Dog, Airboat and Rocket-Net Work in the Atlantic Region

1993

W. R. Barrow

CWS Sackville, N. B.

Dog, Airboat and Rocket-Net Work in the Atlantic Region - 1993

W. R. Barrow, Wildlife Technician
CWS, Sackville, New Brunswick

CANADIAN WILDLIFE SERVICE
P. O. BOX 1590
SACKVILLE, N. B.
E0A 3C0

COVER PHOTOS

TOP - Class III Black Duck brood captured with a German Wire-haired Pointer.

LEFT - Canada Goose banded and neck collared as part of the Hestbeck Neck Collar Program.

RIGHT - Fluoroscoping a hen eider from coastal Nova Scotia for embedded shot.

INTRODUCTION

Weather has always had an impact on waterfowl reproduction, brood size migration, and related scientific work and that for 1992-93 was no exception. The winter of 1992-93 was one of extremes with excessive cold spells in December and January with heavy snows three times the norm occurring in February and March. The Canadian Coast Guard reported that the 10 feet of ice in the Gulf of Saint Lawrence was the heaviest for thirty years. Ice between Port Hawkesbury and Halifax was reported as extreme. Wintering geese at the Martenique Sanctuary required feeding as the eel grass feeding zone was ice covered. Pan ice in normally ice free Halifax Harbour disrupted the maple sugar industry and super chilled water stressed salmon at aquaculture sites.

Spring conditions were fair and lacked our traditional storms or wet cold weather. The month of May was considered cool with excessive rain, however, no extremes in weather were experienced. This trend persisted into June and is reflected in the first Black Duck brood sightings. The first eleven black broods reported by Hanson in the N.B.-N.S. Border Area and Petrie, near Woodstock, N.B., had two or less duckling production per brood. The later broods were more productive.

The excessive cold combined with other weather systems condensed the rocket net program and limited success. The efficiency of night lighting and dog work was disrupted by the staggered Black Duck hatch.

RESULTS AND DISCUSSION

DOG WORK

Ginger and Falco, two German wire-haired pointers, contributed to most of the waterfowl captured with dogs in 1993. Dogs were used to point young broods on the Fundy salt marshes or to retrieve nesting hen eider on densely vegetated islands.

Salt marshes are known to be one of the most productive habitats on earth and on a local basis provide brood rearing habitat for some of our Black Duck population. Black Duck salt marsh use has likely decreased in proportion to the loss of this vital habitat. Salt marshes have been drained and abused for over two centuries and presently where 35,000 hectares of Bay of Fundy salt marsh once existed only 5,000 hectares remain intact. Nesting habitat in the salt marsh zone is probably minor due to periodic flooding , lack of cover, and predation. Only one Blue-w teal nest located on an elevated old dike has been located after many years of working these marshes. The salt marsh is ideal for brood rearing and due to its unique salt water tolerance the Black Duck is the most numerous duck banded on salt marshes, although, pintail mallards and green-w teal are common. Overall marsh appearance may be simplistic, but it remains a complicated system of tidal creeks, ponds, ditches, and sometimes dangerous mud substrate all impacted on by tidal flooding. Two factors, good visibility and lack of high vegetation enhance work with a pointing dog in this habitat.

The Co-operative Waterfowl Banding Program has been on-going in the Atlantic Region since 1965. Although objectives, quotas, and recommendations have changed the target species remains the Black Duck with emphasis on "local birds". Considering manpower, costing, and effort; no other method approaches the efficiency of dog work in capturing local blacks. In

1993, nine Co-op banding stations banded 81 local blacks with a budget approaching $54,000 or $660/bird. In 1993 one handler and dog banded 68 local blacks with little effort or costing.

Nova Scotia Natural Resources technician, George Boyd, has supervised the eider banding in Nova Scotia for over twenty years. All banding has been dog assisted and necessary in heavily vegetated or treed islands. Dogs, Anna, Branta, Benna, and Falco, have been the backbone of the program capturing over four thousand birds, which includes multiple recaptures.

Of the 3544 actual banded birds 138 have been recovered for an overall low recovery rate of 4 percent. The only unusual recoveries are for one oiled bird and one captured with fishing gear. The harvest distribution for this eider population appears to be very compact. Approximately 70 percent of the recoveries are shot along the east coast of Nova Scotia between Chedabucto Bay and Yarmouth. There does not appear to be an exchange with Bay of Fundy eider as only one N.S. bird was shot at Dear Island, N.B. Four eider were harvested north of this east cost zone in the Northumberland Strait near New Glasgow. Thirty-two percent of the recoveries are American, all from two states, Maine (25) and Massachusetts (18).

