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Atlantic Waterfowl Council

Technical Section

Torrington, Connecticut  
February 27 - March 4, 1983



REPORT  
QL  
677.5  
A881  
1983

CANADIAN WILDLIFE SERVICE

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

QL  
677.5  
A881  
1983

State	Type of Survey	Aircraft Type	Flying Time	Area Covered
	Aerial	Cessna 172	40 hrs	Coastal and Reservoirs
	Aerial	Cessna 172	30 hrs	Coastal

Atlantic Waterfowl Council  
Technical Section  
Torrington, Connecticut  
February 27 - March 4, 1983

Attached is the agenda for the 1983 Technical Section meeting and the following is a brief discussion of items of particular concerns to the CWS-Atlantic Region.

### Winter Waterfowl Inventory

The first day was devoted entirely to discussion and review of winter inventory techniques and results. The objective was to develop proposals for improving methodology of the surveys and standardizing techniques throughout the Flyway. Generally, mid-winter inventories were started in all states from the early to mid 1950's and have been conducted annually from January 1-15. The following are some survey characteristics by State.

State	Type of Survey	Aircraft Type	Flying Time	Area Covered
Maine	Aerial	Twin Engine	40 hrs	Coast and Rivers to ice edge
N.H.	Aerial	Cessna 172	2 hrs	Coastline and transects
N.Y.	Aerial	Cessna 172	30 hrs	All ice free areas
Vt.	Aerial	Cessna 172	6 hrs	Lake Champlain
Mass.	Aerial	Cessna 172	15-19 hrs	Coastal and ice free inland
R.I.	Aerial	Cessna 185	2	Coastal
Conn.	Aerial	Cessna 172	7 - 8 hrs	Coast and Conn. River
N.J.	Aerial	Cessna 172	20 hrs	Coastal
Va.	Aerial	Cessna 172		Coastal
W.Va.	Aerial	Helicopter	6 hrs	Ohio River
Penn.	Ground, Aerial	Cessna 172 and Helicopter	12 hrs	All ice free areas

Md. ?

Del. ?

<u>State</u>	<u>Type of Survey</u>	<u>Aircraft Type</u>	<u>Flying Time</u>	<u>Area Covered</u>
N.C.	Aerial	Cessna 172	12 hrs	Coastal and Reservoirs
S.C.	Aerial	Cessna 180	18 hrs	Coastal
Ga.	Aerial	Helicopter and Cessna 180	16 hrs	Transects in coastal and plantation areas
Fla.	Aerial	Cessna 172	20 hrs	Permanent water areas

Costs ranged from \$50/hr for Cessna to \$300/hr for helicopter.

The USFWS tried experimental aerial transects in N.J. in 1981-82 at one mile intervals perpendicular to the coastline. Results were similar to previous surveys; thus, transects were increased to 1/4 mile intervals in 1982-83 which significantly increased cost but not the size of the estimated wintering populations. Random sampling of 1/4 mile transects is proposed for 1983-84. The result of the 1983 mid-winter inventory is on file in the library.

CWS involvement in the survey was requested for known Black Duck and Canada Goose wintering areas in the Atlantic and Quebec regions. I suggested that this might be possible on a periodic basis (say 3 year intervals) but was probably too expensive to be conducted annually.

*relative to our need for the results*

#### Woodcock Surveys

A discussion of woodcock survey results for 1982 suggested that populations remained stable in N.H., Vt. Virginia, Fla. Ga, R.I., Quebec and P.E.I. but declined in all other areas. In addition the average number of wings per envelope was down in the U.S. survey. As a result, the U.S. proposes to continue reducing season lengths in the northeastern states by delayed openings. They are also proposing the introduction of a permit system to facilitate sampling of woodcock hunters.

I suggested that present surveys, i.e. singing ground and wing, should be re-examined and adjusted and revised where necessary. The U.S. and Ontario were satisfied with present sampling procedures and the results; however, I continue to question present data as collected and believe that Canadian surveys (if not the U.S.) should be evaluated particularly from the standpoint of accomplishing objectives. Does sampling have to be statistically representative to provide meaningful productivity indexes and, if so, can the present sample be considered representative?

