4 and terminated October 4.

Stotts and Hooper arrived at Tinker Harbour on September 4 and McKee replaced Hooper on September 18. The camp was vacated on October 6.

The first two traps were set to catch on September 8. The last trap was pulled and stored on October 4.

Six traps measuring 2'H x 25'-30'L of welded 1" x 2" mesh, 14 gauge wire were used in pond sites, as were 3 traps of the same material but 4'H. Eight traps measuring 4'H x 25'L of welded 1" x 2" mesh, 12 and 14 gauge wire were set at intertidal sites with high water depths of 2'-3.5' during spring high tides. Two 10'L x 10'W x 5'H panel traps constructed of 2" x 2" mesh welded wire (12 gauge) re-enforced with 1" conduit and ½" construction rod (corners) were also set in intertidal zones.

All traps tops were of 2' mesh poultry netting.

All traps except 2 panel traps were of the "lily-pad" design having rounded perimeters and no corners.

Trap mouths used were essentially all vertical slits, most of 14 gauge 1" x 2" mesh welded wire because of its added springiness.

Lily-pad-type traps were staked with 2-3, 5'L, 3/4" steel conduit. Added was a 6'-7' spruce sapling to give greater rigidity and a place to hang holding-bags of burlap while birds were netted with long-handled dipnets. Catching boxes (2'H x 2'W x 3'L) of scrap wire were used to retrieve most birds from panel traps.

RESULTS

A total of 556 ducks was banded (Table 1). Of these 230 were black ducks with a 1:1.25 adult:immature age ratio indicating relatively poor reproduction in the population sampled. 276 green-winged teal meanwhile had an excellent age ratio (1:17.40). A few pintails and mallards and a common merganser were also caught. Additionally, 15 retraps (10 black ducks and 5 green-winged teal) were captured.

Green-wings continued to be less intimidated by trap structures than other species, getting on bait first and staying on it. They again seemed to be the first to enter a trap, especially when the site was above water level at low tide. They would also feed in 18" of water by diving. Black ducks were extremely wary, often flying when observers made an appearance a mile away. The primary problem with black ducks, however, was their failure to stay on the bait once they had used it several days in a row.

Crushed corn and barley was the bait used and it was far too fine and light for trapping intertidal zones. Whole corn and whole barley would be a good bait for intertidal zones (as well as ponds for greenwings). The flour from crushed bait did attract myriads of gammarids, which may have attracted some ducks.

Pond sites were choice trapping sites for teal (Table 2). Only a few sites could be called successful for black ducks, but overall the northeastern and mid-southern section of Stag-Kellick Bay was judged best. It is believed that the channel in the mid-northeastern section of Tinker Harbour would be good but would require 6'-7'H traps to prevent drowning during spring tides. It will also be vulnerable to heavy seas and kelp inundation. In any case a panel trap with 1 slit entrance proved to be most successful for capturing black ducks.

Regular daily counts of dabbling ducks were made and these data are shown in Table 3. Black duck numbers declined by late September after a maximum of about 500 birds on any 1 day. Resting areas for these birds were the inland lakes or bogs SSE of mid Stag-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, 1982 or 1983.

Maximum populations of teals and pintails rarely exceeded 200 birds on any one day and, again, mild temperatures may have maintained their presence longer than normal. The maximum number of Canada geese noted in 1 day was about 125, but averages were much less. A few mergansers and goldeneyes were also noted.

A stable population of about 800 common eiders (young and adult) inhabited the banding sectors and their adjacent boundaries; this is quite a decrease from the 4,000 noted in 1982.

Predation was no problem in 1983. A young or female goshawk killed 1 greenwing.

Three greenwings, 1 pintail and 1 black duck drowned. One cross fox was seen and fox scat was common, but tracks were few on mud flats. Fresh bear sign was absent in 1983.

The condition of primary flight feathers were checked in almost all birds. Only 1 local was noted (common merganser). A very few young greenwings had 1-2 green primaries through September 24 and a few adult females showed this condition through October 3. In pintails only adult females showed green primaries (through September 29). For black ducks green primaries

were noted in young through September 26 while in adults it was October 1 for females and September 26 in males.

Black ducks (N=116) were checked for pinto or speckled feet in which the webs lack normal gray or black pigment. In this sample 9 of 47 adult males, 5 of 15 adult females, 3 of 33 immature males and 6 of 21 immature females were positive.

During the period in camp the temperature dropped below freezing on only five mornings, the lowest being 24°F. The first freezing date was September 15. One brief ice shower and 1 light snowfall occurred. All in all it was a relatively mild fall through early October. It rained often through mid-September. Winds of 20-30K were relatively common with several days with 35-55K in which kelp heavily inundated intertidal zones causing problems with trap sets.

Phases of the moon were as follows: new on September 6 and October 6, first quarter on September 13 and October 13, full on September 22 and last quarter on September 29. Spring tide periods occurred about September 5-11, September 22-27 and October 4-10. The best black duck catch occurred during the period September 22-29 when the moon was bright and low tide occurred from 0200 to dawn. (Note: In 1982 the moon's first quarter occurred on August 26 and September 25, full moon on September 3, last quarter on September 10 and new moon on September 17. The best catches occurred between full moon and last quarter and again between new moon and first quarter when the tide was low between 0200 and dawn).

The best trap (Stag-Kellick's Canoe Cove panel) only had catches prior to sunrise and no birds (essentially) were ever noted in the cove long before the trap was set to catch on September 21. A high of 50 blacks were captured on September 27 in all traps. The other panel trap (Tinker Harbour's Lookout Point) was set to catch on September 19, but although birds used the vicinity for some time thereafter, only a few were captured.

Hunters shot over and/or poached traps or baited sites at 3 locations (Stag Island Pond, Mason Island Pond and Stag-Kellick's

Mid-Stream site) by mid September, necessitating closure of the island sites and close observation of the Mid-stream site. Observation at the island sites thereafter indicated only minor use by ducks although a dozen Canada geese frequented Mason Island.

RECOMMENDATIONS

1. The big problem with this station involved keeping black ducks on the bait even though they may seem to be hooked. Only about 10 percent as many birds occurred as when Cooch trapped here. The area was tough to trap efficiently because of high winds, kelp inundation and the necessity of setting traps in waters that are potentially drownable sites. The presence of non-tidal sites used by black ducks would make trapping more efficient but such sites are unreachable from Tinker Harbour.
2. Since it appears that a reliable outboard motor is impossible to obtain for this sector, this should be a 2 man operation serviced strictly by aircraft. A square-end canoe and small motor can be used to haul traps and bait. A shortwave radio can be used for alerting GBAS to emergency needs.
3. The period of operation should be from late August (arrival in camp) to the proper tide and moon in September in order to erect signs, to catch greenwings in 5 pond sites, to get black ducks on bait prior to the bright early moonglow tide period and to capture black ducks at 4 panel trap sites. Again, black duck catch appears to be correlated with low tides from 0200 to dawn. If moonlight occurs, so much the better.
4. The area closed to hunting should extend from the east edge of Stag Island through the 3-island complex (Blake Islands) just south of Mason Island. This will be a reduction over 1983, but the most trappable black duck use was encountered in this zone.
5. Public notices about the operations should be posted in Rigolet, Northwest River and Goose Bay post offices to

reduce accidental hunting of closed areas by normally legal hunters. Baited area signs should be erected at trap sites prior to opening of the hunting season on September 1.

6. Black duck use here is tied very closely to dense kelp beds at or near low tide, especially at night during the hunting season. At least 4 panel traps (10' x 10' x 5'-6'H) should be used (S-K Midstream, S-K Canoe Cove, T.H. Lookout Island and south of the smallest Blake Island). Some of the 12 gauge 4'H, 1" x 2" mesh welded wire traps can be cut and joined to construct 6'H panels.
7. Greenwings can be caught in 2'H traps (S-K Mid-east puddle and T.H. Camp Pond) and with 4'H traps (S-K Canoe Cove Salix Pond, S-K Canoe Cove Bog Pond and T.H. Tidal Pond).
8. Bait used should be whole corn and whole barley. Crushing is unnecessary and wastes a lot of grain ingredients in tidal areas.
9. A clam rake to scoop rocks and soil out of and surrounding the trap site permitted 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 gauge poultry netting or 1"-1.5" mesh (bar) plastic garden netting (12'W), preferrably the latter for panel traps.
11. A few artificial decoys appeared to be useful to entice birds to land in the trap vicinity, especially the first birds flying to feed when the tide was at the proper level.
12. Trap caches were made on the highest rockface at the south edge of Lookout Point in Tinker Harbour (5 traps), north of the west end of Camp Pond (1), at west edge of Canoe Cove's Salix Pond (8), and due south of the High Point (E) trap site (5). A heavy plywood box filled with plastic grain bags was set southwest of the campsite (uphill about 150 yards).
13. The 14' x 16' Pioneer wall tent made living in the bush comfortable, especially with the inclusion of a wood stove

and sufficient wood. The tent, however, needs a good coating of waterproofing prior to further use. Both men could also sleep in this tent.

14. The current camping site is difficult to improve upon given local alternatives. A major problem will be discovery and collection of firewood. It might be contracted to local citizens on a 1-2 trip basis.

15. 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.

ACKNOWLEDGEMENTS

Murray Michelin of Rigolet was our guide and primary boatman for obtaining supplies and firewood. He prebaited the area once prior to our arrival. He retrieved the last of the equipment during a period of gale winds so that we could properly store everything at Labrador Division of Wildlife in Goose Bay.

Stewart Luttich with Labrador Division of Wildlife was most helpful with storage facilities and transportation problems in Goose Bay. Maria Berger also with Wildlife helped store equipment.

William Whitman supervised this operation and the Canadian Wildlife Service provided the equipment used. Salaries (when needed), materials and supplies, and airfares were provided by the Atlantic Flyway's Cooperative Banding Fund.

ANTHROPOLOGICAL NOTE

There appeared to be at least 12 old Inuit tent circles on Kellick Point. Two were on the tundra just west of the highest elevation, 1 was near the barren northeasterly shoreline and 8 were clustered in the mid-eastern half of the tundra area.

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 pp. flora/fauna supplement (mimeo).

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Table 1. Age and Sex of Ducks Banded in the Tinker Harbour Area, Labrador, 1983

SPECIES	LM	HYF	HYM	AHYF	AHYM	TOTAL
MALLARD		1	1	1	1	4
BLACK DUCK		53	75	30	72	230
G. W. TEAL		147	114	9	6	276
PINTAIL		15	18	12		45
COMMON MERGANSER	1					1
TOTAL						556

ble 2. Time and Place of Duck Bandings in the Tinker Harbour Area of Labrador, 1983
(1. Includes 4 mallards and 1 common merganser. A total of 19 traps used for all species. Asterisk (*) indicates final trap site.)

	BLACK DUCK, MALLARD AND COMMON MERGANSER					PINTAIL					GREEN-WINGED TEAL					
TRAP SITE	9/8-14	9/15-21	9/22-28	9/29-10/4	SUB TOTAL	9/8-14	9/15-21	9/22-28	9/29-10/4	SUB TOTAL	9/8-14	9/15-21	9/22-28	9/29-10/4	TOTAL	GRAND TOTAL
Tinker Harbour																
Camp Pt.*											19	19	7	7	52	52
Grassy Knoll																0
Tidal Pd.*													3	1	4	4
Lookout Panel*			6		6								2		2	8
Lookout Is. (E)*			2		2			1		1						3
Lookout Is. (Mid)*			8		8			1		1						9
Lookout Is. (W)*																0
Lookout Pt. (NE)		2			2							5			5	7
Lookout Pt. (NW)													1		1	1
Mason S. PD. (S)*	2		2		4	8	1			9	50	20			70	83
Mason S. Pd. (W)*																0
Mason S. Pd. (N)*																0
Subtotal	2	2	18		22	8	1	2		11	69	44	13	8	134	167
Stag-Kellick Bay																
Canoe Panel*			106	13	119			5	2	7						126
Canoe Salix Pd.*											3	2			5	5
Canoe Bog Pd.*			2	4	6											6
Mid E. Puddle*											24	10	34	2	70	70
S. E. Crk.*			4		4								2		2	6
Mid Stream*			35		35											35
Mid Stream Shoal*																0
High Pt. (E)*			23		23											23
High Pt. (W)*			18	1	19											19
Stag Is. Pd.*	6		1		7	27				27	53	12			65	99
Subtotal	6		189	18	213	27		5	2	34	80	24	36	2	142	389
Grand Total	8	2	208	18	235	35	1	7	2	45	149	68	49	10	276	556

Table 3. Average populations of Dabbling Ducks and Canada Geese noted in the Stag-Kellick (S.K.) and Tinker Harbour (T.H.) sectors during various periods in 1983.

SPECIES	September 4-7		September 8-14		September 15-21		September 22-28		September 29-October 4	
	S.K.	T.H.	S.K.	T.H.	S.K.	T.H.	S.K.	T.H.	S.K.	T.H.
Mallard										
Ave.			TR	1			1			
Range			0-2	0-3	0-1		0-5			
Black Duck										
Ave.	160	53	147	192	89	225	96	87	22	74
Range	0-210	0-201	1-280	17-400	0-300	12-500	0-27	0-260	0-51	0-200
B.W. Teal										
Ave.			TR							
Range			0-1							
G.W. Teal										
Ave.	8	30	23	27	11	42	6	17	3	10
Range	0-25	0-60	10-35	0-1 5	0-34	0-135	0-17	0-60	0-15	0-40
Pintail										
Ave.	5		4	9	TR	29	6	7		TR
Range	0-15		0-17	0-31	0-2	0-185	0-14	0-41		0-4
Canada Goose										
Ave.	12	36	5	18	4	18		7	1	4
Range	0-30	0-70	0-25	0-125	0-21	0-100		0-40	0-8	0-18
Goldeneye										
Ave.			1							
Range			0-5							
R.B. Merganser										
Ave.	1		4							
Range	0-5		0-25							

Nutak
Labrador

1983 Waterfowl Banding

Nutak, Labrador

Banders:

William Andersen III
Maria Berger
Tim Bowman
Frank Phillips

Introduction

Banders Maria Berger, Tim Bowman, and Frank Phillips arrived at Nutak on July 22. William Andersen arrived on August 3. Banding began on July 22 and moulting birds were banded until August 10th. Bait trapping began subsequently and was continued until September 13, when the banding operation was terminated. A total of 356 birds was banded. A summary of birds banded by species, sex, and age class is included in Table 1. In addition, 12 black ducks with foreign bands were recaptured.

A map of the Nutak area is shown in Figure 1. Banding locations are labelled on the map.

Some obstacles were experienced, as would be expected with any first year operation. However, most difficulties encountered were logistical in nature and can be worked out easily. There exists good potential for banding operations in the Nutak area, and banding success can only be expected to increase in future years.

Moulting Birds

The first moulting black duck was captured on July 22 in the area of East Pond. Subsequent searching of the area revealed several places where moulting ducks were found hiding. Most notable at East Pond were small cavities formed at the water's edge, at the east end of the pond, in which one to three ducks were found in many of the cavities. Once spotted inside cavities, it was a fairly easy matter to cover the entrance of the cavity with a dip net to prevent escape, and remove the birds by hand from inside the cavity. Other moulting birds were found in the brush surrounding the pond. This technique of searching the shoreline and brush was used at several other ponds in the area and proved to be effective in most cases where willows, spruce, and grassy areas afforded ample cover for the moulting birds. The most effective method

of search was to have banders each cover a respective zone, and follow a path parallel to the water's edge around, and inside, the perimeter of the pond. Once a moulter was located, three people would work the bird. Ducks would seldom flush and could be approached close enough to be captured by hand or dip net. Most ducks were found within fifty feet of the water's edge, but as far as 150 yards in some cases. Spruce trees growing near ponds appeared to be favoured hiding places for moulters, which would hide under dense branches close to the ground. Ponds in which ducks were found in this manner include East, West, Slam Bang, Goose and Big Rock ponds (see Figure 1).

Another method of capturing moulting ducks and geese was to drive them ashore by boat, and once on land, chase them on foot to capture. In several instances, ducks would enter the woods or brush near the water and hide. Searching would then proceed as described above.

On the July 22 arrival of banders, many ducks banded appeared to be well into their moult, leading us to believe that moulting birds may be caught as early as the first week of July. Although the last moulting black duck was banded on August 10, others were sighted later than that, including one group of about 10 black ducks which were driven ashore in Goose Cove on August 13, but eluded banders and were not captured. It appeared as though late-moulting black ducks chose to run once in the brush, rather than hide. These birds must be pursued closely if they are to be captured.

Totals for moulting birds captured by these two methods were 92 black ducks (including 5 foreign recaptures), 10 Canada geese, 4 pintails, 1 mallard, and one American Coot. Five other Canada geese were banded as locals using these capture strategies. A breakdown, by sex, of moulting waterfowl banded is included in Table 2.

One interesting observation was that following each search and banding of ducks at ponds, the moulting birds would leave the pond and move to other

ponds. This is evidenced by the fact that a second consecutive search of the same pond the following day would turn up few, if any, of the birds banded the previous day. We found that a three to four day rotation of searching ponds was sufficient to allow new moulters to settle into an area in numbers large enough to make the banding effort worthwhile.

Although goldeneye were present in Okak Bay, large concentrations of moulters were not located. One group of 300 Flying goldeneye was sighted in Goose Cove on 7/25, and several smaller groups were observed on 8/3 in the same area. Small numbers of moulting goldeneye were observed in Goose Cove from 8/10 to 9/2, and one Barrows goldeneye was driven ashore and banded on 9/2.

Bait Trapping

Preliminary scouting of prospective bait trapping areas was done during the moulter capture period (late July to early August). Numbers of flying black ducks were relatively low during that period, but flocks of up to 100 ducks were seen using some areas by August 5. Initial baiting of Goose Cove was started on August 3, while West Pond, East Pond, Woody Bay, and Trout Brook were baited on August 4. Ducks were seen in large numbers at all sites on August 5, and on the 6th, the first trap was erected on West Pond. Traps were erected at East Pond, Goose Cove #1 and #2, and Woody Bay during the next two days. All traps were two or three funnel traps. Netting was left off the traps at the time of trap erection. Although ducks continued to take bait at most sites, they were reluctant to enter the traps. Netting was placed on Goose Cove traps on 8/10 and 8/11, and the first black duck was trapped there on 8/13. Netting was placed on East Pond and West Pond traps on 8/17. Trapping success was slow, even though bait was being taken from inside most traps, so funnels were gradually closed to an opening width of about 6 cm. This measure was

coupled with another funnel modification: the leading edge wires of the funnel were cut and bent inward, and the tips curled around to form a small loop at the end of the wire (see Figure 2). Every second wire on each side was bent in this manner so to form a blunt ended deflector that would not injure birds bumping into them. These modifications were effective, and by 8/22, trapping success improved greatly.