Hen eider within the Eastern Shore Islands Wildlife Management Area were the third Atlantic Region waterfowl population to be scanned for embedded shot with a portable fluoroscope. The 35 percent (38/108) embedded shot rate for these birds is considered high and appears to contradict the low 4 percent band recovery rate. The embedded shot work is continuing as it links crippling losses, hunting pressure, wound recovery rates, and hunter education with sound management strategies. A 1994 fluoroscope program for eider populations in the Bay of Fundy and at Table Bay Labrador is anticipated.

Dogs have been used for salvage work on unretrieved waterfowl for five years. Data from this collection will provide insight into crippling losses, non game mortality, lead shot ingestion, non-hunting mortality, and hunting violations. Thirty-five percent (20/57) of the birds collected in 1993 were either found dead or captured alive with a dog. Eight groups of birds totalling over two hundred were recovered during this period. Excessive lead ingestion rates were indicated for Black Ducks, Mallards, and Ring-necked Ducks. **Tables 1-4 summarize the dog work for 1993.**

ROCKET NETTING

The third consecutive year for our participation in the Hestbeck Canada Goose Neck Collar Program was carried out in 1993. The Province of New Brunswick continued its Canada Goose introduction program with nuisance birds from Toronto, Ontario. More emphasis was placed on the introduction of immature birds as many of the adults left the province shortly after release. New Brunswick wildlife personnel rocket-netted an all time high of 41 birds and anticipates a similar release and banding program for 1994. Nova Scotia Natural Resources rocket-netted five geese in 1992 with no success in 1993. Spring migrants short-hop this zone and are unpredictable. Financial restraints and uncooperative geese appear to have terminated the Nova Scotia Program.

The Canadian Wildlife Service rocket -net program on PEI was successful in spite of adverse weather. Rain, snow, and bitter cold were normal, but unpredictable winds more than any other factor impacted on net efficiency. The total geese banded (253) is double that for eight of the most successful programs. The 1991 season when 331 geese were banded is considered the most successful to date.

The age and sex breakdown of Canada Geese rocket-netted on PEI and the band and collar inventory for the Malecki and Hestbeck programs are summarized in **Tables 5 & 6.**

NIGHT-LIGHTING

The CWS Panther Airboat was purchased in 1982 and has routinely contributed to the Co-operative Waterfowl Banding Program and other scientific studies (Table 7). No waterfowl was banded in 1993 and airboat work involved only the B.D.J.V. Woodstock Study and salvage work for unretrieved waterfowl.

The Woodstock study by M. Petrie and D. Sears is unique in that it is the first for the Atlantic Region to address the Mallard/Black Duck dilemma. Females and broods of both species were captured by night-lighting techniques and fitted surgically with an abdominally implanted radio transmitter. The hen and brood were passively released early the following morning and monitored for success. Several hens were recaptured either in traps or by night-lighting with spent transmitters from the previous year's program.

The data collected will be part of a Ph.D. program and will address issues relative to the eastern expansion of the Mallard and a long term decline in the flyway Black Duck population. The study will address:

1) differences in reproduction
2) survival rates for females (predation)
3) brood mortality (predation)
4) habitat preferences
5) inter-specific competition
6) hybridization.

The 1994 program will be the third and final segment of this study.

Table 1

Age, sex and species compositition of waterfowl banded with dogs in theAtlantic Region - 1993.

	LOCAL		HATCH YEAR		AFTER HATCH YEAR		Total
Species	M	F	M	F	M	F	
Mallard	4	5	-	-	-	-	9
Black Duck	34	34	-	-	-	-	68
Green-winged Teal	1	2	-	-	-	-	3
N. Pintail	2	1	-	-	-	-	3
C. Eider*	-	-	-	-	-	154	154
Total	41	42	-	-	-	154	237

*Seaduck banding under N.S.D.N.R. permit.