*probably not*  
" "

## Waterfowl Banding

Banding in Ontario will remain the same as in 1982 while some changes are planned for Quebec. Attached is a preliminary report of 1982 banding operations in Quebec together with proposed activities for 1983. Plan B was approved by the Banding Committee for 1983 which includes expansion of banding into areas where samples of at least 300 Black Duck can be banded with reasonable certainty. Surveys into the hinterlands of northeastern Quebec are also proposed and supported by the Coop Fund. A total of \$25,000 was approved for Quebec Region. In Ontario a total of \$20,800 was approved for the operation of eight banding stations (proposal attached).

The Atlantic Region received funding approval for continuation of all 1982 banding stations through 1983 and tentatively through 1984 which is the year that the present Coop Banding agreement expires. Renewal of the agreement is being prepared for 1985 and will request increased funding from participating States and the USFWS to meet increasing costs of operation. It is expected that existing programs can be continued through the new agreement. A copy of the Atlantic Region banding program is attached.

W. R. Whitman  
Wildlife Biologist  
Canadian Wildlife Service  
Atlantic Region

Project: Tinker Harbour, Labrador

Duration: August 22 - October 14 (8 weeks)

Justification: The Tinker Harbour station was operated in 1981 for the first time in 30 years. The objectives of the renewed banding program in that area were to improve our knowledge of the most remote and major breeding population of black duck in the Atlantic Region and to better determine harvest characteristics of Labrador waterfowl.

Atlantic Flyway Cooperative Banding Program

Atlantic Region

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

1983

Estimated Costs for 1983

Personnel:

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

Project: Tinker Harbour, Labrador

Duration: August 22 - October 14 (8 weeks)

Justification: The Tinker Harbour station was operated in 1981 for the first time in 30 years. The objectives of the renewed banding program in that area were to improve our knowledge of the most remote and major breeding populations of black duck and Canada geese in the Atlantic Region and to better determine harvest characteristics of Labrador waterfowl.

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

Estimated Costs for 1983

Personnel:

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

Tinker Harbour, Labrador

Materials and Supplies:

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

Shipping and Transportation:

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

Total Cost \$16170.00

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

Estimated Costs for 1983

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

Materials and Supplies:

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

## Snegamook Lake - Dog Banding

Project: Snegamook Lake - Dog Banding

Duration: July 1 - July 20

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

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

### Estimated Costs for 1983

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

#### Materials and Supplies:

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



Snegamook Lake - Dog Banding

Project: Main - Black Duck, Canada goose, goldeneye

Shipping and Transportation 31

Justified 1) Fixed Wing Charter (9 hrs at \$260/hr) to \$2340 in Main Bay  
found later 2) Freight of black duck, Canada geese and goldeneye. Based  
on that 3) Commercial Transportation of banding efforts \$1000 1954-55, the  
decision was made to attempt goldeneye banding in 1982. Success was

Misc. and Unforeseen Expenses to changes in location \$1000 of use, human  
disturbance and a variety of other logistical problems. With the

Total Cost gained, however, it is certain that respect \$5490 numbers of  
black duck, Canada geese and goldeneye can be banded in Main Bay during  
July and August. Because of the severe lack of data on those populations  
and their undoubtedly high importance to the Atlantic Flyway, the process  
of establishing a successful banding station should be continued in 1983.  
Costs will be significantly reduced in 1983 with the elimination of  
expensive aerial surveys and transportation costs. Also good success  
can be expected.

Estimated Costs for 1983

Personnel:

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

Materials and Supplies

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

Nain - Black Duck, Canada goose, goldeneye

Project: Nain - Black Duck, Canada goose, goldeneye

Duration: July 1 - August 31

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

Estimated Costs for 1983

Personnel:

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

Materials and Supplies

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

Nain - Black Duck, Canada goose, goldeneye

Project: Codroy River Newfoundland

Shipping and transportation

- |                |        |
|----------------|--------|
| 1) Freight     | \$ 300 |
| 2) Airfares    | \$ 700 |
| 3) Boat Rental | \$1000 |