In addition to 142 black ducks, of which 7 were recaptures, 94 green-winged teal, 16 pintail, and 2 mallards were trapped. An age and sex breakdown of these birds is included in Table 3. Although the age composition of black ducks banded was entirely after hatch year birds, young black ducks were known to be in the area, as at least one brood of black ducks was sighted, and one black duck nest was found.

Three of the seven traps operated were in saltwater. Tides in the Nutak area averaged four to seven feet, and presented some problems for trapping. At Goose Cove, there were no tidal pools suitable for placing a trap, so the two traps there were placed such that they would be dry a minimal amount of time and so that they would not be totally under water at high tide. This seemed to work well. Ducks would enter traps near low tides, and traps were best checked on a rising tide so that ducks were given a chance to enter traps.

Bait trapping at Goose Cove could have been more productive; however, the traps there were out of operation twice for a total of 12 days. From 8/27 to 9/1, they were closed because motor breakdown prevented tending of traps, and from 9/7 to 9/13, traps were inoperatable because of foul weather and extreme high tides. This was unfortunate, as large numbers of black ducks were observed in the Goose Cove area at those times.

Black duck numbers increased through the month of August and reached peak numbers in early September. At the time of our departure, on September 14,

black ducks were still present in large numbers. Accurate numbers of black ducks could not be ascertained due to the largely dispersed nature of the black ducks, and the fact that our working area was only a small part of the entire Okak Bay region. Flocks of 30 to 250 black ducks were regularly seen in late August and early September, but this probably represents only a small fraction of the total numbers of black ducks using Okak Bay and associated waters.

Green-winged Teal numbers continued to increase throughout September, and appeared to be at peak numbers when we left on 9/14. Geese increased considerably during late August and early September, and flocks of up to 1000 were observed during the second week of September.

Bait trapping can be expected to improve in future years once some of the logistical problems are worked out, and also because of the familiarity of banding areas.

Retrapped Birds

Records were kept of all banded birds returning to traps. A listing of all retrapped birds is included in Table 4. The data can be summarized as follows:

Species	No. Retrapped	Total number bait trapped and released	% Returning to traps	Maximum recaptures per individual
Black Duck	38	146	26.0%	7
Green-winged Teal	40	94	42.5%	10
Pintail	7	16	43.8%	6
Mallard	2	3	66.7%	2
TOTAL	87	259	33.6%	10

Future Banding Sites

Trapping should be continued at House Pond, East Pond, West Pond, Woody Bay and Goose Cove sites. In addition, one more trap may be placed on a pond located just west of East Pond, and possibly another on the tidal flats south of East Pond. Another location which should prove productive is Goose Island. There are several small ponds at each end of the island which are utilized heavily by waterfowl, especially at night. Not only may these ponds be bait-trapped, but they are quite small in size and may have potential for netting at dusk by the use of an elevated gill net placed at the downwind end of the pond. Since this is a popular hunting spot, it may be wise to discontinue bait trapping one week prior to the hunting season, and continue with netting thereafter.

All locations in which moulters were banded this year should be searched again in future years. Ponds include East, West, Slam Bang, Big Rock, and Goose Ponds. Goose Cove is a good area for driving moulters ashore. Both Goose Cove and Goose Pond are likely areas to find moulting geese. More detailed maps of the area should reveal other ponds with moulter potential.

Red-breasted mergansers were observed moulting in large numbers near Goose Island on 8/8 and again on 8/11. Birds numbered at least 200. There is potential for drive trapping there, as the birds tended to bunch up and follow the shoreline when approached by boat. Moulting mergansers were also observed in large numbers at Sivgak and in the North River.

Mortality/Predators

Problems with predators were minimal during the banding operation. Avian predators presented the only problems, but they were kept under control by the use of pole traps. Pole traps were erected at Goose Bay #1 and #2,

West Pond, and Woody Bay sites.

On August 19, two black ducks, one adult female red-breasted merganser, and three downy mergansers were found dead in the Goose Cove #2 trap. The cause of the deaths could not be determined, but the pole trap adjacent to the trap had been sprung, and it was suspected that a raptor was responsible for the killing. On 9/1, a hawk owl was found dead in the same pole trap. On 9/3, a goshawk was captured inside the duck trap, and a lone black duck also in the trap was unharmed. Then again, on 9/4, a gyrfalcon was captured in the Goose #2 pole trap. The only other capture in a pole trap occurred on 8/31, when a goshawk was captured at West Pond.

One moulting black duck, (#1237-56906) was found dead and partially eaten one day after it had been banded. It is probable that this was a raptor kill, as both gyrfalcons and a roughlegged hawk had been seen hunting the area that day.

Several mammalian predators were known to be in the trapping area, but never posed any problems. Evidence of weasel, fox, wolf, and black bear activity was found, although the only incident of interference with trapping occurred on 9/7, when a bear knocked down the pole trap at West Pond. Bear tracks were also found leading to a trap at Goose Cove, but no damage or predation occurred.

Two other mortalities occurred when two black ducks were found dead in the Woody Bay trap on separate days. The cause of death could not be determined.

Conflicts with Hunters

The Nutak area has long been a popular hunting place, and there was some concern expressed by several persons in the area that our presence and

operation would drive birds out of the area. To avoid any problems that may arise from this conflict, it may be advisable in future years to discontinue bait trapping on popular hunting ponds and bays one week prior to the commencement of hunting season, and to continue operating in the less heavily hunted areas, using both bait trapping and aerial netting techniques.

If the matter were to be brought up at one of the LIA or community meetings, it would be wise to have a senior CWS representative and a bander familiar with the Nutak operation present to answer questions about the banding project. It appears that much of the misunderstanding arises from a lack of knowledge of the banding operation, and if the methods and aim of the banding project were outlined, opposition to it may be minimized.

Accommodations

Banders resided in an abandoned house at Nutak, which is under the ownership of Sam Lyell of Nain. Although the house is not in the best condition, it was far more comfortable and convenient than living in a tent. Banders returning in future years should obtain permission from the Lyells to use the house as a base camp. The house needs several minor repairs such as roof repair and a new stove pipe. These repairs should be made by banders in return for the use of the house.

Storage of Equipment

Trap wire and netting at Goose Cove #1 and #2, and House Pond sites were stashed in adjacent brush. Traps at East Pond, West Pond, and Woody Bay were left standing on location, and the netting was hidden in adjacent brush. Trap wire and netting from the Trout Brook trap is stored at the house at Nutak. All other equipment is stored at William Andersen's shed in Nain. A list of this equipment is included with this report.

The 18 H.P. Evinrude motor was shipped to Goose Bay for repairs, and is stored at the Labrador Wildlife Division's building there.

Recommendations

1. The major change that should take place in the banding operation is to strive toward independence. Most important to meet this need would be the acquisition of a seaworthy boat and motor. The ideal boat for work in this area is a freighter canoe, twenty feet in length. It would facilitate travel in shallow waters, can carry a heavy load, and uses a relatively small amount of gas to drive it. A 25 H.P. Mercury motor would be a good match for a freighter canoe. This year's crew used several types of boats and the freighter canoe was by far the preferred, and most efficient, craft used.

2. All equipment, supplies, and fuel should be shipped from Nain on a chartered longliner. This would eliminate costly (time and money) trips to Cutthroat to pick up supplies, delays due to weather, reliance on others for handling of freight, freight handling charges, and shortages of supplies. Several boats are available for the charter, and the job should be put up for bids to the owners of the boats. Suggested contacts are:

in Nain:	Jim Webb	in Makkovik:	Bert Winters
	Wayne Jenkins		Rupert Evans
	Jako Merkuratsuk		Tim McNeill
	Tom Barbour		

3. Banders should arrive in Nutak by the first week of July. Several days are needed, before banding starts, to organize camp, gather enough firewood for the whole season, do repairs on the house, and mark channels to facilitate travel.

4. The tickle near Nutak and at Goose Cove should be marked to facilitate access to the bays, and to cut down on propeller and boat damage.

5. Full length poles should be supplied for anchoring traps in soft bottoms, and for marking channels.

6. Maps of 1:50,000 scale are needed for location of small ponds with moulter potential. 1:250,000 scale maps do not show many of the ponds searched for moulters this year.

7. If possible, all equipment should be CWS-supplied to eliminate reliance on the Labrador Wildlife Division for equipment.

8. During the moulting period, more scouting should be done farther inside Okak Bay and into North River, as well as Sivgak.

9. Baiting of potential bait trapping areas should begin the third week of July because there is a noticeable increase in flying black ducks by the end of the month.

10. 37 (40 kg) bags of corn would be sufficient for baiting purposes.

11. Pole traps should be erected at all trapping sites to control avian predators. Eight #1 jump traps are required for this.

12. More trap wire is needed (1 roll), as is more netting for tops. If possible, trap wire should be longer vertically than horizontally to reduce bill damage to birds.

13. A larger trap should be placed at West Pond to reduce the crowding effect which probably prevented more ducks from entering the trap this year.

14. The trap at Woody Bay should be relocated to a salt pond on the opposite side of the cove, near the second brook which enters there.

15. Standing poles should be erected at small ponds on Goose Island as early as possible to get birds used to the presence of poles to be used for aerial netting.

16. A 7½" mesh gill net should be supplied for aerial netting.

17. Some, or all of the bait should be cracked corn for baiting tidal areas where fine grain baits wash away.

18. One or two additional dip nets are required.

19. All banders should be equipped with chest waders, as their use is required when working with tides, and in ponds with soft bottoms. Hip waders and knee rubber boots are also required by all personnel.

20. A radio with frequency 4942.5 must be provided.

21. Banding with dogs may be effective during the moulting period, and consideration should be given to sending a trained dog and owner in the future.

22. Tide charts for the Nutak area would be useful.

23. Consideration should be given to sending a rocket net to Nutak. There is potential for netting both geese and black ducks using that method.

Acknowledgements

Special appreciation should be expressed to William Andersen III, Henry Webb, Apa Kojak (and extended family), and Bing Pelley for their invaluable assistance, advice and friendship during the course of the banding project.

Equipment Stored in Nain

2	3-man tents (and flys)
1	cooler
1	bucksaw
3	metal pails
1	5 gallon bucket
1	small axe
1	hammer
1	pair wire cutters
1	pair scissors
2	dip nets
2	flashlights
4	tarps
2	fish boxes
1	first aid kit
2	files
2	lengths nylon rope
1	prop for 18 H.P. Evinrode
1	spark plug wrench for 18 H.P.
	Cookware - 1 large frying pan, coffee pot, bowls, soap.

Table 1. Nutak Waterfowl Banding - 1983

	AHY			HY		L		
Species	M	F	U	M	F	M	F	TOTALS
Black Duck	214	8						222
Green-winged Teal	4	5		45	40			94
Pintail	5	1		9	5			20
Canada Goose	4	5	1			3	2	15
Mallard	3							3
Barrows Goldeneye		1						1
American Coot			1					1
								356


Figure 1a. Nutak Area
Briery Island
TABLE HILL
Parkavik
Green I
Coopers Island
Shark I
INUKSULUKAK HILL
Uibvak Pt
Kaiktuinak I
Kingnektut Islands
Sunpilik Pt
Tikkagolik Pt
Okak Ahandj
Coffin Island
Moores I
Moores Harbour
Okak Islands
TIGERSCHMITT HILL
OKAK
TROUT BROOK
Nevaktanna Pt
Uibarsuk Pt
Uibarsurasek Pt
Lehman Island
Sea Pt
Erdmann I
Brazen
Kikkert Island
Imnaksuk Pt
Goose Cove
Kikkektak Island 200
Martin Island
BAY
Ivjogiktok Island
Goose Island
Umiangujak Pt
Nutak
WOLDY BAY
ISLANDS
HOUSE POND
Cut Throat I
Cutthroat Vessel
Blow Hard
Hector I
WEST POND
East Pond
Opingivruksuak Island
Skim Berry Pond
Big Rock Pond
Niakok Pt
MAKKAK HILL
Goose Pond
Palsa Bog
UBILIK PENINSULA
IGLUSUAKTALIALUK ISLAND
Nuasornak I
South Amitok I
Iluvektalik Island
Kikiktaksoak Island
Orne Is
Tikkigatsiagak Island
Tuttle I
Webber I
Sutton I
Graveyard Island
TIKKIGAKSUK PENINSULA
Rapids


Figure 1b.
NUTAK - OKAK BAY
ISLAND
Crosby Pt
Brierly Island
Opingivik
Parkavik
Cooper Island
INUKSULUKAK HILL
Uibvak Pt
Brook
Rapids
WHEELER MTN.
SIVGAK
Okak Islands
Sungilik Pt
Tikkagolik Pt
Kingnektut Islands
Collin Island
Moores
Moores Harbour
TIGERSCHMITT HILL
OKAK
TROUT BROOK
Nenaktanna Pt
NORTH RIVER
Imnaksuk Pt
Kikkektak Island
Goose Cove
Martin Island
BAY
Ivjogiktok Island
Goose Island
WOODY BAY
Nutak
ISLANDS
HOUSE POND
Kairtukuluk Pt
Cubin
Umiangujak Pt
Tikigatsiakuluk Pt
Allavik
Tikigatsiak Pt
OKAK
WEST POND
EAST POND
SLAM BANG POND
GOOSE POND
BIG ROCK POND
MAKKAK HILL
Palsa Bog
UBILIK PENINSULA
ILLUILIK HILL
String Bog
IGLUSUAK
Nuasornak
South Amitok I
Iluvektalik Island
Tikkigatsiagak Island
Sutton
Rapids

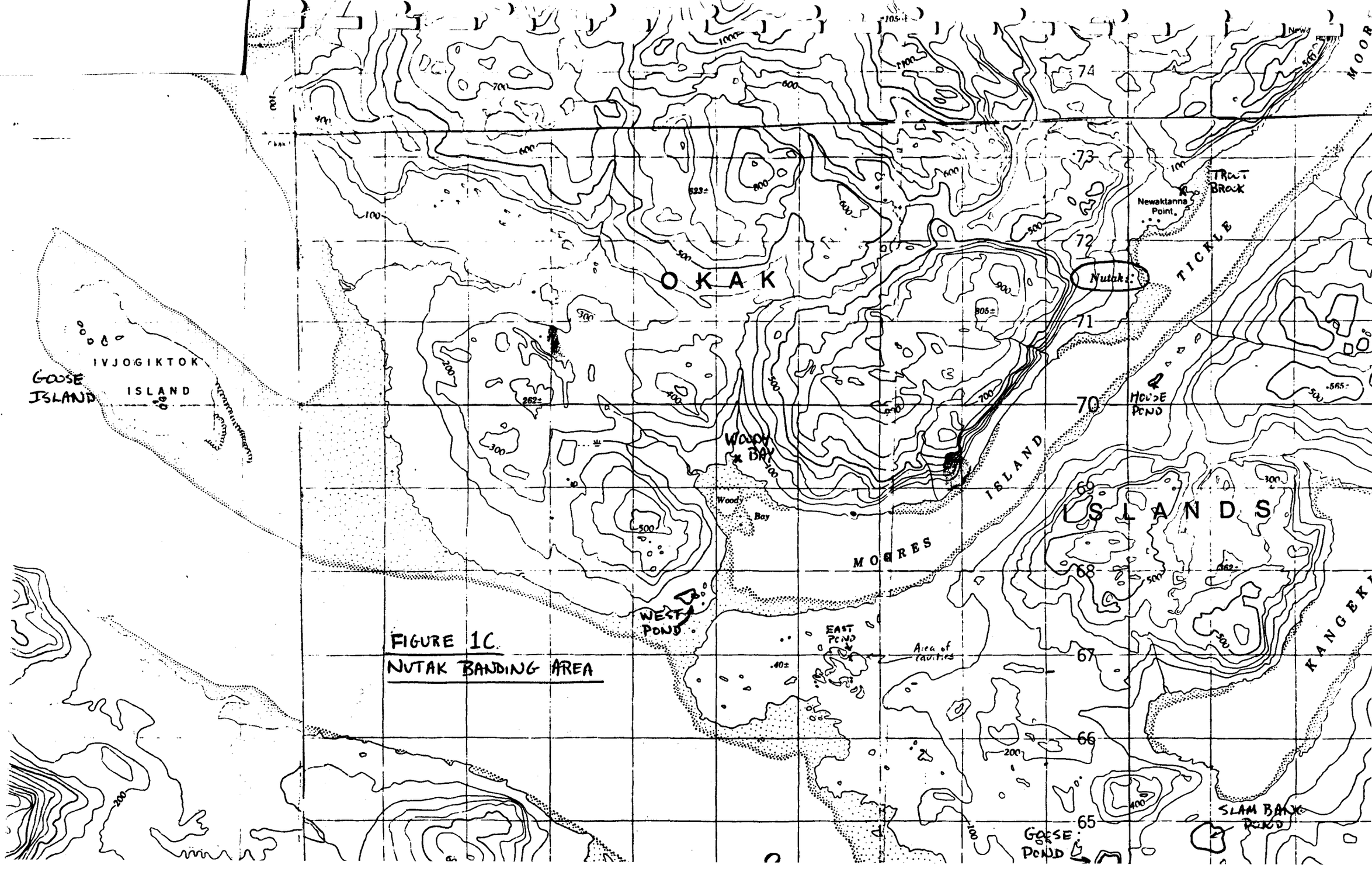


FIGURE 1C.
NUTAK BANDING AREA

Table 2. Moulting Waterfowl Nutak, 1983[1]

Black Duck		Pintail		Mallard	Canada Goose[2]			Barrows Goldeneye	TOTAL
M	F	M	F	M	M	F	U	F	
85[3]	2	3	1	1	4	5	1	1	103

1. 1 sex unknown. American Coot was taken.
2. An additional 5 local geese were banded, 3 male and 2 female.
3. 5 additional male black duck foreign recaptures were also made.