Table 2 Unretrieved waterfowl collection, Atlantic Region 1989-1993

Species	Location						
	White Birch	E. Amherst	Shepody NWA	Wallace NWA	Missag-uash Marsh	Pisquid Pond	Total
Mallard	5	5	-	1	-	-	11
Black Duck	16	9	-	-	-	1	26
B x M Hybrid.	-	1	-	-	-	-	1
Am. Wigeon	3	5	-	-	-	2	10
G.W. Teal	24	21	3	3	-	7	58
B.W. Teal	12	7	-	1	-	9	29
N. Pintail	-	-	-	-	-	1	1
N. Shoveler	-	2	-	-	-	-	2
Wood Duck	3	2	1	-	-	1	7
R.N. Duck	36	7	2	4	1	14	64
Gadwall	1	-	-	-	-	1	2
G. Scaup	-	1	-	-	-	-	1
Oldsqaw	-	1	-	-	-	-	1
C. Eider	1	-	-	-	3	-	4
Ruddy Duck	-	1	-	-	-	1	2
Canada Goose	-	-	-	-	-	1	1
Snow Goose	-	-	-	-	-	1	1
C. Merganser	-	-	1	-	-	-	1
H. Merganser	1	-	-	2	-	-	3
P.b.Crebe	-	3	1	-	-	-	4
Am. Coot	3	1	-	-	-	1	5
Sora Rail	2	-	-	-	-	-	2
Bittern	1	-	-	-	-	-	1
Yellowlegs	-	-	-	2	-	-	2
Cormorant	-	1	-	-	-	-	1
Kingfisher	-	1	-	-	-	-	1
Crow	-	-	1	-	-	-	1
Raven	-	1	-	-	-	-	1
Total	108	69	9	13	4	40	243

Table 3 Ingestion rates by marsh and for those waterfowl species testing positive with some degreee of lead poisoning.

	Black, Mallards & Hybrids			Ring-necked Ducks		
Location	Total	Ingested Pb.	Ingestion Rate	Total	Ingested Pb.	Ingestion Rate
White Birch West Co. N.B.	21	2	10 %	36	6	17 %
Shepody NWA Albert Co. NB	-	-	-	2	1	5 %
E.Amherst Cumb. Co. N.S.	15	1	7 %	7	1	14 %
Pisquid Pond Kings Co. PEI	1	-	-	14	6	43 %
	37	3	8 %	59	13	22 %

Unretrieved Waterfowl and Marsh Bird Collection - 1993

Table 4

Sample	Date	Location	Species	How Obtained	Condition	Fluoroscope
2	3 Oct	White Birch	G-w Teal	Found dead	poor	-
3	"	"	"	Found by dog	good	-
4	"	"	"	Found dead	poor	-
5	"	"	"	Caught by dog	good	-
6	"	"	"	Crippled - shot	"	-
7	"	"	"	Found dead	"	-
8	"	"	"	"	"	-
9	"	"	"	"	"	-
10	"	"	"	"	"	-
11	"	"	"	"	"	-
12	"	"	"	"	"	-
23	4 Oct	"	"	found by dog	poor	-
24	"	"	"	"	good	-
25	"	"	"	"	"	-
26	"	"	"	caught by dog	"	-
27	"	"	"	found by dog	"	-
33	6 Oct	"	"	caught by dog	"	-
34	"	"	"	found by dog	"	-
47	13 Oct	"	"	found dead	poor	-
17	3 Oct	"	B-w Teal	crippled - shot	good	-
18	"	"	"	found dead	"	-
19	"	"	"	crippled - shot	"	-
46	12 Oct	"	"	found by dog	"	-
22	4 Oct	"	Wood Duck	caught by dog	"	-
45	13 Oct	"	Am Wigeon	found dead	poor	-
1	3 Oct	"	Black Duck	found dead	poor	-

Table 4 (Cont'd)

Sample	Date	Location	Species	How Obtained	Condition	Fluoroscope
20	4 Oct	White Birch	Black Duck	found by dog	good	-
21	"	"	"	crippled - shot	"	-
44	12 Oct	"	"	found by dog	"	+1
35	6 Oct	"	Mallard	caught by dog	good	-
13	3 Oct	"	R-n Duck	found dead	good	-
14	"	"	"	crippled - shot	"	+1
15	"	"	"	caught by dog	"	-
16	"	"	"	crippled - shot	"	-
56	12 Oct	"	"	found dead	"	-
55	13 Oct	"	"	"	poor	-
57	"	"	"	crippled - shot	good	-
51	19 Oct	"	"	found dead	"	+2
28	5 Oct	Pisquid Pond	G-w Teal	crippled - shot	good	+1
29	"	"	B-w Teal	found dead	"	-
30	"	"	Am Wigeon	"	"	-
31	"	"	R-n Duck	crippled - shot	"	+3
32	"	"	"	"	"	-
38	10 Oct	E. Amherst	G-w Teal	crippled - shot	"	-
48	18 Oct	"	"	found by dog	"	-
50	"	"	"	crippled - shot	"	-
54	19 Oct	"	"	crippled - shot	study skin	-
53	19 Oct	"	Wood Duck	caught by dog	study skin	-
39	10 Oct	"	Wood Duck	found dead	good	-
49	10 Oct	"	A. Wigeon	caught by dog	good	-