Total Costs \$9750

Estimated Costs for 1983

Personnel: 2 men at \$1500/man \$3000

Materials and Supplies:

- |  |        |
|--|--------|
| 1) Bait - 25 bags at \$12.00/bag                     | \$ 300 |
| 2) Wire, netting, etc. available from previous years |        |

Transportation and Lodging

- |                               |        |
|-------------------------------|--------|
| 1) Mileage 2000 at \$0.35/mi. | \$ 700 |
| 2) Lodging 6 wks \$200/wk     | \$1200 |
| 3) Nfld. Ferry                | \$ 200 |

Total Cost: \$5400

Project: NB-NS Border Area

Project: Codroy River Newfoundland

Duration: July 29 - September 3

Duration: August 29 to October 8

Justification: The Border Area station has operated annually since the

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

Estimated Costs for 1983

Personnel: 2 men at \$1500/man \$3000

Materials and Supplies:

1) Bait - 25 bags at \$12.00/bag \$ 300

2) Wire, netting, etc. available \$ 360

2) from previous years available from

Transportation and Lodging

1) Mileage 2000 at \$0.35/mi. \$ 700

2) Lodging 6 wks \$200/wk \$1200

3) Nfld. Ferry \$ 200

Total Cost

Total Cost \$5400

Project: NB-NS Border Area

Duration: July 25 - September 3

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

Estimated Costs for 1983

Personnel:

2 men for 6 wks \$1500/man \$3000

Materials and Supplies:

1) Bait - 30 bags at \$12.00/bag \$ 360

2) Wire, nets, etc. available from previous year

1) Bait - 15 bags at \$12.00/bag \$ 180

Transportation:

1500 miles at \$0.30/mi. \$ 450

Total Cost

2000 miles at \$0.30/mi. \$3810

Total Cost

\$2530

Project: Bathurst Basin, N.B.

Duration: August 29 - Oct. 15

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

Estimated Costs for 1983

Personnel: one experienced bander for 7 weeks \$1750 \$3000

Materials and Supplies: Available from previous years

Equipment: 1) Bait - 15 bags at \$12.00/bag \$ 180

Transportation: 2) Wire, nets, etc. available from previous year \$1000

Total Cost \$4000

Transportation:

2000 miles at \$0.30/mi. \$ 600

Total Cost \$2530

Project: CWS Airboat Nightlighting

Duration: July 15 - Oct. 15

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

Personnel: a local assistant is required to guide and assist

Estimated Costs for 1983

Personnel: 2 men for six weeks during peak banding period

\$3000

Materials and Supplies: Available from previous years

Equipment: supplied by CWS

Transportation and Field Expenses

\$1000

Total Cost

\$4000

Project: USA Airboat St. John River

Duration: July 15 - August 15

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

Estimated Costs for 1983

Personnel: a local assistant is required to guide and assist

USFWS personnel. \$1000

Materials, Supplies and Equipment

Supplied by USFWS

Lodging and Transportation

Total Cost

GRAND TOTAL \$48,650

U.S. Banders should be paid in U.S. funds; but all other wages and expenses will be in Canadian currency. Total U.S. funds required is estimated at \$9,000.00.



ATLANTIC WATERFOWL COUNCIL  
 TECHNICAL SECTION  
 Summary of Costs 1983  
 Feb. 27 - March 4  
 Cooperative Banding Program  
 Agenda

Newfoundland-Labrador

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

10:20-12:00 - Complete Stats/Paid Days Subtotal \$36,810

Review and discuss experimental "transect" method currently being tested (N.J.)

New Brunswick-Nova Scotia

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

7:20 - Recommendations to the Tech. Subtotal \$11,840

5:00 - Executive Committee Meeting

7:30 - Sociable Gathering GRAND TOTAL \$48,650

March 1 8:30 a.m. - 10:00 a.m. - Greetings, Announcements, Committees Assignments and Appointments

U.S. Banders should be paid in U.S. funds; but all other wages and expenses will be in Canadian currency. Total U.S. funds required is estimated at \$9,000.00.