Table 3. Bait Trapped Waterfowl Nutak 1983

	AHY		HY		TOTAL
	M	F	M	F	
Black Duck	129[1]	6	-	-	135
G.-w. Teal	4	5	45	40	94
Pintail	2	-	9	5	16
Mallard	2	-	-	-	2
					247

1. An additional 7 adult male black duck foreign recaptures were also taken.

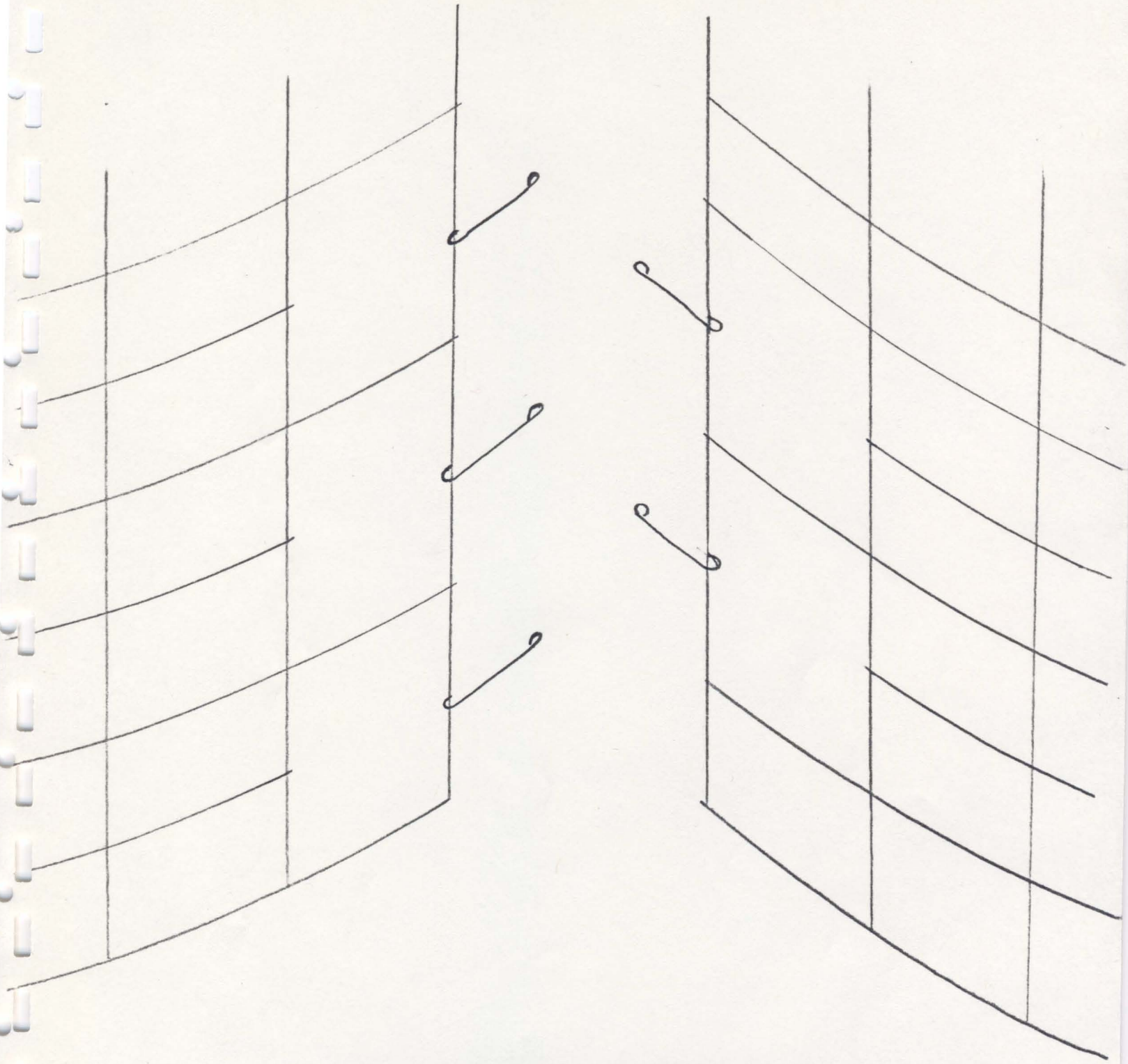


Figure 2. Modification of Funnels

Table 4. Retrapped Waterfowl, Nutak, 1983[1]

Band #	First Capture	Last Capture	Total Bait Trap Captures	Species	Remarks
1237-56924	July 25[2]	August 23	1	Black Duck	AHY M
939	July 26[2]	Sept. 1	2		
966	July 28[2]	Sept. 6	3		
974	July 29[2]	Sept. 2	1		
989	Aug. 13	Aug. 24	2		
990	Aug. 17	Sept. 13	2		
999	Aug. 22	Aug. 31	2		
1237-57000	Aug. 22	Aug. 24	2		
1357-13002	Aug. 23	Aug. 24	2		
05	Aug. 23	Sept. 1	3		
06	Aug. 23	Aug. 24	2		
07	Aug. 23	Sept. 13	7		
09	Aug. 23	Sept. 13	2		
12	Aug. 23	Aug. 30	4		
13	Aug. 23	Aug. 25	2		
15	Aug. 23	Sept. 1	4		
19	Aug. 23	Aug. 28	2		
21	Aug. 24	Sept. 13	7		
25	Aug. 25	Sept. 13	2		AHY M
35	Aug. 25	Sept. 6	3		AHY F
36	Aug. 25	Sept. 2	3		
48	Aug. 26	Aug. 27	2		
50	Aug. 26	Aug. 30	2		AHY F
56	Aug. 26	Sept. 3	3		AHY M

1. Excludes moulters recaptured as moulters.
2. Initially captured as moulter.

Table 4 (cont'd) Retrapped Waterfowl, Nutak, 1983

Band #	First Capture	Last Capture	Total Bait Trap Captures	Species	Remarks	
1357-13061	Aug. 27	Aug. 30	2	Black Duck	AHY	M
64	Aug. 27	Sept. 1	2			
65	Aug. 27	Sept. 13	3			
67	Aug. 27	Sept. 1	2			
70	Sept. 28	Sept. 1	2			
71	Aug. 27	Aug. 29	2			
75	Aug. 28	Sept. 3	2			
80	Aug. 28	Sept. 1	3			
82	Aug. 28	Sept. 1	2			
84	Aug. 28	Sept. 1	2			
88	Aug. 28	Aug. 31	2			
99	Sept. 1	Sept. 13	2			
13202	Aug. 30	Sept. 6	2			
10	Sept. 4	Sept. 13	2			
15	Sept. 5	Sept. 11	3			
17	Sept. 9	Sept. 14	4		AHY	F
1237-56936	July 25[2]	Sept. 2	2	Mallard	AHY	M
1357-13010	Aug. 23	Sept. 4	2			
876-01207	Aug. 24	Aug. 25	2	Pintail	HY	F
09	Aug. 24	Aug. 25	2		HY	M
10	Aug. 24	Aug. 30	3		HY	F
12	Aug. 24	Sept. 5	2		HY	M
15	Aug 30	Sept. 4	6		HY	M
16	Aug. 30	Sept. 4	6			
17	Aug. 30	Aug. 31	2			

Table 4 (continued) Retrapped Waterfowl, Nutak 1983

Band #	First Capture	Last Capture	Total Bait Trap Captures	Species	Remarks
634-13403	Aug. 25	Aug. 31	2	G.-w. Teal	HY M Hunterhill Sept. 1
08	Aug. 28	Sept. 9	2		HY M
09	Aug. 28	Sept. 13	10		HY M
10	Aug. 29	Sept. 11	7		HY F
12	Aug. 29	Sept. 7	4		HY M
13	Aug. 29	Sept. 13	6		HY F
15	Aug. 29	Sept. 7	3		HY F
16	Aug. 29	Sept. 4	2		HY M
19	Aug. 29	Sept. 13	5		HY M
25	Aug. 31	Sept. 7	4		HY M
26	Aug. 31	Sept. 13	5		HY M
28	Aug. 31	Sept. 9	2		HY M
29	Sept. 1	Sept. 3	2		HY M
31	Sept. 1	Sept. 13	9		HY F
33	Sept. 3	Sept. 13	6		HY F
36	Sept. 4	Sept. 13	6		HY M
37	Sept. 4	Sept. 9	2		HY F
41	Sept. 5	Sept. 13	6		HY M
634-13442	Sept. 5	Sept. 9	2	G.-w. Teal	AHY F
43	Sept. 5	Sept. 9	3		HY M
45	Sept. 5	SEpt. 9	2		HY M
47	Sept. 5	Sept. 12	2		HY M
48	Sept. 5	Sept. 13	6		HY M
51	Sept. 5	Sept. 12	3		HY F

Table 4 (continued) Retrapped Waterfowl, Nutak, 1983

Band #	First Capture	Last Capture	Total Bait Trap Captures	Species	Remarks	
634-13455	Sept. 7	Sept. 13	4	G.-w. Teal	HY	M
57	Sept. 7	Sept. 11	2		HY	F
58	Sept. 7	Sept. 13	3		HY	M
70	Sept. 9	Sept. 12	2		HY	F
71	Sept. 9	Sept. 12	3		HY	M
72	Sept. 9	Sept. 12	3		HY	M
74	Sept. 9	Sept. 12	3		HY	F
76	Sept. 9	Sept. 11	2		HY	M
77	Sept. 11	Sept. 13	3		HY	M
79	Sept. 11	Sept. 13	3		HY	F
83	Sept. 11	Sept. 13	2		HY	F
84	Sept. 11	Sept. 12	2		HY	F
86	Sept. 11	Sept. 12	2		HY	F
87	Sept. 11	Sept. 12	2		AHY	M
88	Sept. 12	Sept. 13	2		HY	M
89	Sept. 12	Sept. 13	2		HY	M

RETRAP AND RECAPTURE INFORMATION

Banding Station: Nutak Species: Black Duck

(one species per sheet)

Complete Band number	Retrap or Recapture location	Date of retrap	Additional information
1[illegible]7 - 17682	Nutak	7/24/83	
1[illegible]37 - 45456		7/25	
1837 - 72856		7/25	
[illegible]47 - 35238		7/26	
1107 - 41573		7/29	
[illegible]87 - 32808		8/24	
1357 - 05423		8/24	
1357 - 05324		8/26	
[illegible]97 - 10365		8/27	
1187 - 72482		8/27	Duck dead in trap
1[illegible]27 - 99_70		8/27	One digit = illegible - replaced with band # 1357 - 13072
1[illegible]97 - 92619		8/28	

List of bands used at Nutak 1983

1237-56901 - 57000
1357-13001 - 13100
1357-13200 - 13226

624 - 13401 - 13494

876 - 01201 - 01222

728 - 15301 - 15315

Estimated Budget for Nutak Labrador Banding 1984

Period: June 23 to September 20

Wages:	Wages for 3 people at $3250/person	$ 9750.00
Travel:	3 return airfares - Goose Bay to Nain	800.00
	2 return airfares - Moncton to Goose Bay	1000.00
	Charter for Collector Ship - Nain to Nutak	1000.00
Lodging:	(Nain)	1800.00
Food		1700.00
Gas and Oil		1500.00
Shipping, Misc. Supplies, etc.		3450.00
Total Operating Costs		$ 20000.00

Capital Costs

1	freighter Canoe 20' or 22'	2500.00
1	25 HP Outboard	1500.00
1	15 HP Outboard	1200.00
	Subtotal	4200.00

Total Projected Cost (1984) $ 25,200.00

Dog Banding
Labrador

Banding with Dog - Snegamook Lake, Labrador, 1983

Introduction

In 1983 the Canadian Wildlife Service conducted breeding ground surveys in Labrador and identified Snegamook Lake as an important black duck production and molting area. Bait trapping in 1981 proved unsuccessful; however, a pointing dog captured thirty molting birds. A banding crew with dog worked Snegamook Lake in 1982 as well as locations at West Micmac Lake and Flatwater Brook. Over 100 adult male black ducks and geese were banded. In 1983 two handlers with German Wirehaired Pointers worked the Snegamook Lake area.

History of Atlantic Area Dog Banding

Probably George Boyer was the first C.W.S. biologist to use dogs for banding waterfowl in the Atlantic Provinces. During the early-50's, he used Labrador Retrievers to band flightless birds in the Maritimes. English Setters were later used by the P.E.I. and N.S. Wildlife branches with limited success. In the early 70's, George Boyd of Lands and Forests, Nova Scotia, and Austin Reed of C.W.S. in Quebec used German short-haired pointers to band local waterfowl. Keith McAloney of Ducks Unlimited in Amherst banded Eider and Black Ducks with a Chesapeake Retriever during this period. George Boyd is presently using both a short hair and a wire hair and has banded over three thousand birds.

Work Area

To eliminate extensive travel costs only the Snegamook Lake area was worked in 1983. This lake is located in the Postville Region, a designation

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.

Snegamook Lake is a very large clear water lake located in the Kanairiktok River system and found on 1:50,000 map sheet 13 k 11 & 12. The western portion of this lake is a complicated system of bogs, smaller lakes and ponds, inland bays and river systems which provide an area of unlimited habitat for molting waterfowl. Figures 1 and 2 show the lake location and work area.

Results

Eleven days were spent in the field of which eight days were required for banding. Four species of waterfowl and a total of 186 birds were banded in 1983. Table I summarizes this total by sex and age class. The cost analysis for this program is presented in Table II and the dog recaptures for Labrador 1981-83 are summarized in Table III. All observations for 1983 are contained in the appendix.

Discussion

Complying to 1982 recommendations, two dogs with handlers were used at one location. This increased the efficiency of the operation in that

more birds were captured for each encounter. Due to less travelling, all concerned were more rested and travel expenses were halved. When one dog slackened off, it was immediately inspired by the other.

The German Wire-haired Pointer is certainly the ideal dog for work at Snegamook. They worked beautifully in all habitat types. Their short coat dried very quickly, which is appreciated when you end up sharing the same sleeping bag. Their size is ideal as they take up virtually no room in a boat, plane or tent. Their endurance to physical punishment is incredible but after 8-10 days of hard work several days of rest are required.

The method of capture and behavior of birds to dog banding is identical to those descriptions contained in the 1982 report. The movement of birds out of the work area was more pronounced in 1983. Lakes which were productive in 1981-2 contained no birds. This year the Nutak bait banding crew banding molters with hand nets found that a four-day interval was required before reworking areas. Reworking areas at Snegamook Lake with dogs resulted in over a 90% decline in production. Fred Payne of the Nova Scotia Lands and Forests Department found that a large population of molters failed to return to a small lake in southern Nova Scotia after a dog banding operation. The possibility that such operations may drive birds from an area should be considered.

To date, 23 birds, or 7.5% of the total Black Ducks banded, are recaptures. These recaptures can be subdivided into three groups.

(1) Eleven birds banded as adult males at winter banding stations in seven states or provinces.

(2) Four birds banded as adult males at Snegamook Lake in 1981 or 1982.

(3) Eight immature birds, banded at six locations throughout the flyway.

Interpretation of these data has changed greatly since 1982. A more accurate theory will be achieved when the dog banding data are combined with those of the Tinker Harbour and Nutak banding stations.

The 1983 objective of 200 Black Ducks was not reached. However, a more complete view on the biology of this area was achieved. Adult male and local Mallards were banded in addition to other species. Thirty brood sightings and observations on other wildlife are recorded in Appendix A.

In 1975 George Boyd was asked by Dr. Ray Owen, of the University of Maine, to record measurements of molting black ducks in Nova Scotia. Since then a total of 197 black ducks (96% males) were banded with weights and measurements taken. George continued this work in Labrador and Appendix A contains a summary of his work and measurements for thirty-four birds.

Recommendations

Banding adult male black ducks is very important in the management of this species. The calculation of survival and mortality rates, and changes in harvest regulations, are most readily detected in this population segment. To date the most efficient capture method for adult males is with dogs and this program should continue in 1984 at either Snegamook Lake or in Okak Bay.

The Okak Bay area should be worked ahead of Snegamook Lake for several reasons. The importance of Snegamook Lake as a molting and production area is well known and documented. Working the Okak area would eliminate the previously mentioned "harrassment factor" for one or two years and provide additional information on a new area. The Okak area as described

by the 1982 banding crew would appear to be more productive, more easily worked, and better suited than Snegamook Lake for banding with dogs.

All equipment used at Snegamook Lake was left at Goose Bay and later sent to other areas. A complete inventory of remaining equipment and additional purchases is required.

In 1982 a Beaver aircraft was used to transport all equipment to and from Snegamook Lake. Only 15 gallons of fuel could be shipped with our gear, which eventually cut our travel and production. An Otter charter should be used on the first flight for safety reasons and to eliminate supply shortages.

Given approval for 1984 this program should again include two dogs and handlers.

Five important work areas (Figure II) were identified at Snegamook Lake during ground work and aerial surveys. Future banders should concentrate their work at these locations. Birds were also banded en route to and from these areas.

Acknowledgements

George Boyd's contribution to this year's program was greatly appreciated. His energetic manner as a cook, doctor and bander was invaluable.

I would also like to thank the Newfoundland/Labrador Wildlife Service for their assistance with equipment storage and transportation.

W. R. Barrow
Wildlife Technician
Sackville, N. B.

Table I. Total banded waterfowl by sex and age class, Snegamook Lake - 1983

Species	Local M	Local F	Local U	After Hatch Year M	After Hatch Year F	Total	Bands Used
Black Duck				154	6	160*	123758401-58500
Mallard	2			2		4	123757465-57500
N. Pintail	3	4				7	135754601-54629
Canada Goose			1	7	7	15	86671906-71912
							628750-71912
						186	

* Black Duck total includes two replaced bands.

Table II. Cost analysis for the 1983 dog banding program.

Salaries	Transportation	Food & Lodging	Gas-Oil Misc. Supplies	Total
1550.00	3745.33	518.54	43.50	5867.27

Total birds	186
Cost/bird	31.54
Total Black Ducks	160
Cost/Black Duck	36.67

Table III. Total Duck Recaptures, Labrador, 1981-83.