Table 4 (Cont'd)

Sample	Date	Location	Species	How Obtained	Condition	Fluoroscope
40	10 Oct	E. Amherst	N. Shoveler	found dead	-	-
52	19 Oct	"	Black Duck (1427-978-68)	caught by dog	good	-
43	10 Oct	"	Mallard	crippled - shot	good	+1
42	10 Oct	"	BxM hybrid	crippled - shot	"	-
41	10 Oct	"	R-n Duck	found dead	"	-
37	10 Oct	"	P-b Grebe	"	"	-
36	6 Oct	Nr. White Birch	C. Eider	hydro-line	study skin	-

Table 5

Age, sex and species compositition of Canada Geese rocket-netted on Prince Edward Island - 1993.

	SY			AHY			Total
Species	M	F	T	M	F	T	
Canada Goose	26	52	78	112	62	174	252
L. Canada Goose	1	-	1	-	-	-	1
Total	27	52	79	112	62	174	253

Table 6 Listing of band and neck collar numbers used for the Atlantic Region rocket net program 1987-

Date	Location	Band Sequence	Collar Numbers	Total Banded
3 Oct.- 3 Nov. 87	Orwell Bay P.E.I.	698-83701-83745	1XK1-1XK0 2XK1-2XK0 3XK1-3XK0 4XK1-4XK0 5XK1-5XK5	45
6 Apr. - 29 Apr. 88	Orwell & Pownal Bay Area, P.E.I.	628-75035-75061 698-83978-84000 718-15535-15550 728-15422-15450	5XK6-5XK0 6XK1-6XK0 7XK1-7XK0 8XK1-8XK0 9XK1-9XK0 0XK1-0XK0 1XM1-1XM0 2XM1-2XM0 3XM1-3XM0 4XM1-4XM5 4XM7-4XM9	93
1 Oct. - 15 Nov. 88	Orwell Bay P.E.I.	698-83746-83800 698-83801-83817	5XY1-5XY0 6XY1-6XY0 7XY1-7XY0 8XY1-8XY0 9XY1-9XY0 0XY1-0XY3	72 (53 collared
24 Apr. - 5 May 89	Codroy, Nfld.	628-75062-75070	4XM0- 5XM1-5XM7 5XM9	9
16 Oct. - 27 Oct. 89	Orwell Bay P.E.I.	698-83818-83832	6XM1-6XM0 5XM8- 5XM0- 0XY5-0XY6 0XY0-	15
8 Sept. - 27 Sept. 89	Baikie Lake	718-15601-15629	1XU1-1XU0 3XU1-3XU0 4XU1-4XU5 4XU6 (recapture) 4XU7-4XU0	29 (1)

Table 6 Listing of band and neck collar numbers used for the Atlantic Region (cont'd.) rocket net program 1987–

Date	Location	Band Sequence	Collar Numbers	Total Banded
20 Mar.- 10 Apr. 90	P.E.I. Orwell Glenfinnan Warren Grove Tryon Agustine	628-75071-75100 728-15201=15215 728-15504-15600	0XY7-0XY9 4XY1-4XY0 3XY1-3XY0 2XY1-2XY0 1XY1-1XY0 7XM1-7XM0 8XM1-8XM0 0XM1-0XM0 2XU1- 2XU3-2XU0 7XU1-7XU2 7XU4-7XU0 9XU1-9XU4 9XU6-9XU7 9XU9-9XU0 0XU1-0XU6 0XU8-0XU0 8XU1-8XU0 9XM1-9XM0 2XT1-2XT0 3XT1-3XT2 3XT4-3XT5	142
15 Aug. - 24 Aug.	Churchill Falls Labrador area	718-15630-15636	6XT2-6XT3	7 (2 collare
22 Aug - 26 Sept.	Baikie Lake, Lab.	728-15601-15629	5XU2-5XU4 5XU6-5XU0 6XU1-6XU0 8XT1-8XT0 9XT2	29
4 Sept. - 21 Oct.	Bathurst, N.B.	728-15216-15234	1XT0-1XT9 4XT0-4XT8	19

Table 6 (Con't) Listing of band and neck collar numbers used for the Atlantic Region rocket net program 1987 -