7:30 p.m. Webless Migratory Game Bird Committee  
 7:30 p.m. Report from Chairman  
 Status of A.R.P.  
 Status of Webless Migratory Game Bird  
 Hunting Permit  
 7:45 p.m. Report, by states, for Webless hunting season  
 Report by Federal Biologist

ATLANTIC WATERFOWL COUNCIL  
TECHNICAL SECTION  
1983 Winter Workshop  
Feb. 27 - March 4

Agenda

February 27 (Sunday) - Travel day. Registration

February 28 - 8:30 a.m. - 4:00 p.m. - Winter Waterfowl Inventory Workshop

8:30 - Introduction - Purpose, Scope and Problems

8:45 - Review of methodology currently in use by States and/or Feds

10:00 - Break

10:20-12:00 - Complete State/Fed Review

Review and discuss experimental "Transect" method currently  
being tested (N.J.)

Lunch

1:30 - Proposals plus review and evaluation for changes in W.I.  
methodology, scheduling, etc.

2:30 - Development of schedules for implementing and testing new  
proposals selected.

3:00 - Break

3:20 - Recommendations to the Tech. Section and Council

5:00 - Executive Committee Meeting

7:30 - Sociable Gathering

March 1            8:30 a.m. - 10:00 a.m. - Greetings, Announcements, Committee  
Assignments and Appointments

10:00 a.m. - 5:00 p.m. - Committee Meetings

7:30 p.m. Webless Migratory Game Bird Committee

7:30 p.m. Report from Chairman

Status of A.R.P.

Status of Webless Migratory Game Bird

Hunting Permit

7:45 p.m. Report, by states, re: Woodcock hunting season

Report by Federal Biologist

March 1

8:15 p.m. Discussion and Recommendations

8:30 p.m. Adjournment

March 2

8:30 a.m. - 12:00 noon - Committee Meetings

1:00 p.m. Lead Poisoning Control Information Program  
Scott Feierabend, National Wildlife Federation

2:00 p.m. Dabbling Duck Comm. Report

3:00 p.m. Break

3:30 p.m. Dabbling Duck Comm. Report

5:30 p.m. Leave for Banquet at Bristol Fish and Game Club

March 3

8:30 a.m. Canada Goose - SNOBS Committee Report

10:00 a.m. Break

10:20 a.m. A Study of Resident Nuisance Canada Geese in Connecticut  
and New York - Kathryn Converse, Mass. Coop. Wildlife  
Research Unit

11:00 a.m. Use of Chemical Deterrents to Reduce Crop Depredations  
by Canada Geese  
Mike Conover - Conn. Agr. Extension Service

11:30 a.m. C.W.S. Reports

12:00 Lunch

1:00 p.m. F.W.S. Reports of Research Planned and in Progress  
Mike Conroy, Matt Perry

2:00 p.m. Diving Duck Committee Report

3:00 p.m. Break

3:30 p.m. Banding - Harvest Management Committee Report

March 4

8:30 a.m. Special Committee Reports (time and place, etc.)

Old Business

New Business

Adjournment

ATLANTIC WATERFOWL COUNCIL TECHNICAL SECTION

COMMITTEE ASSIGNMENTS - FEBRUARY 28, 1983

ALL COMMITTEES:

Review the Draft Region 5 Resources Plan as it pertains to each committee and prepare a report for the council.

Banding - Harvest Management Committee

Harvest Management Sub-committee

1. Review state reports on zoning and three-way split seasons.
2. Coordinate with other committees to recommend 1982-83 waterfowl seasons with special emphasis on the Canada goose, black duck, canvasback and brant.

Banding Sub-committee

1. Review the status of the cooperative banding project and special brant fund.

Dabbling Duck Committee

Black Duck Sub-committee

1. Prepare final plan for harvest reduction for presentation at AWC March meeting.
2. Conduct a winter inventory workshop and make recommendations regarding improvements.
3. Suggest specific projects for funding to implement the Black Duck Plan.

Wood Duck, Other Dabblers Sub-committee

1. Review the results of early waterfowl seasons, particularly as they relate to wood duck and black duck populations.
2. Outline the benefits and detriments of early season duck hunting as it applies to the Atlantic (and Mississippi) Flyway

Diving Duck Committee

1. Examine the potential for an experimental canvasback season to include breeding ground/pair indices/winter inventory goals.
2. Review the Service's position on canvasback management, including the reevaluation of area closures.
3. Recommend diving duck seasons for 1982-83 in coordination with the harvest management committee.