Band Number	Recapture Year	Banding Information				
		Age	Sex	Bander	Date	Location
1157 74455	1981	L	M	Maine F & W	27 Aug 79	Maine
1157 42915	1981	AHY	M	Maine F & W	2 Mar 79	Maine
1187 80395	1982	AHY	M	Pea Is. Refuge	19 Jan 81	N. Carolina
1237 14981	1982	AHY	M	PEI F & W	5 Feb 82	P. E. I.
1287 35465	1982	AHY	M	Mass. F & W	29 Jan 82	Mass.
897 73356	1982	AHY	M	J.E. Forbes, US F & W	13 Jan 82	New York
1287 35265	1983	AHY	M	Mass. F & W	22 Jan 82	Mass.
1337 27545	1983	HY	M	Mass. F & W	10 Sept. 82	Mass.
1147 74132	1983	AHY	M	Mass. F & W	18 Feb 79	Mass.
957 03434	1983	AHY	M	Mass. F & W	20 Jan 70	Mass.
947 59420	1983	L	M	Maine F & W	5 Sept 1975	Maine
1187 87996	1983	L	M	Maine F & W	5 Aug 1982	Maine
1107 55352	1983	AHY	M	Maine F & W	25 Feb 80	Maine
947 47474	1983	AHY	M	New Jersey Dept. of Environment	22 Jan 76	New Jersey
1237 33455	1983	HY	M	Brigantine N.W.R.	22 Aug 82	New Jersey
1357 05319	1983	AHY	M	N.S. L & F	1 Feb 83	Nova Scotia
1356 05066	1983	HY	M	N.S. L & F	28 Sept 82	Nova Scotia
1237 28206	1983	HY	M	Quebec C.W.S.	28 Aug 82	Que.
1147 11790	1983	HY	M	Ontario CWS	12 Aug 79	Ont.
1147 01857	1983	AHY	M	N.B. CWS	7 July 82	Labrador
1147 01889	1983	AHY	M	N.B. CWS	9 July 82	Labrador
1147 01827	1983	AHY	M	N.B. CWS	8 July 81	Labrador
1147 01816	1983	AHY	M	N.B. CWS	6 July 81	Labrador

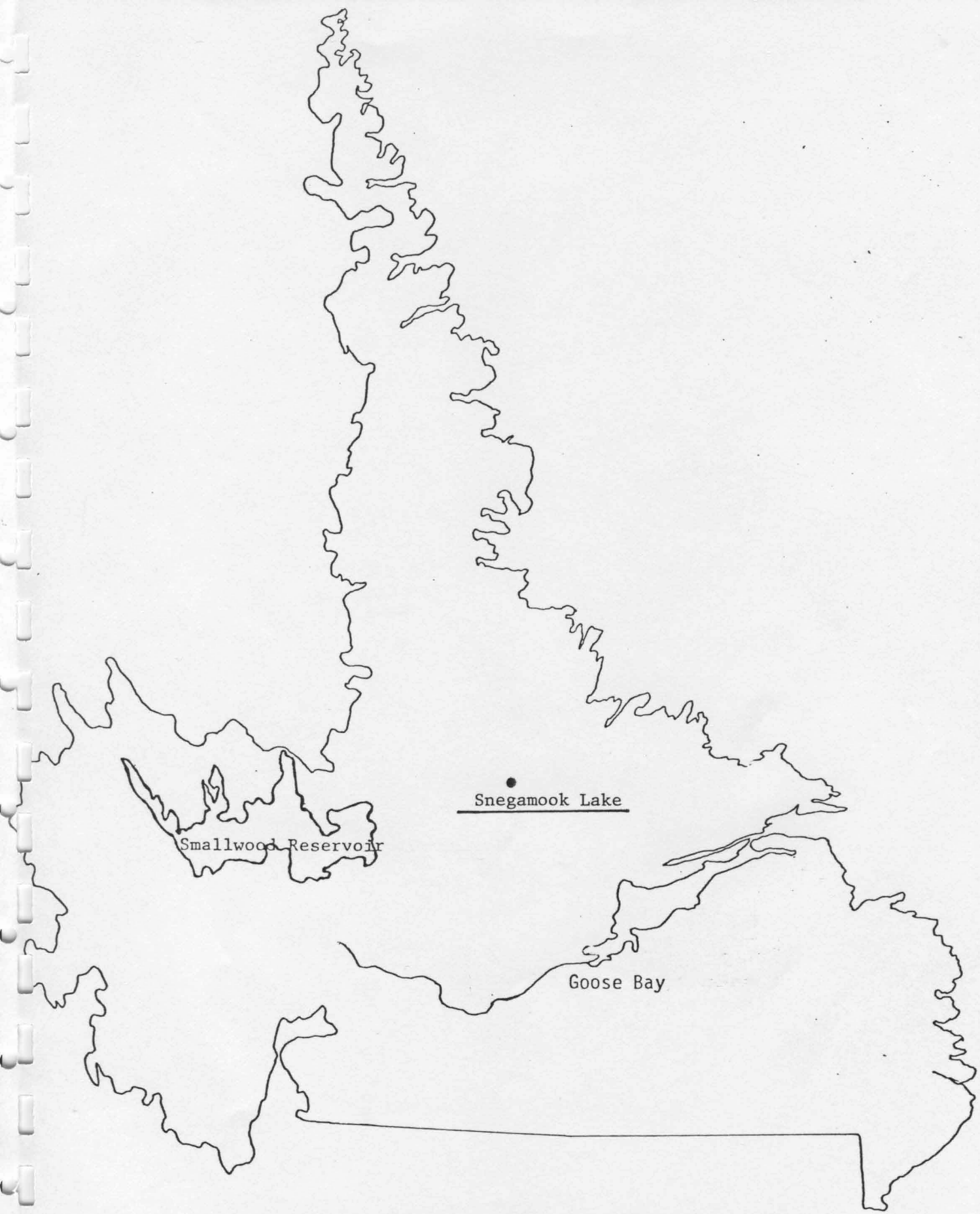


Figure 1. Location of banding with dogs, Labrador, 1983.

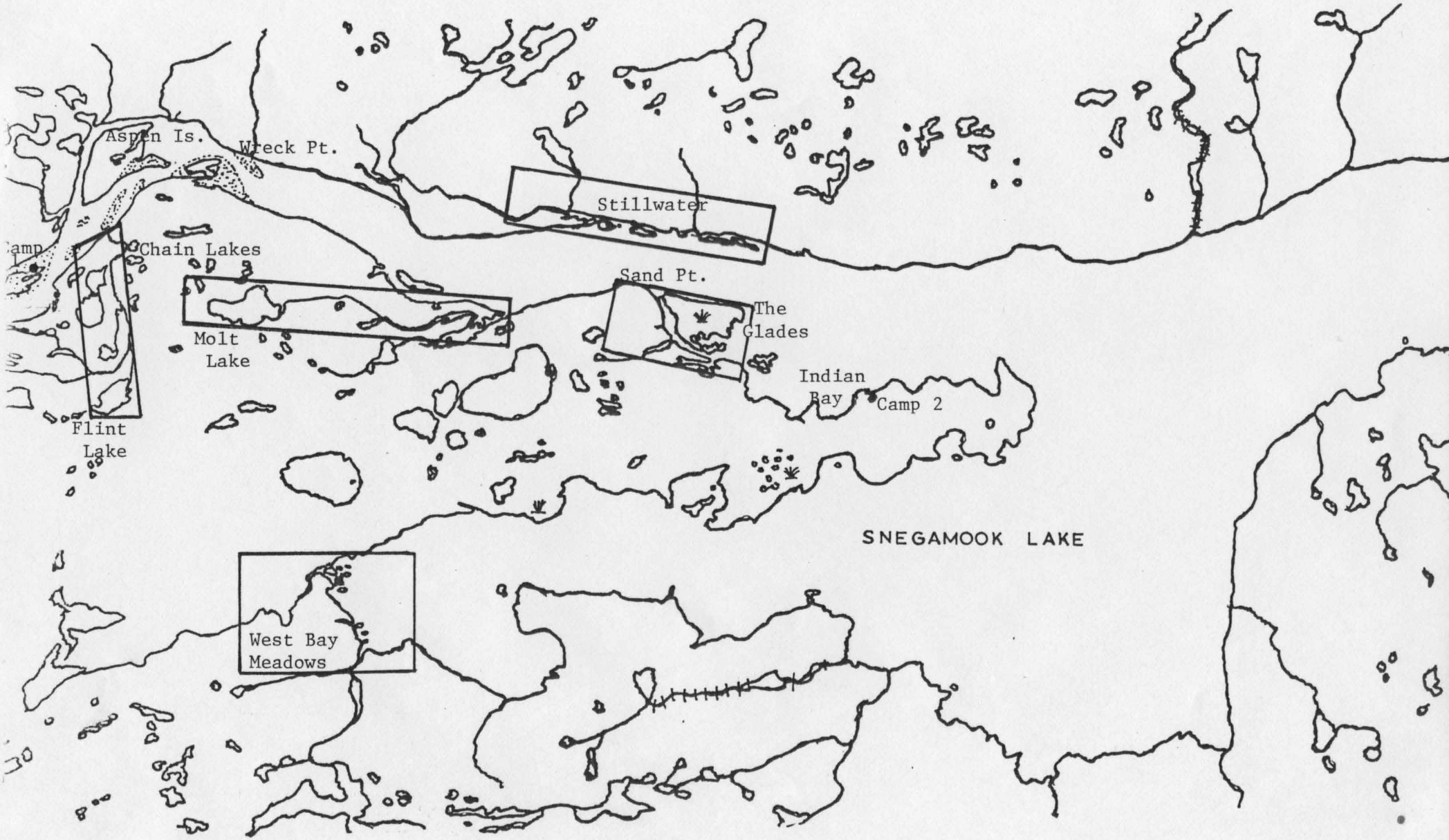


Figure 2. Snegamook Lake Banding Locations 1983.

Appendix A. Brood Production, Snegamook Lake, 1983

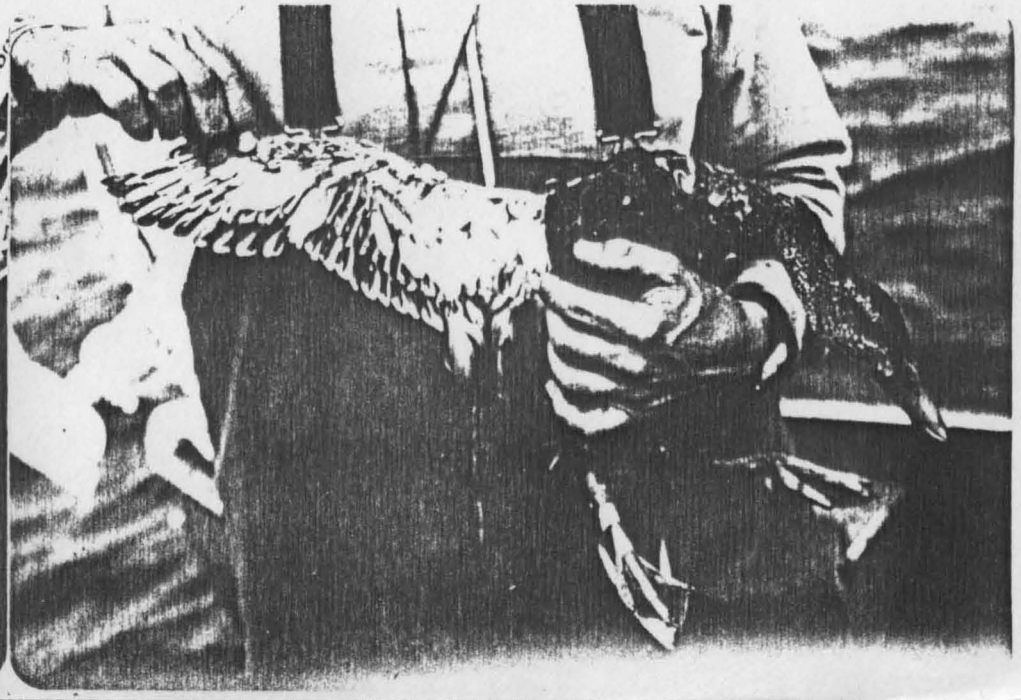
Date	Breed	Size	Class	Comments
5 July	N. Pintail	6	2B	6 banded
"	"	6	2B	
"	"	unk.		broody hen
"	"	"		broody hen
"	Am. Green-w. Teal	"		broody hen
"	Canada Goose	6	1C	
"	"	6	1-	
"	"	5	1-	
"	"	2	1-	
"	Black Duck	8	1A	
"	Am. Goldeneye	5+	1A	
6 July	Canada Goose	2	1B	
"	"	8	1B	
"	"	8	1B	
7 July	N. Pintail	8	2B	
"	"	6	1B	
8 July	Black Duck	-	-	broody hen
"	"	1+	1B	
"	Unk. species	-	1A	
"	Black Duck	1+	2C	
9 July	"	-	-	broody hen
"	"	1+	1B	
"	Am. Goldeneye	9	1A	
10 July	"	7	1A	
11 July	"	11	1A	
"	"	5	1B	
"	Mallard	2+	2B	
"	N. Pintail	1+	2B	
12 July	Am. Wigeon	12	-	eggs pipping in nest
"	Am. Green-w. Teal	11	1A	

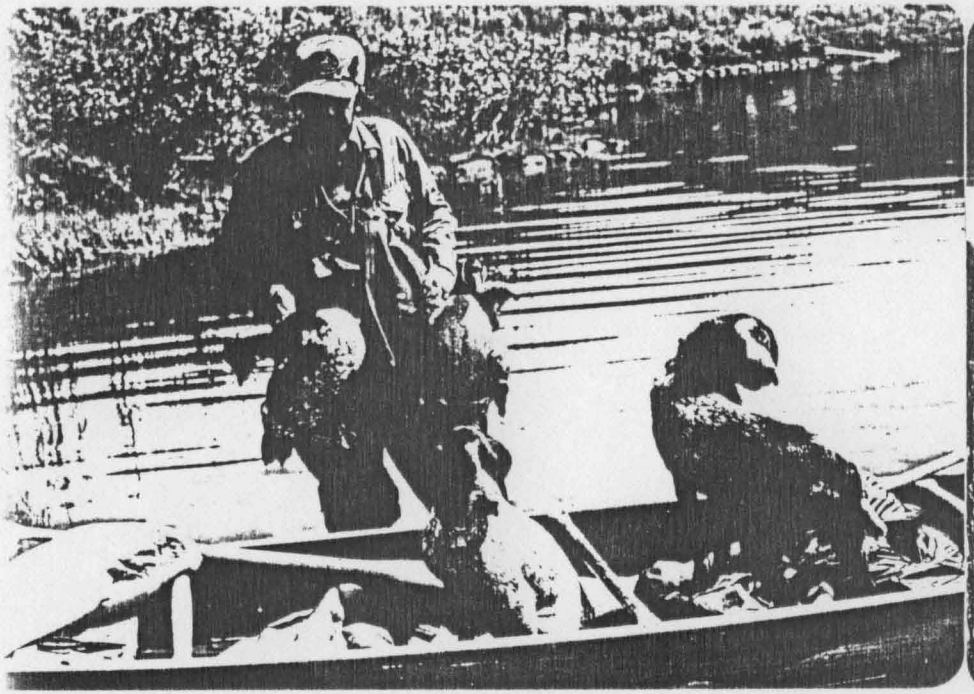
Appendix A. (continued) Additional Wildlife Observations

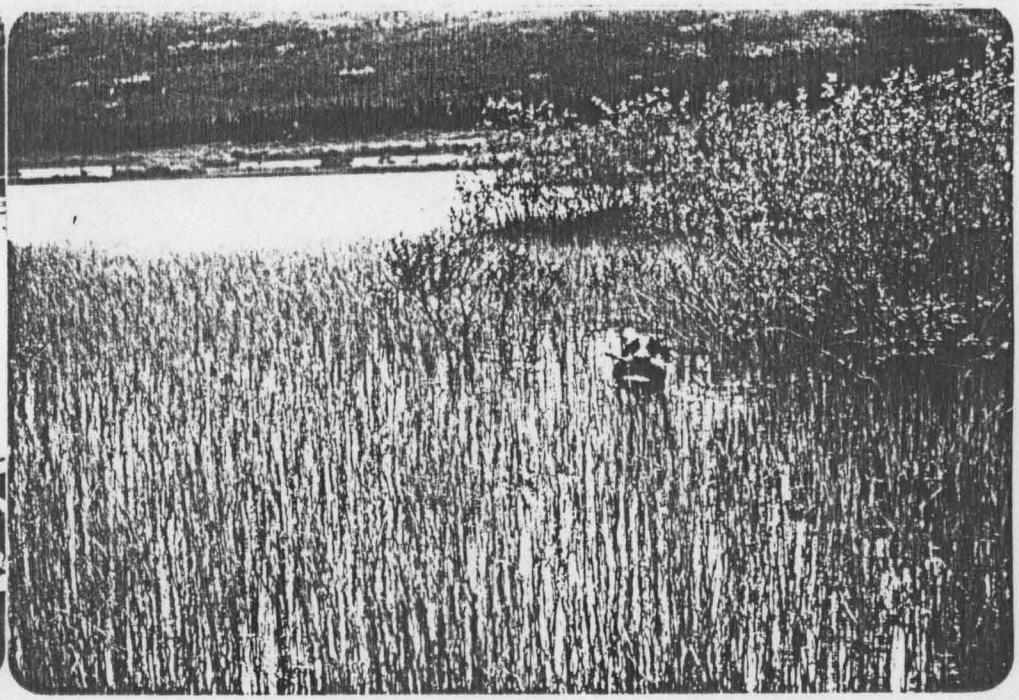
Date	Sighting		Comments
4 July	Black bear and cub		Flight to Snegamook
	Moose and calf		"
	150 Black Ducks	West Bay	
	30 Canada Geese		
	30 Black Ducks		
	60 Canada Geese		
	150 Black Ducks	The Glades	20 min. aerial survey
	5 Black Ducks	Malt Lake	
	35 Black Ducks	Flint Lake	
	25 Goldeneye		
	110 Black Ducks	Camp II	
	2 Loons		
	1 Osprey		
5-13 July	2 muskrat		observations throughout work area
	2 beaver		
	1 Sora Rail		
	1 Bittern		
	12 pr. Red b. Mergansers		
	2 pr. Herring Gulls		
	2 Blue-w. Teal		
	30 Scaup		
	2 Red-t. hawk		
	2 pr. Osprey		
	35 Green-w. Teal		
	30 Goldeneye		
	1 Moose		return flight to Goose Bay

Other than an abundant population of biting insects, dragon flies were the most numerous. The only herptiles observed were several American Toads.