Date	Location	Band Sequence	Collar Num.	Total Banded
19 Mar- 12 April 1991	Orwell Glenfinnan Tryon Summerside Malpeque	698 838 33-83887 698 840 10-84100 718 155 52-15600 728 152 35-15300 728 156 30-15700	H3 - H9 - with combinations of 20 letters, 9 numbers & 5 symbols. H=, H?, H%, H#, H+ with combinations of 20 letters, 9 numbers & 5 symbols.	331
4-23 April.92	Orwell Summerside Glenfinnan Hamilton	718 15651-15700 808 80618-80700	x1,x2,x3,x4,x5,x6,x7 with combinations of 20 letters, 9 numbers and 5 symbols.	141
21 Aug.92	Baikie Lake Lab.	698 838 88-83894	x7L,M,N,O,P,R	7 (6.Collars)
9 Sept.-24 Oct.1992	Bathurst Hrb.	808 80901-80912	----------	12 (No Collars)
9 Apr.92	N.S.N.R. (Windsor)	688 89012 89016	X81-2-3-4-5	5
28 Apr.92	NBMNR Saint John River	798 19401 19404	X+T,3,5,2	4
7-29 Apr.93	Hamilton Pownal Wilmot Tryon Summerside Bedeque Souris	808 80501- 80600 808 80701- 80749 808 80801-80816 808 80913-81000	8?, 8#.8%,8+,8= XX,XZ,JL With combinations of numbers, letters and symbols	253 (252 Collared)
20 Sept.-6 Oct. 1993	Bathurst Hb.	818 26501-26504	----------	4 (No Collars)
22 Sept.- 14 Oct. 1993	Terra Nova N.P. Nfld.	628 75155-75194	x3, x# with comb. of #'s, letters & symb.	40
16 April - 5 May	N.B.M.N.R.	798194-05-19445	x + x4 with comb. of #'s, letters & symb.	41

Table 7 Summary of CWS Panther Airboat Activities.

Year	Operator	Total Birds	Total Bl. Ducks	Hours Worked	Birds/ Hour	Projects
1982	Tim Bowman Andrew French Bill Barrow	1275	262	72.1	18	Co-operative Waterfowl Banding Program.
1983	Jim Hawkins Bill Barrow Tim MacDonald	1051	425 11	50.2	21	Co-operative Waterfowl Banding Program, collected 11 B. Ducks from Codroy, Nfld for Ontario hybrid study.
1984	Tim MacDonald Randy Hicks	802	220	32.4	25	Co-operative Waterfowl Banding Program.
1985	Randy Hicks	831	241	22.2	37	Co-operative Waterfowl Banding Program, Blue-w. Teal collection for NSL&F relocation program.
1986	Randy Hicks	663	208	23.2	29	Co-operative Waterfowl Banding Program, Nasal tags were fitted on 25 Ring-n Ducks at A.P.M.B.S.
1987	Randy Hicks	744	325	31.8	23	Co-operative Waterfowl Banding Program, Nasal tagging Ring-n. Ducks at A.P.M.B.S., First year of G. Parker Black Duck telemetry study.
1988	Bill Barrow	671	300	48.4	14	Co-operative Waterfowl Banding Program, First year for blood sampling in lead shot program, Wood Duck propagation program with DU and NSL&F, Norm Seymour's Black Duck nasal tag study, Second year for Parker's telemetry work, Assisted in DU's Green-w Day.

Table 7 Summary of CWS Panther Airboat Activities.

Year	Operator	Total Birds	Total Bl. Ducks	Hours Worked	Birds/ Hour	Projects
1989	Bill Barrow	942	206	45.6	21	Third year of Parker's telemetry work, assisted in DU Green Wing Day. Continued blood sampling for lead analysis, Second year of Seymour's Nasal tag program, Co-operative Waterfowl Banding Program, First year for crippled or dead waterfowl searches.
1990	Bill Barrow	855	258	60.0	14	Co-operative Waterfowl Banding Program, Fourth year of Parker's telemetry work, Third year of Seymour's nasal tag study, DU Green-Wing Day, Ring-n Duck x-ray study, Salvage operation for dead crippled toxic waterfowl.
1991	Bill Barrow	1082	454	53.7	20	Co-operative Waterfowl Banding Program, D.N.A. blood work for N. Seymour, Fifth year of Parker's telemetry work, DU Green-Wing Day demonstration, First year for fluoroscope work.

Table 7 Summary of CWS Panther Airboat Activities.

Year	Operator	Total Birds	Total Bl. Ducks	Hours Worked	Birds/ Hour	Projects
1992	Bill Barrow	-	-	-	-	Saint John River Fluoroscope program. BDJV transmitter implant program in Woodstock, N.B. Salvage work for unretrieved waterfowl.
1993	Bill Barrow	-	-	-	-	BDJV Woodstock Program assisting Petrie and Sears. Unretrieved waterfowl program.