Environmental Management Committee

1. Examine the National Wildlife Federation's cooperative program on steel shot to review priorities that were established by the Migratory Waterfowl Committee of the International Association of Conservation Agencies.
2. Identify the most important issues of the program for the Atlantic Flyway and suggest areas of improvement.
3. Continue to consider the effects of acid rain on waterfowl as it may pertain to the Atlantic Flyway.

Goose Committee

SNOBS Sub-committee

1. Make recommendations for the implementation of the Whistling Swan Plan, including a limited, experimental hunting season.
2. Develop 1983-84 brant and snow goose hunting season recommendations.

Canada Goose Sub-committee

1. In conjunction with the March meeting of the Technical Committee, meet with Dr. Rusch, Dr. Malecki and, hopefully, Vernon Stott to review Stott's latest analysis of goose banding data.
2. Determine from this review whether convincing (not necessarily conclusive) data exist to verify one or both of the hypotheses under consideration by the Special Canada Goose Committee
3. If adequate data are deemed to exist, prepare a summary of that data and the conclusions to be drawn therefrom.
4. If the data are deemed insufficient, identify the gaps that must be filled to test the appropriate hypothesis.
5. In the latter case, review the Rusch prospectus, the Remington Farms proposal (attached) and the initial guidelines prepared by the Special Canada Goose Committee and develop a refined research prospectus suitable for implementation as a P-R project.
6. In the former case (Item 3), develop an alternative research prospectus to test management strategies that will achieve objectives previously established for the "southern" flock.
7. Provide me with a report on your deliberations, etc. for presentation at the March Council meeting in Kansas City.

Diving Duck  
Jack Donnelly, Committee Chairman  
Jim Myers, Sub-Committee Chairman

Banding - Harvest Management  
Fred Hartman - Committee Chairman  
Tommy Strange, Sub-Committee Chairman

Canvasback-Redhead-  
Scaup  
-----  
N.C. - Donnelly, V.R.  
  
FL - Hines  
DU - duPont  
FWS - Haramis  
FWS - Perry

Goldeneye-Other Divers  
-----  
VT. - T. Myers, V.R.  
RI - J. Myers, V.R.  
FWS - Conroy  
FWS - Larned

Banding  
-----  
PA - Hartman, V.R.  
Ont. - Harcus, V.R.  
RF - Soutiere  
CWS - Whitman  
FWS - Jonkel  
CWS - Dupuis ..

Harvest Management  
-----  
DU - Goudy  
S.C. - Strange, V.R.  
N.H. - Lacaillade, V.R.  
ME - Corr  
FWS - French  
N.Y.W. - Farrell  
N.C. - Barnes  
W.V. Rinell

Environmental Management  
Larry Hindman, Committee Chairman  
, Sub-Committee Chairman

Environmental Management  
Waterfowl Mortality  
-----  
MD - Hindman, V.R.  
Que. - Lepage, V.R.  
CO - Chasko, V.R.  
DE - Alexander, V.R.

Habitat - Land Use  
-----  
VA - Settle  
DU - Kamman  
FWS - Florschutz  
NS - Payne, V.R.

Atlantic Waterfowl Technical Section Committee Assignments

FEB. 27, 1983

Goose Committee

Fred Ferrigno, Committee Chairman  
Dennis Luszc, Sub-Committee Chairman

Dabbling Duck

Skip Spencer, Committee Chairman  
Frank Montalbano, Sub-Committee Chairman

Snow Goose,  
Brant Swan

N.J. - Ferrigno, V.R.  
VA - Gilchrist, V.R.  
CWS - Reed  
FWS - Goldberry  
G.S. BW - Sheaff  
N.C. - McClanahan  
  
FWS - Holland

Canada Goose

N.C. - Luszc  
R.F. - Galbreath  
PA - Stroupher  
P.E.I. - Dibble, V.R.  
DE - Whittendale  
FWS - Orr  
N.J. - Paul Castelli  
DU - Ralph Bitely  
NY - Jack Moser