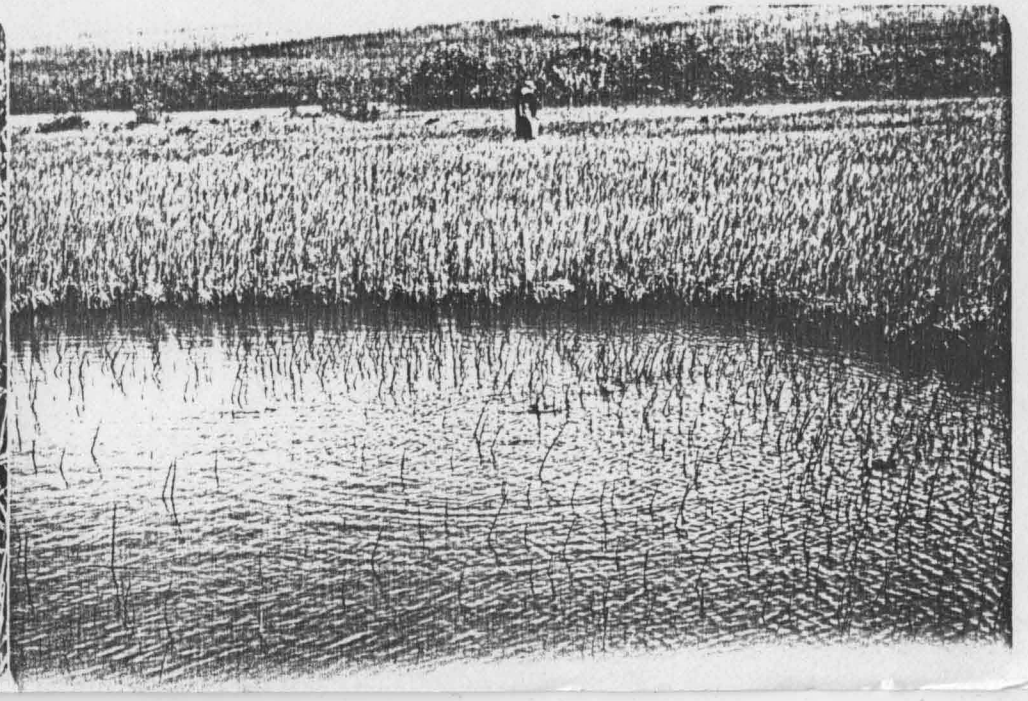
Fish, Flies and Flightless Waterfowl Frequent Snegamook Lake.







Two dogs worked well around Snegamook Lake's flooded meadows and marshes.



SNEGAMOOK LAKE, LABRADOR

I would like to thank the Canadian Wildlife Service, in particular Dr. Bill Whitman and Mr. Bill Barrow, for making it possible for me to make the trip to Snegamook Lake, Labrador.

Since 1971 I have been using my dogs to capture and retrieve waterfowl for banding. To date we have captured over 2,400+ Common Eiders and 800+ other waterfowl. I started with a German Shorthaired Pointer and now I am using German Wirehaired Pointers.

In 1975 I was asked by Mr. Ray Owen if I would weigh and take measurements of any molting black ducks that I might capture while in the field with my dogs. At that time only a couple of areas in Nova Scotia were known to have molters. An effort was made to locate other molter areas and to date some 200 molting black ducks have been captured. Some of these molters have been caught more than once in the same molting period, others recaptured during subsequent molting periods, weights and measurements were taken during each capture.

Very little is known about the physical changes a free flying black duck goes through during its yearly molt, therefore the limited data that I have can only be applied to the physical condition of black ducks at other times of the year. This Snegamook Lake trip has been the first opportunity to capture and take measurements of black ducks outside of Nova Scotia.

The following are a few observations that I have made

concerning molting black ducks in Nova Scotia.

1. A total of 197 molting black ducks has been banded in Nova Scotia; of this number only 9.6% were males.

2. The average weight of molting females is 1,089 g, the average winter weight of a female black duck in Nova Scotia is 1,167 g, showing a 137 g weight difference.

The average weight of molting males is 1,167 g, the average winter weight of a male black duck in Nova Scotia is 1,419 g, showing a 252 g weight difference.

3. The average weight loss per day of a female molting black duck is 11.8 g.

4. The average weight loss between captures during the same molting period was 113.3 g (an average of 8 days between recaptures).

5. The average weight difference (of the same bird) during different molting periods is 77 g. (max. 140 g, min. 25 g).

6. Female primary feather growth averaged 5.84 mm/day ranging from 7.97 mm/day to 4.16 mm/day.

7. It seems that the majority of female black ducks molting in Nova Scotia are native Nova Scotian birds. No female black ducks banded as molters in Nova Scotia have been recaptured or shot outside of Nova Scotia.

I have received information back on 12 female black ducks banded as molters in Nova Scotia. The average distance a female was recaptured or shot from the place of banding was 41.4 miles;

maximum distance 200 miles, minimum distance 8 miles.

One female banded at Brier Springs, Mass. on 02-21-79 was captured at Debert, N. S. as a molter on 08-05-80 and again on 08-19-82.

I have only received information back on one male which was banded at Debert on 08-05-80 and shot at Barnstable Marsh, Mass. 12-30-80.

8. Molting black ducks in Nova Scotia have been captured on areas as small as a couple of acres and as large as a few hundred acres. These birds do not seem to concentrate on a few areas but rather are spread out over the entire province in small concentrations.

Black ducks do not necessarily use the same areas each year to molt. In the mid sixties, a large number of molters were found on a lake in the western part of the province. This area was checked the next year and again in 1980 and only a couple of molters were found. Quite the opposite situation exists with one area known as McElmon's Pond near Debert, Colchester County. Although it is impossible to estimate the exact number of birds using this area, 20-25 molters are captured each year.

Snegamook Lake offers an excellent opportunity to band over 200 molting waterfowl a year and is by far the largest area I have ever worked with my dogs. Although molting black ducks use the entire area, there are definitely hot spots where the majority of the birds are located. Like any new area it takes time to locate these more productive sections.

The majority of birds were captured during the first 5 or 6 days of hunting. The remaining time was mostly spent returning to areas previously hunted. Many of the molters at Snegamook Lake seem to move after being worked with dogs. One area in particular that produced 20+ birds the first time it was hunted only produced a couple of birds a few days later. The area is so large that I believe the birds move farther back into the cover, away from the water's edge, making it very time consuming to relocate them.

I realize that any wildlife work attempted in Labrador is very expensive. Keeping this in mind, I would like to make a couple of suggestions that may at least increase the amount of data obtained on any future trips.

(a) Capturing molting black ducks in Labrador gives us an opportunity to extract information never before obtainable. Therefore weights and measurements should be taken from every black duck.

(b) Dogs can hunt effectively, under Labrador's very dense cover conditions, for upwards of two weeks without a few days rest. There is no limit to the number of birds a dog can capture per day if the birds are available. Therefore I believe the number of molting black ducks banded in Labrador could be greatly increased if the dogs could work another area along with Snegamook Lake. Hunt Snegamok Lake area until the captures per day drop, then move to another molting area while the dogs are still fresh.

George Boyd
Waterfowl Technician

Location	Band Number	Species	Sex	Age	Weight	10th Primary	8th Primary
1237-58	412	Black	Male	AHY	1350	22.60	23.35
	413				1450	6.43	5.01
	414				1230	73.45	88.86
	415				1260	49.96	58.88
	416				1200	15.07	18.88
	421				1430	79.00	94.58
	1237-57500				1190	86.05	99.35
	57408				1410	61.85	67.10
	422				1510	40.05	42.84
	423				1200	54.60	89.70
	424				1160	107.05	123.45
	432				1490	89.15	91.00
	433				1350	63.15	71.50
	434				1200	49.45	59.09
	57490				1140	82.78	97.40
	438				1210	85.00	99.98
	440				1350	52.35	60.00
	466				1210	110.02	119.15
	467				1400	62.45	71.97
	468				1240	62.43	71.97
	470				1240	122.50	142.35
	471				1200	128.85	142.85
	474				1110	111.45	130.35
	475				1490	no feather growth	
	476				1240	107.95	120.05
	1147-01827				1180	105.05	128.90
	479				1505	no feather growth	
	483				1485	8.50	9.45
	484				1510	39.50	45.70
	486				1535	no feather growth	
	485				1360	110.05	126.14
	606				1235	28.75	32.25
	605				1320	25.30	30.35
	607				1280	102.85	120.56

Codroy Valley
Newfoundland

CODROY VALLEY BAIT TRAPPING - AUGUST 29 - October 7, 1983

A total of 813 ducks of 4 species and one hybrid was banded during the 1983 banding project at the Codroy River.

Banders Jim Hawkings and David Morrow arrived at Gillis' Cabins on the morning of August 29. Gear left at the Dept. of Fisheries shed at South Branch last year was picked up and found all in good order.

A preliminary survey of the river estuary revealed about 1,500 geese and approximately 200 black ducks in the main estuary below Upper Ferry Bridge. Several local residents commented to us that waterfowl were particularly abundant this year and had been moving into the area much earlier than usual. A more intensive survey on August 30 was as follows: Canada Geese 1500+, Black Ducks 300+, Green-winged Teal 200+, Blue-winged Teal 15, Pintail 30, American Wigeon 5. On August 30 and 31, potential trap sites 1, 2 and 3 in the Brooms Brook area and 4 and 5 in the MacArthur's Island area were baited with corn. By September 1, black ducks were well onto the bait, and traps were set up on sites 1 and 2 and site 4 on the little pond on McArthur's Island. On September 2 trap 3 at Broom's Brook and Trap 5 on Sandspit Island were erected and traps 1, 2 and 4 were made operational. On September 3, the first ducks were banded and trap 5 was made operational. September 4 was our most successful day with 80 ducks banded, but that night traps 4 and 5 were tampered with by poachers and trap 4 was raided by a mink. We decided to continue trapping and deal with the poaching problem by making sure traps were cleared of ducks just before dark. In actual practice, a complete check of traps was initiated just before dusk, and completed in darkness using a Coleman lantern. Live traps were set up at trap 4 to catch the mink but we had no success.

Fortunately, it did not return, and for the time being no further problems occurred. On September 7, trap 6 was erected in Cormier's Pond.

Numbers of ducks and geese increased in the area over the next few weeks. By mid-September, there were approximately 3,000 Canada Geese, 550 Black Ducks, and 300 Green-winged Teal. It is likely that there were more green-winged teal further upriver and up Broom's Brook, moving back and forth feeding along the estuary, as our high catch rates and relatively low recapture rates seem to indicate.

All six traps continued to produce on a fairly consistent basis. Trap 4 was moved out of the little pond on McArthur's Island due to fear of another mink attack and a trap was set for mink near trap 1 after we witnessed an attack near there on a just-banded duck in broad daylight, but again with no success. Traps were closed 16 September due to illness in the crew and opened again on the afternoon of 17 September.

Trap 5 was visited by mink on September 22. Again, there was no luck in catching the mink and when trap 5 was raided again by mink on September 27 it was decided to take down this trap and move it to the Broom's Brook area and it was later re-set as trap 8. Also trap 2 was taken down and moved to a promising area on the mainland near McArthur's Island and re-named trap 7.

Trap 6 showed signs of tampering on September 29 and both the R.C.M.P. and Roy MacIsaac were notified, but only Roy showed any interest in the problem. It seems poaching will continue to be a problem at Codroy. Our suggestions to alleviate the problem include being especially diligent in checking traps, removing birds before dark, choosing trap locations inaccessible by foot, equipping truck with a plug-in spotlight and enlisting aid of sympathetic local residents to help watch traps.

On September 28 and 30 we presented a slide show and talk to all grades at the elementary school, as well as the high school on October 4 and 5. Reaction to this presentation was very positive and hopefully this will be helpful in increasing public awareness in the future. Many local residents are still uninformed and suspicious of the banding project, and every effort should be made in future to make people aware of what we are doing here and its importance.

Observations and Comments

Other waterfowl seen in area during 1983 banding program include:

Ring-necked Duck (approximately 30)

Mallard (only 4 seen)

Pied-billed Grebe (2 seen)

Common Goldeneye (2 seen)

Red-breasted Merganser (max. count 1 day - 15)

Common Loon (5)

Double-crested Cormorant (7)

Great Cormorant (2)

We did not see any of the following : Common Eider, Harlequin, Oldsquaw, or any of the Scoters, but bear in mind that we had little time to make observations along the seacoast outside the estuary.

Recommendations

1. Next year wire sufficient for two more traps and some netting should be included in supplies along with an axe, and more poles for traps.

Eight traps could be set up and worked reasonably provided they are concentrated in Broom's Brook, McArthur's Island and Cormier's Pond areas. (See possible new trap sites - Map Supplements.)

2. Attempt to meet with landowners near trap sites and obtain permission to cross their land and try to obtain help in watching traps.

3. If possible a spotting scope and spotlight for truck should be supplied. Also all members of banding crew should have chest waders.

4. Banding period should be tried from mid-September to late October. Locals tell us that in most years that is the time ducks and geese are most numerous. (I don't agree with this necessarily. -JSH)

5. 600 GWT bands (size 4) should be issued next year - it seems quite feasible to band that many.

6. Banders might try to take small groups of students and other interested parties down to traps.

Contact People

Mike Wall	Fisheries Officer, South Branch	Office 955-2214 Home 944-2340
R.C.M.P.	C. B. 634-4357 P.A.B. 695-2149	
Roy MacIsaac	Wildlife Officer, South Branch	955-2724
Ed Rogers	Principal, Elementary School	
Brendan Doyle	High School Principal	
Dr. Betts	Dentist in area - seems very interested in banding.	
Evinrude Dealer	Beauchamp Hardware, Port-aux-Basques.	695-2115

Report submitted by banders:

David Morrow (Aug. 29 - Oct. 7)
Jim Hawkings (Aug. 29 - Sept. 22)
Tim Bowman (Sept. 22 - Oct. 7)

Equipment Stored at South Branch for Codroy Bait Station

Trap wire, netting, and poles

Bait buckets (2)

Canoe paddles (2)

Dip nets (3)

Coleman lantern

Burlap bags (3)

2 beef buckets

2 live traps

2 life jackets

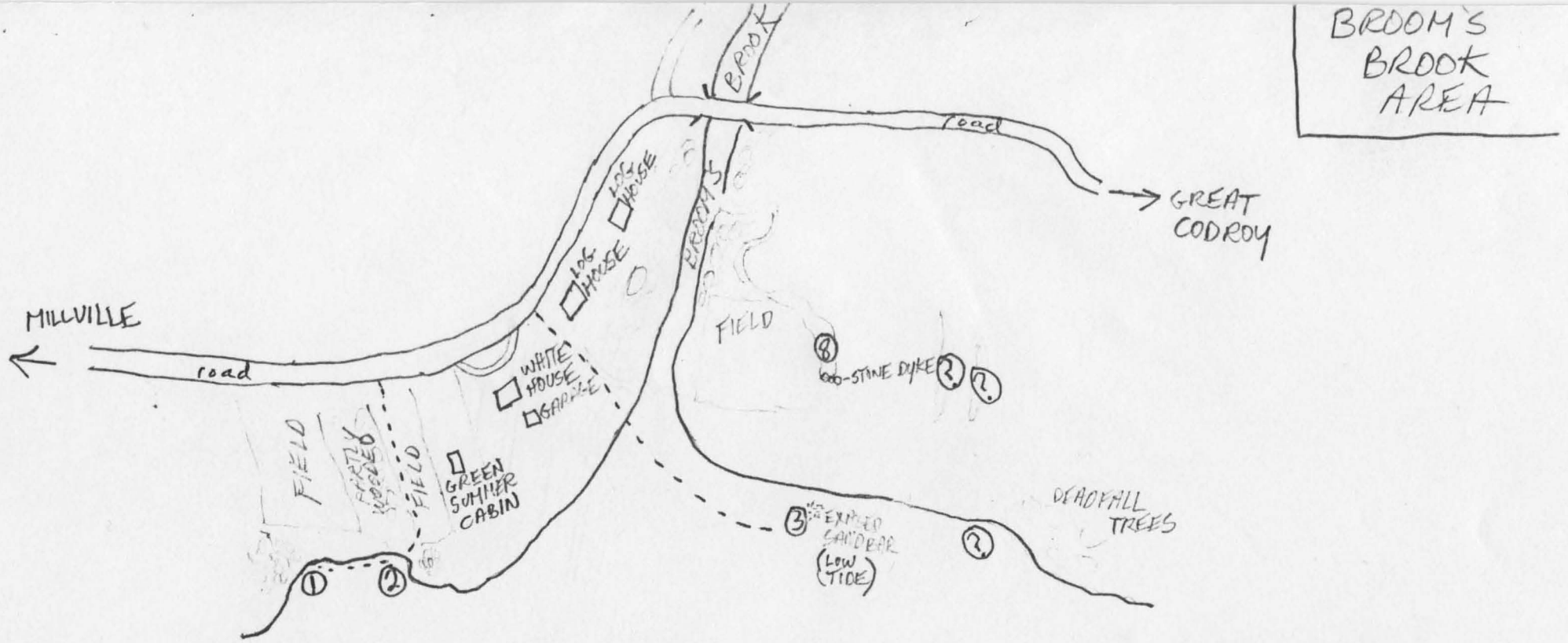
Coleman fuel

"Notice" sign posts

Age and Sex Breakdown - Codroy River, 1983

Species	Hatching Year			After Hatching Year			Totals		
	M	F	Total	M	F	Total	M	F	Total
Black Duck	207	154	361	4	6	10	211	160	371
Black x Mallard Hybrid	11	3	14				11	3	14
Green-winged Teal	205	195	400	2	13	15	207	208	415
Pintail	5	4	9				5	4	9
Blue-winged Teal	2	2	4				2	2	4
TOTALS	430	358	788	6	19	25	436	377	813