Black Duck-Mallard

ME - Spencer, V.R.  
N.B. - Baird, V.R.  
MA - Heusman, V.R.  
N.J. - Widjeskog  
FWS - Longcore  
DU - McAloney  
CWS - Erskine  
DU - Bampton

Wood Duck - Other  
Dabblers

FL - Montalbano, V.R.  
GA - Dewberry, V.R.  
WV - Ruckel, V.R.  
KP - Williams  
RI - Allin  
FWS - Perry

3. Upper Presqu'ile Provincial Park Proposed 1983 Atlantic Flyway Pre-Season Cooperative Banding Projects for Ontario

This station can reasonably be expected to band 1,400 mallards, 300 black ducks and 25 mallards. Plans for Ontario's participation in the Cooperative Banding Project for 1983 are presented in this outline. In accordance with previous objectives of the Banding Committee for the current five-year program, black duck banding is given priority regarding the location and operation of banding stations, with mallard and wood duck banding receiving secondary consideration. A summary of funding requirements is presented in Table 1. Details of requirements for individual banding stations are listed as follows:

1. Aylmer Wildlife Management Area: Aylmer District  
Dates: 15 August - 19 September  
Salaries (contract): \$1,800  
Supplies, Transportation, Services: \$300 (trap repairs, bait, waders)  
Local Contacts: Gary Zacher (519) 773-9241  
McCrea's Pond, Monmouth Twp.: Gary Austin (519) 773-9241  
Remarks: This station normally bands about 1,000 mallards and 100 black ducks. About 1,500 mallards and 50 black ducks are also banded by Canadian Wildlife Service personnel in this reference areas.  
Local Contacts: Barry Walker (416) 286-1521
2. Presqu'ile Provincial Park: Napanee District  
Dates: 15 August - 15 September  
Salaries (contract): \$2,000  
Supplies, Transportation, Services: \$300 (bait, transport, traps)  
Local Contacts: Dave Jones (613) 354-2173  
Watt Township: Dave Montgomery (613) 354-2173  
Dates: 15 August - 15 September  
Remarks: This station can reasonably expect to band about 150 mallards, 50 black ducks and 350 blue-winged teal. Continued operation of this station is important because the data might be lumped with that from the Upper Canada Migratory Bird Sanctuary and adjacent Quebec banding stations.



3. Upper Canada Migratory Bird Sanctuary:

Cornwall District

This station can reasonably be expected to band 1,400 mallards, 300 black ducks and 100 wood ducks, in addition to miscellaneous other species.

Dates: 8 August - 24 September

Salaries (contract): \$2,000

Supplies, Transportation, Services: \$300

Local Contacts: Eric Johnston (613) 933-1774

Mike Eckersley (613) 933-1774

Remarks:

This is an important station because of the comparatively large numbers of birds banded. The data from this station might also be lumped with other nearby stations (Ontario and Quebec) to provide adequate sample sizes for calculation of survival rates.

4. McCrea's Pond, Monmouth Twp.:

Minden District

Dates: 15 August - 15 September

Salaries (contract): \$1,000

Supplies, Transportation, Services: \$500 (bait, transport, traps)

Local Contacts: Barry Walker (705) 286-1521

Eric Michael (705) 286-1521

Remarks:

This station can reasonably expect to band about 40 black ducks, 25 mallards and 50 wood ducks.

5. Cooper's Pond, Watt Township:

Bracebridge District

Dates: 15 August - 15 September

Supplies, Transportation, Services: \$500 (bait, transport, traps)

Local Contacts: Jim Poirier (705) 645-5244

Dave Brooks (705) 645-5244

Remarks: 1981 (total = 398; black ducks = 19), it is recommended that the basis for 1983. Smaller portable traps black ducks, would be used on a more ex by R. J. Stitt, East Point Banding Report

This station can reasonably expect to band about 10 black ducks, 20 mallards and 100 wood ducks. Operation of this station, in addition to the station in Minden District (see #4), will provide banding information from an area where data is lacking.

6. Petawawa Crown Game Preserve:

Pembroke District

Dates:

15 August - 15 September

Supplies, Transportation, Services:

\$500 (bait, traps)

Local Contacts:

Gary Moore (613) 732-3661

Al Armstrong (613) 732-3661

Remarks:

This station can reasonably expect to band about 100 black ducks and 50 mallards. Data from this station could be lumped with those from adjacent eastern Ontario and western Quebec stations.

7. Lillabelle Lake:

Cochrane District

Dates:

1 August - 7 September

Salaries (contract):

\$1,800

Supplies, Transportation, Services:

\$400 (bait, trap maintenance, transportation)

Local Contacts:

Dan Elliot (705) 272-4365

Bill Therriault (705) 272-4365

Remarks:

Operation of the above station should result in the banding of approximately 150 mallards and 75 black ducks. We support continuation of this station for 1983 because of the lack of data on duck populations from northern areas.

8. East Point, Hannah Bay:  
(Under Review)

Moosonee District (James Bay)

The Piskwamish Point Station, in operation since 1967, was closed in 1980. Efforts in 1980 were directed towards surveying the southern portion of James Bay for large concentrations of black ducks and potential areas for new banding sites. The most suitable site for a new banding station appeared to be at East Point, Hannah Bay. Although relatively low numbers of birds were banded at East

Point in 1981 (total = 398; black ducks = 44) and 1982 (total = 363; black ducks = 19), it is recommended that the station be continued on a trial basis for 1983. Smaller portable traps, which appear to be effective for black ducks, would be used on a more extensive basis (see recommendations by R. J. Stitt, East Point Banding Report 1982).

Dates: 1 August - 9 September

Salaries (contract): \$5,000 (two contract persons required) ?

Supplies, Transportation, Services: \$4,400 (\$2,700 for helicopter costs, \$1,700 for supplies)

Local Contact: Ken Abraham (705) 336-2987  
Robert Stitt (705) 336-2987

Remarks: As noted by Stitt (1980, M.N.R. report), species composition changes from year to year in the southern James Bay area. This makes it difficult to forecast accurately the number of birds likely to be banded. It is estimated, however, that 100 black ducks (using smaller portable traps) and 100 mallards, and 500-plus pintails in certain years, could be banded. This will not provide enough data to calculate survival rates for black ducks, but will provide the only ongoing duck banding data for the Ontario portion of the southern James Bay area.

M.N.R. staff will also continue to investigate alternative banding sites along the Hudson Bay coast. This will be done in the course of other work/surveys, and if funds permit, may include such efforts as dropping of bait to assess banding potential for black ducks. Initiation of a major and costly effort to band black ducks along the Hudson Bay coast is not recommended for 1983. The possibility of such a project will be reassessed in 1984, when the effectiveness of smaller portable traps has been further tested at the East Point, James Bay banding site.

Table 1. Proposed 1983 Atlantic Flyway Pre-Season Banding Program for Ontario: Cooperative Funding Required

Station or Operation	Duration	Salaries (contract)	Supplies, Transportation, Service	Total
Aylmer Wildlife Management Area (Aylmer District)	15 Aug. - 19 Sept.	\$ 1,800	\$ 300	\$ 2,100
Presqu'ile Provincial Park (Napanee District)	15 Aug. - 15 Sept.	\$ 2,000	\$ 300	\$ 2,300
Upper Canada Migratory Bird Sanctuary (Cornwall District)	8 Aug. - 24 Sept.	\$ 2,000	\$ 300	\$ 2,300
McCrea's Pond, Monmouth Twp. (Minden District)	15 Aug. - 15 Sept.	\$ 1,000	\$ 500	\$ 1,500
Cooper's Pond (Bracebridge District)	15 Aug. - 15 Sept.	-	\$ 500	\$ 500
Petawawa Crown Game Preserve (Pembroke District)	15 Aug. - 15 Sept.	-	\$ 500	\$ 500
Lillabelle Lake	1 Aug. - 7 Sept.	\$ 1,800	\$ 400	\$ 2,200
East Point, Hannah Bay (James Bay) for black ducks (Moosonee District)	1 Aug. - 9 Sept.	\$ 5,000 ?	\$4,400	\$ 9,400
	Totals	\$13,600	\$7,200	\$20,800

## HISTORICAL BACKGROUND

Cooperative waterfowl banding program:

1982 pre-season operations in Quebec

A preliminary report

The main objectives of this program were:

- 1) To determine distribution of harvest from breeding and wintering areas;
- 2) To determine changes in harvest pressure on various populations;
- 3) To determine annual and/or long-term survival rates.