BROOM'S BROOK AREA

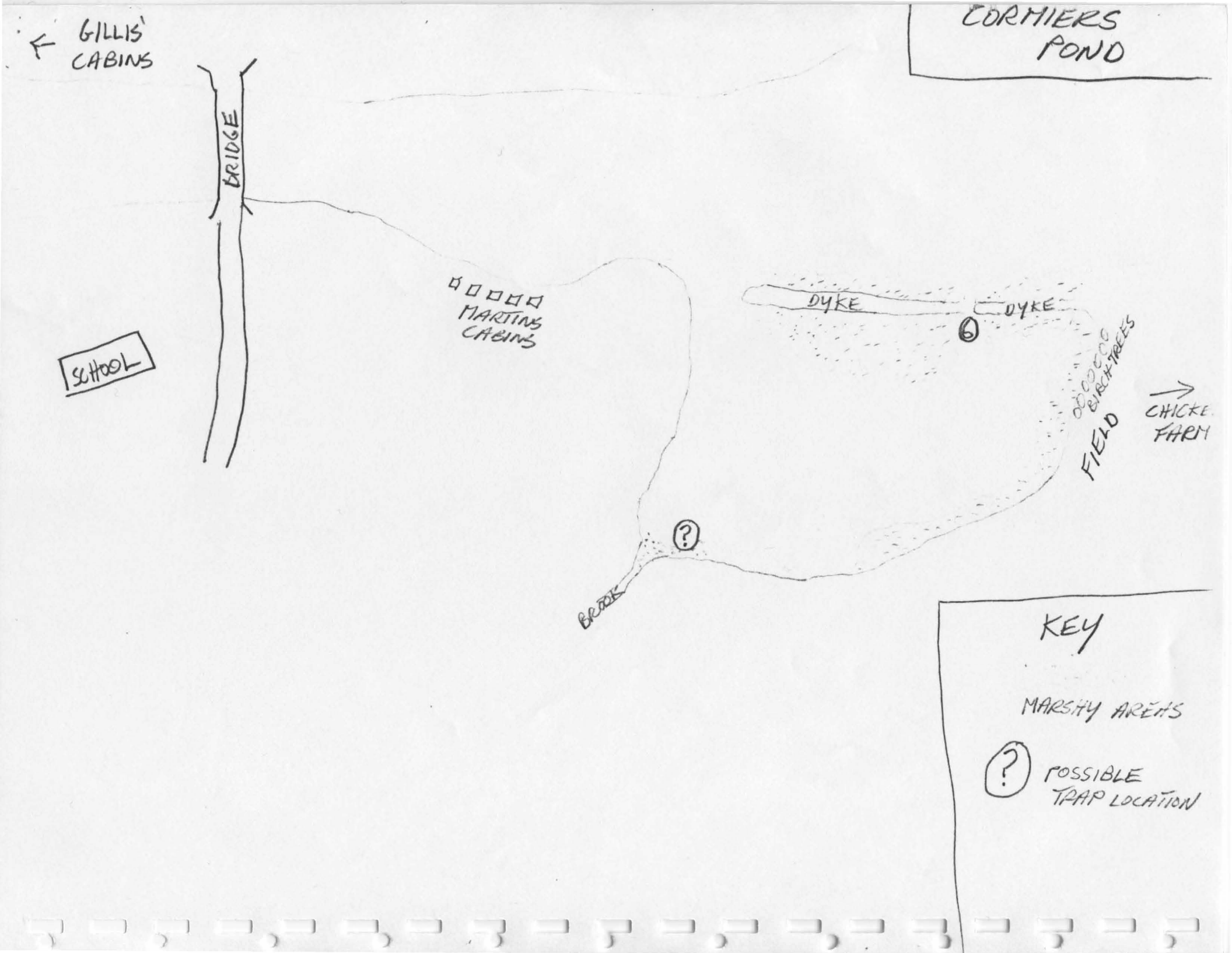


KEY

WOODED AREA

(?) OTHER POSSIBLE TRAP LOCATIONS

--- ~~Access routes~~ Foot access to traps


GILLIS' CABINS
BRIDGE
CORMIERS POND
MARTINS CABINS
SCHOOL
DYKE
DYKE
6
BIRCH TREES
FIELD
CHICKE FARM
BROOK
?
KEY
MARSHY AREAS
?
POSSIBLE TRAP LOCATION

Carmanville
Newfoundland

Waterfowl Bait-Trapping Report

Carmanville, Newfoundland

August 5 - September 9, 1983

BAIT-TRAPPING, CARMANVILLE, NEWFOUNDLAND, 1983

A waterfowl bait trapping station was in operation in the Carmanville, Newfoundland area during the period August 5 to September 9, 1983. A total of 127 ducks was banded.

Banding took place on Middle Arm, a salt water bay east of Carmanville. Sites trapped were the same as those used during 1980 banding and have been described in the 1980 banding data. Access to the arm was by power boat, as all traps were on salt water.

Baiting began August 5 and trapping started August 17. More captures may have been possible if traps were erected earlier, and if more than the 4 traps had been available. (I constructed one trap from my own material.) Traps had to be obtained from Terra Nova National Park, where they had been stored for the past two years, and this delayed the start of the operation. The first bird was banded August 19, and banding ended September 9, with a total of 61 Black Ducks and 66 Green-winged Teal being banded. Species, sex and age breakdown of banded birds are listed in Table 1.

Table 1. Age and sex breakdown, 1983, Carmanville, Nfld. banding project.

Species	HATCH YEAR			AFTER HATCH YEAR			TOTALS		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Black Duck	27	33	60	1	0	1	28	33	61
G.-w. Teal	24	36	60	1	5	6	25	41	66
	51	69	120	2	5	7	53	74	127

At start of baiting, 25 Black Ducks and 25 Green-winged Teal were observed near trapping sites, and another 40 Black Ducks and 25 Green-winged

Teal were observed in nearby beaver ponds. Five (5) Blue-winged Teal were observed August 7-12 and one Blue-winged male, HY, was trapped August 22, and released, as I did not have the correct band size. One Pintail was observed near one trap August 24.

By August 13, numbers had risen to 100 Black Ducks and 75 Green-winged Teal, and by 31 August, numbers of Black Ducks and 100 Green-winged Teal. Some ducks appeared not to frequent trap sites, and more traps and hence further coverage of the bay may have enhanced the banding operation.

My recommendation would be the use of at least 8 traps, which would cover all areas of the bay used by waterfowl. Under normal conditions 100 Black Ducks and 100 Green-winged Teal might be obtainable.

One Teal was lost to predators. Upon arrival at trap a Bald Eagle was sitting nearby. It appeared that the Eagle had grasped the teal through the net covering the trap and crushed its head. Mink were not a problem at trap sites, although mink are quite common in the area.

Poaching did not appear to be a problem up to the end of banding. I contacted the local R.C.M.P. detachment at start of banding, and regular patrols were made at main access areas to arm.

Three traps and 2 bags of grain have been stored here for future use, if banding should be continued next year.

ACKNOWLEDGEMENT

I would like to thank Wilbert Harvey, of Carmanville South, for his help on several occasions. He helped erect and dismantle the traps as well as accompany me on numerous occasions helping with banding operations.

Jim Hawkings

Border Region
NB/NS Bait Trap

Bait Trapping Border Area

1983

July 25 - September 9

Banders:

Tim MacDonald
Robert Mourney

WATERFOWL BAIT-TRAPPING, N.B.-N.S. BORDER AREA 1983

A waterfowl bait-trapping station was maintained from 25 July to 9 September in the Nova Scotia-New Brunswick border region by Tim MacDonald, Robert Morouney and Scott Whitman. Mark Petrie and Peter Hess also helped from time to time.

Three distinct areas were trapped. The Amherst Point Bird Sanctuary, the Russell Impoundment of the John Lusby Salt Marsh and the Eddy Marsh.

A total of 524 birds of nine different species was banded and released (see Table 1). Black Ducks were the dominant species, with Ring-necked Ducks being the second highest. Trapping procedure was as suggested in the supplied "Banding Manual for Students, Maritime Cooperative Waterfowl Banding Project".

Amherst Point Bird Sanctuary

Due to the great area of the Amherst Point Bird Sanctuary, up to 8 traps were maintained there. Four were located in Impoundment 1 and were the most productive for all species. Impoundment 2 was the most productive Impoundment at Amherst Point for Black Ducks. A large multi-funnel-multi-catch box trap was set up to see if it would increase our trap success; however, no noticeable increase in catch resulted. Only one trap was used in Impoundment 3 and it was removed after a week and a half without catching a single bird. (See Figure 1 for trap locations.)

John Lusby Salt Marsh

The John Lusby Salt Marsh consists of two impoundments, the Russell Impoundment and the Burgess Impoundment. The Russell Impoundment was by far the best place to catch Black Ducks, and proved to be the most productive.

Two traps were used for the first part of the trapping period and two more were added to increase the number of unbanded birds being caught daily. The Burgess Impoundment was not trapped this year due to maintenance being done on the Impoundment. In the past, the Burgess Impoundment has produced a large number of Blacks and Blue-winged Teal. This area should not be overlooked in the future. (See Figure 1 for trap locations.)

Eddy Marsh

The Eddy Marsh was totally unproductive this year and time may be better spent elsewhere in the fugure. (See Figure 2 for trap locations.)

Trap Mortality

A total of 20 ducks was found dead in our traps. Four of these were believed to have died as a result of predators. Seven ducklings died after becoming entangled between the strands of wire. Nine others were found dead in the traps and may have died from having their bands caught on the trap fingers and drowned because of exhaustion or other unknown reasons.

This year the total number of birds banded was low compared to the last three years, although the number of Black Ducks (360) and Ring-necked Ducks (103) banded was high.

Recommendations

1. Trap bottoms should be put on all traps in Impoundment Two, since walking next to the traps creates holes for the ducks to get through.

2. Putting a strip of burlap around the trap at water level may decrease the number of ducklings drowning due to entanglement in the trap wire.

3. At least four traps should be used in the Russell Impoundment towards the latter half of the trapping period.

4. After a windy night, the traps should be checked as soon as possible.

5. Weaving the poles through the wire will prevent ducks from being caught behind the poles and drowning.

6. It may be better to maintain the traps without trap fingers since using them contributes to higher trap mortality.

TABLE 1

AGE And Sex Breakdown

SPECIES	LOCAL				HATCHING YEAR				AFTER HATCHING YEAR				TOTAL			
	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Male	Female	Unk.	Total
Black Duck	21	22	-	43	123	106	-	229	42	46	-	88	186	174	-	360
Black X Mallard	-	-	-	-	1	-	-	1	5	1	-	6	6	1	-	7
Mallard	-	-	-	-	2	1	-	3	3	3	-	6	5	4	-	39
RingNeck Duck	47	36	-	83	3	10	-	13	1	6	-	7	51	52	-	103
Blue Wing Teal	-	-	-	-	1	1	-	2	-	-	-	-	1	1	-	2
Green Wing Teal	-	-	-	-	-	1	-	1	1	1	-	2	1	2	-	3
American Widgeon	1	1	-	2	1	1	-	2	-	-	-	-	2	2	-	4
American Coot	-	-	9	9	-	-	14	14	-	-	7	7	-	-	30	30
Pied Billed Grebe	-	-	3	3	-	-	2	2	-	-	-	-	-	-	5	5
												Grand Total				523

FIGURE 1

Trap Location

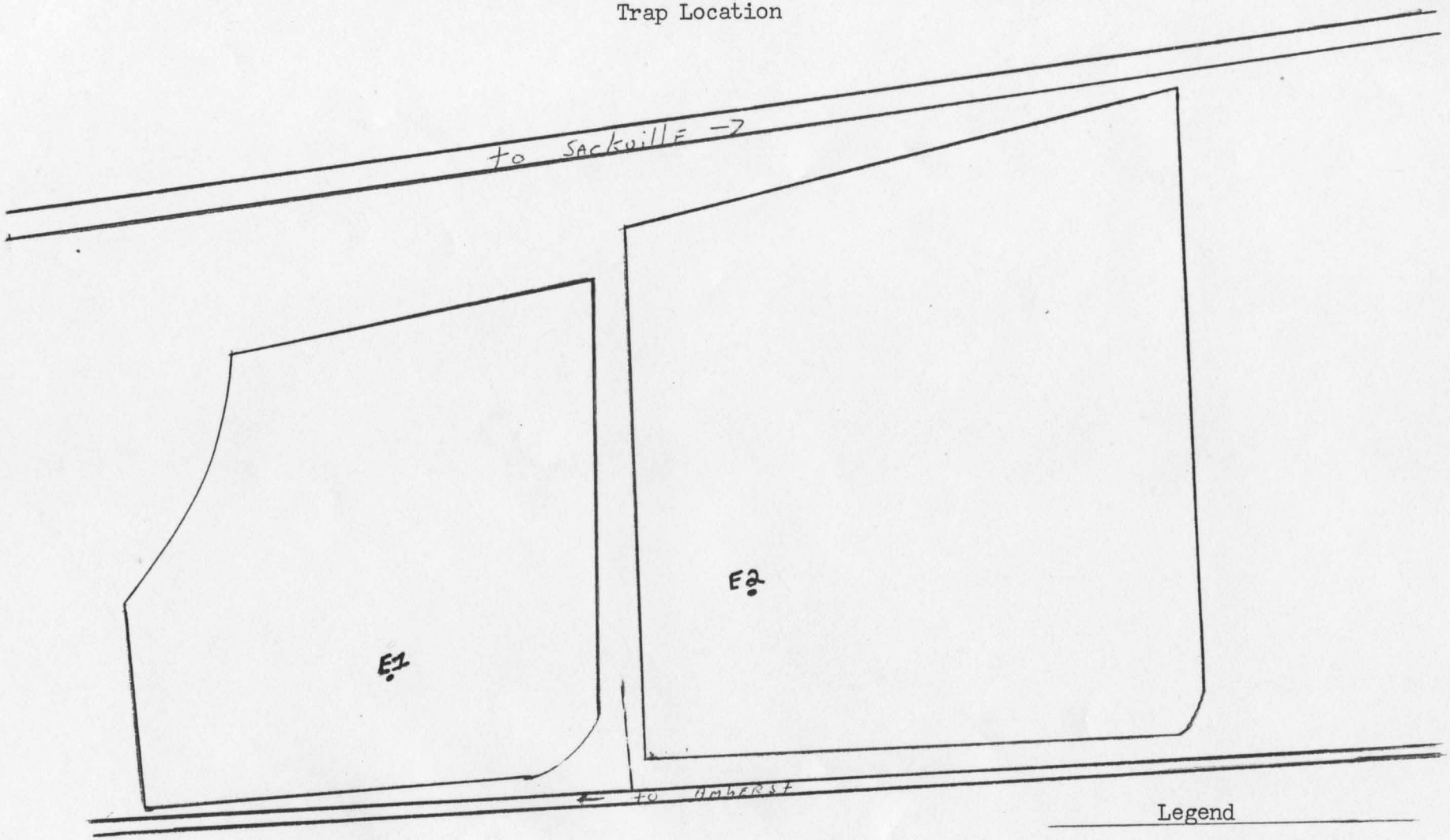
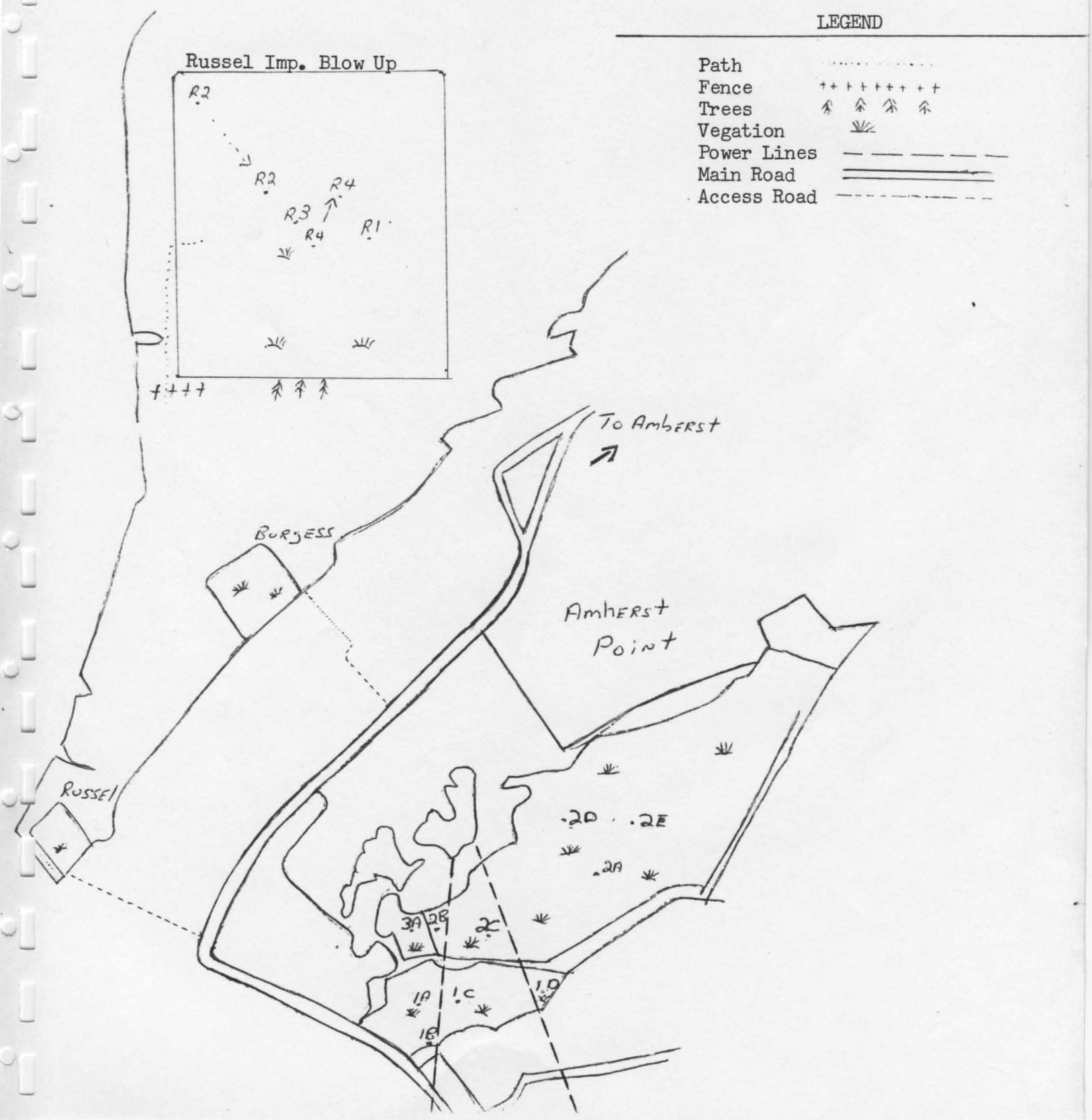


Figure 1

Trap Locations



Bathurst
New Brunswick

Waterfowl Bait-Trapping Report

Bathurst, N. B. Region

August 30 to October 6, 1983

Tim MacDonald

Bathurst, N. B. Bait-Trapping Station

Summary of Results and Techniques

A total of 307 ducks was banded at the mouth of the Tetagouche River, from August 30 to October 6, 1983. Black ducks made up the largest proportion, while Blacks X Mallards hybrids, Mallards, American Green-winged Teal, Pintail and Blue-winged Teal made up the rest. Table 1 presents the species and number banded of each sex and age.

A total of seven traps was used this year, three of which had an additional two foot piece of wire added to make them higher and safe to leave ducks in on the highest tides. The Ranger Cache in Petit Rocher, approximately 12 miles from the trap site, served as a base station during the banding period.

The Bathurst banding site is located in the Bathurst harbour by the mouth of the Tetagouche River. The Bathurst Golf Course occupies the northeast corner of the estuary and is next to a wooded area that extends west to route 134. The opposite shore is a mixture of wooded areas and houses. On this shore is a lookout which provides a good view of the estuary and all traps without disturbing any waterfowl present. The traps can be checked from this site and morning and evening flights into the area can be observed. When checking the traps the truck was left on an access road across from the Bathurst Vocational School. Bait and banding equipment were carried down to the traps.

Birds began moving into the area during incoming tides and began feeding around and in the traps. A rising tide during periods of low light intensity or at night brought more birds into the area than rising tides during the day. Traps were checked and rebaited on low or receeding tide.

A few mortalities were found in the traps on the opening day of hunting season. These birds appeared to have been shot, as they hunt on a small island in the harbour where the birds go at low tide.

A total of 10 Black X Mallard Hybrids were banded at the mouth of the Tetagouche River. These hybrids were identified by the color of their feathers and the presence of white bands on the speculum.

RECOMMENDATIONS

1. Burlap fastened to the bottom, along with wetting the corn before placing it in the traps, will prevent having all the corn washed out due to tidal action.
2. A large trap should be placed in trap location 4. The ducks go to this trap first, then to the others, and so on from trap to trap, until they get in or leave.
3. Trap 7 should be one of the first traps set out because of the number of ducks that feed at this location.
4. This bait-trapping station should be operated from the first week in September until the second or third week in October.
5. Put as many signs out as possible. It is very important in preventing human disturbance.
6. Binoculars are a must for the person operating this station.
7. The high wire should be used at locations 1, 3 and 4.

EQUIPMENT

Trap wire and poles are stored in the Ranger Cache in Petit Rocher. The netting and banding gear were returned to the C.W.S. office.

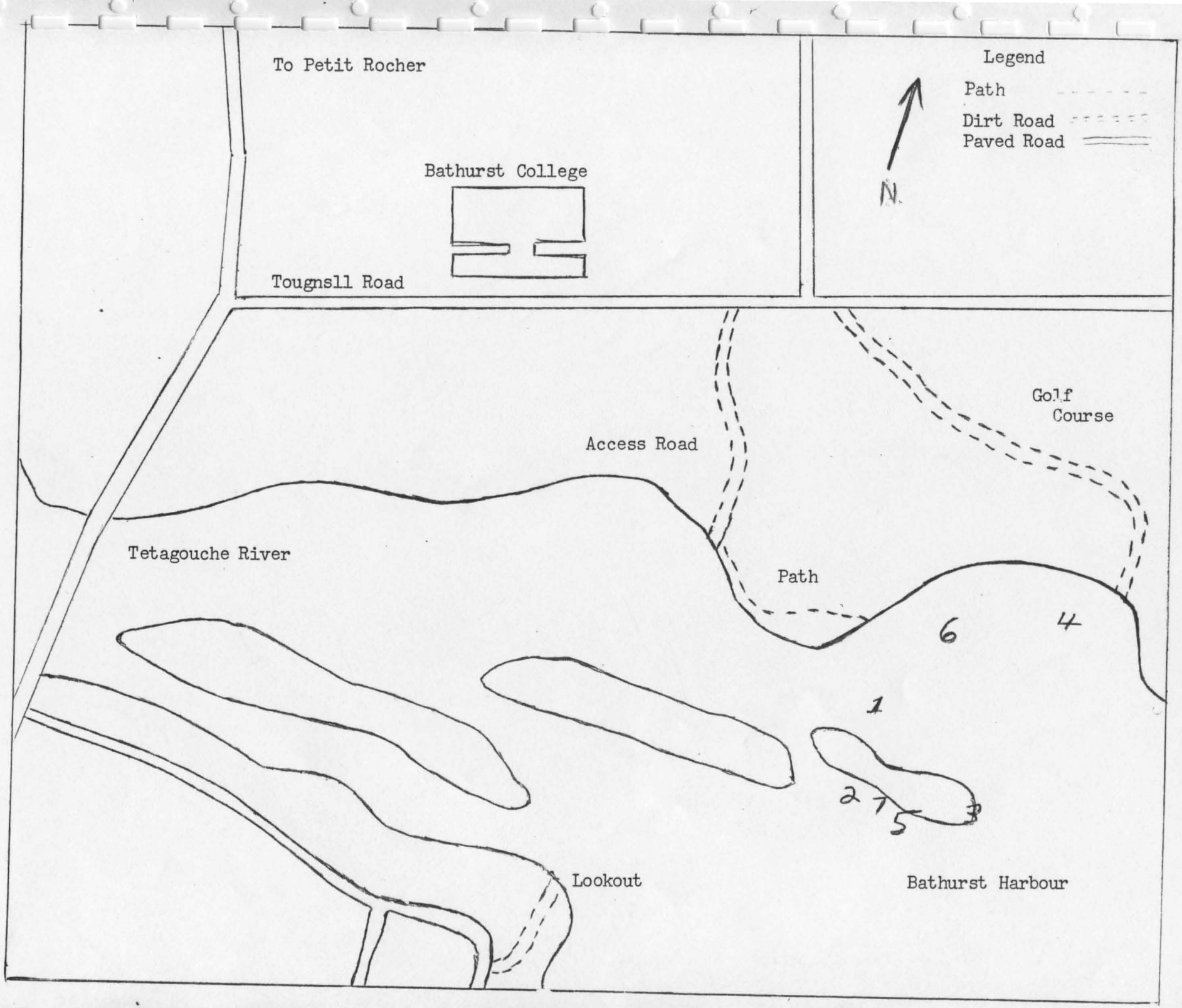
ACKNOWLEDGEMENT

Special thanks to Charlie McAleenan for his help and friendship during the banding period.

TABLE 1

Age And Sex Breakdown

SPECIES	LOCAL				HATCHING YEAR				AFTER HATCHING YEAR				TOTALS			
	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Male	Female	Unk.	Total	Male	Female	Unk.	Total
lack Duck	2	1	-	3	79	46	-	125	99	59	-	158	180	106	-	286
lack X Mallard	-	-	-	-	5	2	-	7	2	1	-	3	7	3	-	10
allards	-	-	-	-	2	2	-	4	1	-	-	-	3	2	-	5
merican Green Wing Teal	-	-	-	-	2	1	-	3	-	-	-	-	2	1	-	3
intail	-	-	-	-	-	-	-	-	1	1	-	2	1	1	-	2
lue Wing Teal	-	-	-	-	-	1	-	1	-	-	-	-	-	1	-	1
													Grand Total			307


To Petit Rocher
Bathurst College
Tougnsll Road
Legend
Path
Dirt Road
Paved Road
N
Golf
Course
Access Road
Tetagouche River
Path
6
4
1
2
7
5
3
Lookout
Bathurst Harbour

U.S.F&W
Airboat

1983 Waterfowl Banding Assignment

St. John River

New Brunswick, Canada

Crew Members

Harold Laskowski, Great Swamp N.W.R., Basking Ridge, NJ

Carl Ferguson, Parker River N.W.R., Newburyport, MA

Lisa Schorr, C.W.S., Sackville, New Brunswick, Canada

Jim Hawkings, C.W.S., Sackville, New Brunswick, Canada

INTRODUCTION

The U.S. Fish and Wildlife Service provided a 2-man crew and airboat nightlighting equipment to band waterfowl within the St. John River marshes of New Brunswick. Additional crew members were provided by the Canadian Wildlife Service, Sackville, New Brunswick Office.

A quota of 500 black ducks was set for the banding station with all other waterfowl captured incidental to blacks also being banded. The only capture technique utilized was that of airboat nightlighting.

The banding station was in actual operation between July 28 and August 4, 1983, for a total of 8 working nights. The quota of 500 black ducks was achieved on the eighth night of operation resulting in the shortest time period this banding station has been known to achieve its quota.

The initially chosen banding crew consisted of one experienced crew leader and two inexperienced individuals. To help alleviate potential problems in capturing waterfowl and in training the inexperienced members, the C.W.S. provided a fourth (experienced) individual for the first 3 nights of operation. The fourth person proved to be very valuable in capturing and banding while the other crew members learned the proper capture and banding techniques. During this period all members of the crew became very adept and proficient at their jobs.

PREPARATIONS

All equipment was stored and maintained at Parker River N.W.R.. Several modifications were made by the maintenance staff of Parker River. These consisted of a support-brace for the airboat operator when operating the boat in the standing position, the addition of a 130-gallon slip-on gas tank for aviation fuel, and a support frame for a banding box-table. Great Swamp N.W.R. provided a new banding box, brackets for the "Wheat" lamps and several pair of specially made banding pliers.

Unlike past years, this crew received no information, assistance, or letters of introduction for access into Canada. The crew made contact with Canadian Customs however several days prior to the border crossing. At this time the customs office requested a letter explaining the program and a list of equipment to be brought into Canada. This facilitated the crossing as no problems or special permits were encountered. Canadian Immigration service did require temporary work permits of the crew however, thus the entire border crossing took approximately 20 minutes in length.

The assignment was scheduled to begin the last week of July to take advantage of the period between full moons.

RESULTS

Weather conditions during the assignment were good with only a few nights of sporadic rain and high winds, however no operating time was lost to this factor.

Water levels within several of the marshes were low, thus eliminating access to some areas. Within Foshay Lake, Long Island and Lower Musquash Island water levels are effected by tidal action of the St. John River. During the nights of operation within these specific areas the tide was not favorable to gain access into many portions of the marsh, thus working area and possibly the waterfowl themselves were somewhat restricted.

A total of 915 ducks, representing 9 species and one hybrid were captured and banded with standard U.S.F.W.S. bands during 8 nights of operation. This resulted in a capture rate of 114 ducks/night which is slightly above average for the past seven years. (Table 1) The black duck capture rate per night was 65 birds which is the highest recorded for the St. John River banding station.

With the capture technique of airboat nightlighting, an attempt is made to capture all waterfowl (with the exception of diving ducks) as they are observed within the marsh. Preference is made to capturing black ducks over any other species, and at times a few birds other than blacks are passed by. This action is minimal however and somewhat constant from year to year. It is thus felt that airboat nightlighting yields a reasonable estimate of a species occurrance within the marshes worked. Table 2 shows number and percentages for each species banded during the past 5 years. It is noted that for all years, excepting 1981, the black duck is the most common species found within the St. John River marshes. The next most common waterfowl is blue-winged teal, followed by American wigeon and green-winged teal.

A rough index to the local population size may be had from the nightly capture rate for each species. (Table 1) Capture rates reveal somewhat stable population sizes for blue-winged teal with an obvious peak in 1981. American wigeon and green-winged teal appear to be fairly constant, while the trend for black ducks within the St. John River basin appears to be increasing which is opposite of the populations status within the flyway as a whole.

Banding success within each marsh worked along the St. John River basin is shown in Table 3. It is noted that the largest number of black ducks captured were from Grand Lake, Farnham Marsh and Portabello. This success has been known to change from year to year however, thus a prediction of which marsh should be worked most heavily cannot be made. It is noted that Foshay was visited 3 times this year; reason for this is that of easy access to assistance in Foshay in the event of breakdown or emergency, thus it is a likely spot to begin each years assignment. Foshay also receives a greater amount of effort because it is easily accessed on the return trip from either Long Island or Musquash if there is still working time left in the night after completing each of the above marshes.

Age structure of all waterfowl banded during 1983 is depicted in Table 4. Again, as in past years very few adult birds were captured.

Data shows that the black duck is the earliest nester along the St. John River with over 50% of those captured being within the hatching year age class while all other species were predominantly within the local class. The most common adult birds banded were blue-winged teal captured at Long Island Marsh which appears to be a molting area for the species.

Equipment problems hampered work on two seperate nights. The first evening of operation would have been July 27, but after launching the boat and starting the generator for the lighting system, it died after less than 1 minute of operation, and could not be restarted. With no lights, work had to be cancelled for the evening. The next day a spare generator was borrowed from the N. B. Fish and Game Department and ours was left at a repair shop. The repairs turned out to be extensive and it took the entire time we were in Canada to be fixed.

A second night of operation (August 1) was cut short due to a broken wire and missing bolt on the airboat engines alternator. This resulted in the boats battery going dead and ultimately the crew being stranded in Grand Lake for the night. Luckily the wind was blowing in a favorable direction and this along with paddling and towing, the crew made it to a boat ramp on the opposite shore where we received some assistance in retrieving our vehicle so the airboat could be trailered back to Jemseg.

The electric trailer winch created problems for the crew from the beginning of the assignment. On the first night of operation the hand crank sheared off, forcing us to utilize the electric motor which is underpowered to pull the boat. With only the electric motor, we were forced into altering our schedule of marshes to work by only utilizing launching ramps where we felt the boat could be retrailered. After a few nights of operation we replaced the electric winch with a hand crank model which was much more efficient.

RECOMMENDATIONS

Personnel

In the past, the U.S.F.W.S. has always supplied an experienced crew leader and one inexperienced member who would be trained to return as crew leader the following year. The C.W.S. would normally provide an experienced individual to fill out the 3 person crew. This year that was not possible and so the C.W.S. provided one inexperienced individual and a second person for 3-4 days who had both banding and airboat experience. This procedure turned out to be very beneficial as the new crew members were trained in netting and banding waterfowl. In this manner, banding success was much higher during the initial learning period than it would have been, thereby reducing the time required to operate this costly banding station.

An aerial flight was not conducted over the marshes during this assignment due to various problems in scheduling flight time by the N. B. Fish and Game Department. Also due to the crew leaders familiarity with the areas to be worked a flight was not ardently pursued. It is recommended however that in future years with new crew leaders a reconnaissance flight be made as early as possible during the assignment. In this manner the crew can become somewhat more familiar with each marsh and where concentrations of waterfowl are located.

EQUIPMENT

1) The airboat generator was not utilized during the entire banding assignment. It is recommended that in future years to avoid missing a nights work a spare generator (if available) be brought along and kept at the cabin. Thus if a breakdown does occur only a couple of hours will be lost in switching generators instead of an entire night.

2) The trailer winch was replaced during the assignment with a much simpler, sturdy hand crank winch. This should prove to be very dependable on future assignments. It is recommended though to replace the existing nylon rope with steel cable.

3) Airboat-Engine: The airboat was recently rebuilt at a cost of over $5,000. During the second night of operation a knocking noise was heard coming from the engine. The boat was later checked by Mr. Tardi of Tardi Aeroengine Ltd. who confirmed that the noise was either a bad piston slap or stuck hydraulic valve lifter. He stated that it would be safe to continue using the engine for the assignment but that it should be returned to the mechanic who did the original repairs to correct the problem.

   Since the boat's engine was recently rebuilt the engines valves did not have sufficient operating time to be properly seated. This resulted in the burning of excessive amounts of oil during each night and loss of firing by several spark plugs from fouling. To avoid problems in the future, the plugs should be checked on occasion and non-detergent oil continued to be utilized until the valves are properly seated.

   The flexible exhaust pipes again ruptured this year. This creates a safety problem with exhaust flames coming directly from the manifold being very close to the generator's gas tank. This year the break occurred close enough to the manifold where we were able to quickly rectify the problem by simply shortening up on the pipe. Since flexible pipes are a necessity due to engine vibration, and they are very difficult to purchase in New Brunswick, it is recommended to bring a couple spare lengths from the U. S. each year.

4) Slip-on Gas-tank: The new gas tank was a great improvement over the formerly used 55 gallon drums. Two minor leaks should be rectified however, one at the joint between the first and second hose and the other where the pump fits into the tank itself.

I wish to thank the crew members, Carl, Lisa and Jim, who assisted for several days, for a job well done. All worked extremely long hours at night, slept a few hours during the day, and then continued working in the afternoons to keep the banding station in operation each evening. The crew became very proficient at their duties and did an excellent job in completing the assignment in such a short period of time. I thank them very much, and wish all future St. John River banding crews similar success.

Prepared by: Harold Laskowski

Harold P. Laskowski
Crew Leader - 1983

HPL:mmm

ABLE 1 NIGHTLY CAPTURE RATES OF THE MOST COMMON WATERFOWL SPECIES BANDED ALONG THE ST. JOHN RIVER, N. B.

	1976	1977	1978	1979	1980	1981	1982	1983
BLACK DUCKS/NIGHT	19	28	20	36	45	57	29	65
BLUE-WINGED TEAL/NIGHT				22	27	62	28	28
*AMERICAN WIGEON/NIGHT				5	22	6	7	6
GREEN-WINGED TEAL/NIGHT				4	8	14	3	6
*OTHER SPECIES				8	16	12	6	9
TOTAL DUCKS/NIGHTS	43	78	48	75	118	151	73	114

*DATA NOT AVAILABLE 1976 THRU 1978

TABLE 2 WATERFOWL BANDED ALONG THE ST. JOHN RIVER, N. B., FROM 1979 TO 1983.

	1979		1980		1981		1982		1983	
	#	%	#	%	#	%	#	%	#	%
BLACK DUCKS	505	48.1	631	38.4	511	37.6	436	40.0	521	56.9
BLUE-WINGED TEAL	306	29.2	374	22.7	557	41.0	421	38.6	225	24.6
AMERICAN WIGEON	67	6.4	305	18.5	52	3.8	109	10.0	49	5.5
GREEN-WINGED TEAL	57	5.4	106	6.4	129	9.5	51	4.7	51	5.6
WOOD DUCK	49	4.7	148	9.0	34	2.5	25	2.3	33	3.6
MALLARD	26	2.5	32	1.9	18	1.3	7	0.6	19	2.1
MALLARD & BLACK	---	---	3	0.2	5	0.4	7	0.6	6	0.6
GOLDENEYE	10	1.0	1	0.1	11	0.8	6	0.6	4	0.4
SHOVELER	---	---	25	1.6	25	1.8	15	1.3	4	0.4
PINTAIL	28	2.6	16	1.0	12	0.9	6	0.6	3	0.3
RING-NECKED Duck	1	0.1	2	0.1	3	0.4	6	0.6	---	---
HOODED MERGANSER	---	---	2	0.1	---	---	1	0.1	---	---
TOTALS	1049	100	1645	100	1357	100	1090	100	915	100

TABLE 3 NIGHTLY SUCCESS WITHIN EACH MARSH WORKED DURING 1983 ST. JOHN RIVER BANDING ASSIGNMENT.

		BLACKS	BLUE-WINGED TEAL	AMERICAN WIGEON	GREEN-WINGED TEAL	WOOD DUCK	MALLARD	PINTAIL	GOLDENEYE	SHOVELER	MALLARD & BLACK	TOTAL
7/28	FOSHAY LAKE	53	54	18	9	17	0	2	1	4	0	158
7/29	GRAND LAKE	82	5	0	2	5	0	0	0	0	0	94
	LITTLE LAKE	1	20	1	12	0	0	0	2	0	0	36
7/30	LONG ISLAND	50	52	6	2	2	1	1	0	0	0	114
7/31	LOWER MUSQUASH ISLE	65	19	17	1	0	12	0	0	0	1	115
	FOSHAY LAKE	12	0	1	2	0	1	0	0	0	1	17
8/1	JEMSEG FLATS	32	--	--	11	--	--	--	--	--	--	43
	GRAND LAKE	7	4	3	--	1	--	--	--	--	--	15
8/2	FOSHAY LAKE	34	57	2	2	1	3	--	1	--	1	101
8/3	FARNHAM MARSH	98	6	--	--	7	--	--	--	--	1	112
8/4	PORTOBELLO	87	8	1	10	--	2	--	--	--	2	110
TOTALS		521	225	49	51	33	19	3	4	4	6	915

TABLE 4 AGE STRUCTURE OF EACH WATERFOWL SPECIES BANDED ALONG THE ST. JOHN RIVER, N. B., 1983.

	LOCAL	HATCHING YEAR	AFTER HATCHING YEAR	TOTAL	%
BLACK DUCK	240	277	4	521	56.9
BLUE-WINGED TEAL	182	8	35	225	24.6
AMERICAN WIGEON	44	0	5	49	5.5
GREEN-WINGED TEAL	31	8	12	51	5.6
WOOD DUCK	10	5	18	33	3.6
MALLARD	4	14	1	19	2.1
MALLARD & BLACK	4	2	0	6	0.6
GOLDENEYE	4	0	0	4	0.4
SHOVELER	4	0	0	4	0.4
PINTAIL	2	0	1	3	0.3
TOTALS	525	314	76	915	100.0%

CWS AIRBOAT

Canadian Wildlife Service

Airboat Night-Lighting

1983

Crew Leader: Jim Hawkings

Crew Members: Mark Petrie

Scott Whitman

Tim MacDonald

Canadian Wildlife Service
Sackville

SUMMARY

In 1983 the C.W.S. airboat operated in the New Brunswick-Nova Scotia border region for 20 nights between 20 July and 22 August. During this time 1052 birds were banded, including 425 (40.3%) Black Ducks, and 175 (16.6%) Green-winged Teal. As in 1982, the most productive areas were Wallace Bay N.W.A. and Shepody Bay N.W.A. The new Panther airboat continued to perform well, with only a few minor breakdowns. As in past years, the lack of suitable marshes to work in reduced the efficiency of this program as a full-time operation. In future years, it would be advisable to 1) work more marshes and maintain a full-time operation, or 2) work the same areas as in the last two years but cut back to a part-time operation. During periods of the full moon, only the best marshes are worth considering.

RESULTS AND DISCUSSION

Banding

A total of 1052 birds was banded this year in 20 nights of operation between 20 July and 22 August. Fewer birds were banded this year than in 1982 (1052 vs. 1275), but the species composition was markedly different (Table 1). This year both the total number (425 vs. 262) and percentage (40 vs. 21) of Black Ducks were much higher, at the expense of Blue and Green-winged Teal. This may have been due in part to selective capture of Black Ducks on one particularly busy night at Wallace Bay (10 August). Significantly fewer American Wigeon and Northern Pintails were captured this year but numbers of the remaining species were comparable to last year.

As in 1982, the most productive areas to work, both in terms of number of birds/night and number of birds/airboat hour, were Wallace Bay N.W.A. and Shepody N. W. A. (Table 2). Both of these areas seemed to improve as the season progressed, although we worked neither until 3 August (Table 3). Tintamarre N.W.A. and Missaguash Marsh showed no such improvement.

Two factors emerged as being most critical to prospective capture success. Location of effort was the most important, as mentioned above. Almost equally important, however, was the timing. Success was generally higher later in the season, probably because most of the birds caught in this operation are not produced on the marsh they are captured on, but move in after they fledge. The stage of the moon is also all-important. On a very dark night virtually every duck will stay on the water when approached, whereas less than half may hold on a clear or even overcast night with a full moon. This is especially important because we deal mostly with birds which are capable of flight.

The banding procedure was modified somewhat this year, as I understand it. Birds were banded on the boat, using a Coleman Lantern for illumination. Banders and recorders sat on either side of the bow or on either side of the large holding cage. A small cage full of birds was placed on the front seat where everyone could easily reach it. In addition, all band-strings were placed in labelled ziplock bags and stored with the notebook, pliers, pencils, etc., in a metal tool box. This kept everything in order and avoided annoying tangles of band strings.

The only improvements I can recommend for the future are:

1. Suspend the lantern somewhere above the front seat to provide better illumination;
2. Carry 2 or 3 small holding cages on the boat instead of just one as we did this season. The extra 2 could be stored on a platform constructed on the left side of the engine cage. These small boxes really speed up processing the birds and minimize the chances of injury.

I think it is important to band the birds on the boat, and if possible somewhere in the marsh where they have easy access to cover and a place to clean themselves up when released. Taking birds back to the truck does not seem to be a very good procedure because inevitably a number of disoriented birds end up on land outside the impoundment, or they fly into nearby trees or shrubbery (this problem is most evident at Wallace Bay). Both situations increase the risk of predation and mortality.

Airboat Modifications and Maintenance

This year the airboat was further modified to streamline the capture and banding procedure. A divider was placed in the holding cage in order that birds could be removed from either side without requiring a person at each end of the cage. In addition, 3 smaller holding cages were built (fashioned after those in use on the U.S.A. airboat). These were useful for 1) holding teal and Ring-necked Ducks, which are susceptable to trampling if placed in with Black Ducks; and 2) sorting captured birds according to species and/or band size at the end of a netting session immediately prior to banding. Straw was placed in all cages to keep the ducks drier and cleaner. This was especially helpful in busy nights when birds were crowded in the cages.

To make the netting area larger and safer, the generator was moved back to a platform constructed to the right of the engine cage, and the front seat was reinstalled. The seat is desirable both for comfort and to prevent injury to the netters when they lose their balance due to a sudden change in speed or direction. The trailer lights were removable to prevent them continually filling with water and shorting out.

No major repair work was required on the airboat this season. The two minor breakdowns involved the alternator, specifically, its mounting bolts and the bolt which holds the alternator brace to the front of the engine. On one occasion one of the two mounting bolts sheared and the fan belt broke, resulting in an overheated engine. At this time it was noticed that the three pulleys (alternator, fan, and water pump) were not well-aligned with one another. This was corrected as well as possible when the mounting bolts were repaired. The other breakdown resulted when the alternator brace bolt came loose, allowing all the coolant to escape

from the resulting hole in the water-jacket. Marsh water had to be added to nurse the boat back to the launching ramp. Subsequently the entire cooling system had to be flushed and the coolant replaced. In the future, a careful inspection of the alternator mount and brace should be included as part of the daily walk-around, especially since alternator problems usually terminate the night's banding, and also pose the danger of serious overheating damage to the engine. The only other minor problem this year involved a stripped spark plug on the left rear cylinder. This was fixed, but that plug should be watched for signs of looseness, leakage, etc.

The Marshes

Following are comments on the areas worked in 1983, and suggestions for improvements in the future.

1. Shepody NWA

This year we worked impoundments A, C, D and the Mary's Point impoundment. The most productive of these were C, D, and Mary's Point. Launching sites were excellent at A, D, and Mary's Point, but portable ramps are required to avoid hanging up the trailer at C. This is the first year the Mary's Point impoundment has been worked, and it appears to be well worthwhile; there are lots of ducks, especially in the west half. The water is quite shallow in most of the impoundment, but the bottom is very slick and there is little danger of getting stuck. A dark night is important when working here, as ducks tend to leave for good once they are flushed. The best launching site is just west of the water control structure.

The best areas to work in impoundment D are in the SW portion;

getting around and netting are somewhat difficult there, but ducks like the flooded shrubbery. Impoundment A was not productive the one time we worked it this year, but it might be worthwhile later in the season. In future years, I recommend working Shepody two nights at a time, Mary's Point and one of the Germantown impoundments one night, and the remaining Germantown impoundments the other night. The Germantown marsh road is in terrible condition and impassable to the boat trailer at present. At least two major holes need to be filled prior to next season.

2. Wallace Bay N.W.A.

Impoundment 1 at Wallace is a true gathering place for ducks during mid to late August, and warrants the highest priority as a banding location. Large numbers of Black Ducks and Green-winged Teal roost in the flooded shrubbery in the middle of the impoundment. The water is very shallow there, however, and the boat makes a large bow-wave which spooks the ducks when it hits them. The netters need to be aware of this and try to net them before that happens. There is also a constant bumping and jolting and danger of hanging up on clumps of vegetation. The cattails on adjacent areas generally harbour lots of teal and Black Duck as well. Unless the night is extremely dark, many of the ducks hold poorly due to the land and fluctuating noise made by the airboat in this shallow water.

This year another log was placed on the control structure to raise the level more than an inch or two before the end of operations.

This impoundment should be worked thoroughly, but only about once per week to avoid large numbers of recaptures and discouraging birds from using the area. A day or night orientation is critical to success if the boat operator is unfamiliar with this impoundment.

This year we tried working impoundment 2-1 for the first time

ever, but it was relatively unproductive. Access was also difficult, involving tricky maneuvering of the boat trailer through 2 gates and between two barns, crossing a ditch on a bridge of questionable integrity, and getting stuck at the launch site for the better part of an hour.

3. Tintamarre N.W.A.

The only possible areas to work at present here are Front Lake and impoundments 1 and 2. Impoundment 2 requires a long, tricky back-up in a very rutted dyke-top, and ramps are required at the launch site to avoid getting the trailer stuck in the soft mud. Impoundment 1 is easy to access, but there were almost no birds the one time we tried this season. Front Lake is easily accessed from either the Jolicure end, or at the upper end via a cookie-cutter channel, and has enough Black Ducks to justify an occasional expedition.

4. Amherst Point M.B.S.

Impoundment 1 at Amherst Point was easily accessed and was fairly productive this year. Impoundment 2 was somewhat more difficult to reach, and had fewer birds. Both areas are traditionally bait-trapped and hence do not justify more than an occasional night's work. Impoundment 3 now has a launching ramp and might be worth checking out next year.

5. Missaguash Marsh

No one seems to know why, but the Missaguash does not seem to be a productive place to work the airboat anymore. I think it is partly because the area is so large and birds are dispersed all over the place, and partly because it is heavily vegetated, making the ducks both difficult to find and difficult to net. It is also such a large area

that it takes several nights just for an unfamiliar person to navigate effectively in it. Unless there is a dramatic change, I do not recommend putting much effort in this marsh next year.

RECOMMENDATIONS

1. Begin airboat operations slightly later and concentrate effort during moonless and crescent moon periods.
2. Define clearly at the outset the goals of the airboat banding program, including desired banding quotas and priority species. This will allow the crew leader to work efficiently towards these goals and minimize wasted time and money. This operation will run most efficiently as a nearly full-time effort during moonless periods, and as a 2 or 3 night-per-week effort, concentrated at Wallace Bay and Shepody Bay, during the periods of brighter moonlight. Occasional or even frequent forays in late August and September would contribute greatly to the success of the program.
3. Repair holes in Shepody road and construct rock launching ramps at Shepody B and C and Tintamarre No. 2.
4. Investigate the possibility of access to the New Horton impoundments. Ducks Unlimited should be approached about this, as well as the possibility of financing road repairs at Shepody and repairs to launching sites.
5. If next year's (or any future) crew is entirely inexperienced, as was this year's, have an experienced person from the previous year work with them for at <u>least</u> two nights to ensure that a routine is established which maximizes safety and efficiency. Thus, a certain amount of accumulated expertise can be passed on and maintained, even though there may be complete turnover in personnel.

Jim Hawkings
25 August 1983

Table 1. Species, age, and sex of birds banded by nightlighting in the N.B.-N.S. border area, 1983.

Species	Local		Hatching Year		After Hatching Year		TOTAL
	M	F	M	F	M	F	
Black Duck	27	31	197	150	6	14	425
Blue-winged Teal	22	24	87	60	25	15	226
Green-winged Teal	5	13	38	45	55	19	175
Ring-necked Duck	37	45	15	18	-	2	117
American Wigeon	7	3	8	11	3	2	34
Wood Duck					28	1	29
Northern Pintail			1			2	3
Mallard			2		2		4
Northern Shoveler				2			2
Ruddy Duck	1	2			1		4
Hooded Merganser			1				1
American Coot	5*		4*				9
Pied-billed Grebe	12		8*		2*		22
* Sex unknown					TOTAL		1051

In addition the CWS airboat made two trips to Codroy to band waterfowl and to collect samples as part of a Black X Mallard Hybrid study coordinated by the C.W.S. London office. Forty-nine birds were banded during this period:

	Local	Hatch Year	After Hatch Year	Total
Black Duck	-	11	-	11
Green-w. Teal	-	22	2	24
Blue-w. Teal	-	5	2	7
Ring-n. Duck	4	-	-	4
Am. Wigeon	1	2	-	3
				49

Table 2. Average number of birds banded per night and per airboat hour by banding location, N.B. - N.S. border region, 1983.

Location	No. Birds per Night	No. Birds per Airboat Hour
Shepody Bay N.W.A.	108	36.9
Wallace Bay N.W.A.	107	39.7
Tintamarre N.W.A.	10	6.0
Amherst Point M.B.S.	38	19.6
Missaguash Marsh	29	13.3

Table 3. Nightly success of airboat nightlighting operations in the New Brunswick-Nova Scotia border area, 1983.

Date	Location	Black Duck	B.w. Teal	G.w. Teal	R.n. Duck	Am. Wigeon	Wood Duck	N. Pintail	Mal.	N. Shoveler	Ruddy Duck	H. Merg.	Coot	P.b. Grebe	Total	Boat Hours	Birds/ Boat Hour
20 July	Amherst Point Imp. #1	13											4	5	23	1.9	11.6
21 July	Front Lake	3													3	1.8	1.7
22 July	Tintamarre Imp. #1														0	0.3	0.0
23 July	Amherst Point Imp. #2	3													3	1.4	2.1
25 July	Front Lake, Tintamarre #1	13					1								14	3.2	4.4
26 July	Tintamarre No.2		2												2	1.2	1.7
1 Aug.	Amherst Point No. 1,2	32	3	2	14								5	8	64	2.6	24.6
3 Aug.	Wallace Bay No.1	8	10	11		3									32	2.1	16.2
4 Aug.	Missaguash	6	11	10		13	6	1							47	2.4	20.0
5 Aug.	Front Lake	2	10	1			4								37	2.1	17.6
8 Aug.	Shepody Imp. D	17	9	13	4		3		1						47	2.0	23.5
9 Aug.	Shepody C,A, Mary's Point	30	47	16	23	2	3		2	1		1			125	2.7	45.9
10 Aug.	Wallace Bay No.1	170	12	17				1	1						201	4.4	45.7
13 Aug.	Missaguash	4	2	19		4	3								32	2.6	12.3
14 Aug.	Front Lake, Tintamarre #1	6	1												7	1.9	3.7
15 Aug.	Wallace Bay No. 1,2	16	36	59	17	5	3	1							137	3.0	45.6
16 Aug.	Amherst Point No. 1	7	17		25	3					4			8	64	1.9	33.7
17 Aug.	Shepody D, Mary's Point	55	51	14	25	1	6			1					153	4.1	37.3
21 Aug.	Missaguash	1	3		2	2									8	1.6	5.0
22 Aug.	Wallace Bay No.1	19	14	13	7	1	—	—	—	—	—	—	—	—	54	1.2	45.0
		425	228	175	117	34	29	3	4	2	4	1	9	21	1052	44.4	

Atlantic Flyway Cooperative Banding Program: Atlantic Provinces.

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Name
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Date
March 14, 1986