Approximately 275,000 ducks and 50,000 geese have been banded since 1965 in eastern Canada; they respectively represent 50 percent and two thirds of the total bands put on each group of birds in the byway. Of these 40,000 ducks have been trapped and marked in Quebec for the period 1965-1981.

When the cooperative banding program agreement was extended in 1981 Pierre Dupuis, Senior technician, five-year, banding quotas were established at 300 for each species. Emphasis has been again oriented toward banding of Black duck, Wood duck and Mallard duck. In the case of Black duck, the main objective of the banding program was to evaluate the importance of hunting on the overall mortality rate.

## 1982 PROGRAM IN QUEBEC

As stressed in the Black duck continental management plan (Spencer, chairman, 1982) (as a prime management objective) to better evaluate the population status of this species. "Recent population appraisals of Black duck populations have been declining for twenty or more years, and the banding of adults as well as immature birds (Spencer, *ibid*)." data-bbox="120 661 821 786"/>

Environnement Canada  
Canadian Wildlife Service  
Quebec Region  
Sainte-Foy (Québec)

February 1983.

- 2 -

## HISTORICAL BACKGROUND

Through its bird banding program that was set up as early as 1949<sup>7</sup> at Baie Johan Beetz on the north shore of the gulf of St-Lawrence, the Canadian Wildlife Service has been contributing to the monitoring of many waterfowl species in Quebec.

The main objectives of this program were:

- 1) To determine distribution of harvest from breeding and wintering areas;
- 2) To determine changes in harvest pressure on various populations;
- 3) To determine annual and/or long-term survival rates.

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When the cooperative banding program agreement was extended in 1981 for another five-year, banding quotas were established at 300 for each age/sex classes. Emphasis has been again oriented toward banding of Black duck, Wood duck and Mallard duck. In the case of Black duck, the main objective of the banding program was to evaluate the importance of hunting on the overall mortality rate.

## 1982 PROGRAM IN QUEBEC

As stressed in the Black duck continental management plan (Spencer, chairman, 1982) (is a prime management objective) to better evaluate the population status of this species. "Recent population appraisals suggest that Black duck populations have been declining for twenty or more years (Winter Survey data) or are stable (indirect population estimates)". Current band return analysis require relatively large samples in consecutive years, and the banding of adults as well as immature birds (Spencer, *ibid*).

In Quebec, two stations have been traditionally providing quotas of 300 Blacks each year: Baie Johan Beetz and Thurso. Direct band recovery rates within Canada is of enough value to adjust age ratios from wing samples of the National Harvest Survey (Newell and Boyd, 1978) but the small sample size prohibits estimating valid survival/mortality rates.

In 1982 we tried to answer three questions:

- a) is it feasible to band a quota (300 x 4 age/sex classes) of Black duck in a single season in Quebec?
- b) is it possible to mark large numbers of Blacks on a regional basis?
- c) what are the costs for implementing such a large banding program?

The overall pre-season (i.e. operations completed before opening of hunting season in Canada and U.S.) banding operation was geared to continue on-going operations but also to evaluate new sites:

- continuity in Thurso (since 1967) and Baie Johan Beetz (since 1949).
- reopening of stations in Lake St-John and Gaspé.
- increase of banding effort along the Outaouais river in two ways:
  - 1) by adding five banding locations;
  - 2) by experimenting possibilities of duck banding in protected areas after the opening of the hunting season.
- selection of banding sites in Abitibi.

## RESULTS

Nine (9) banding stations were operated in Quebec, from July to mid-October 1982 (Figure 1). Traditional sites were operated again in Baie Johan Bertz (site no 1, fig. 1) and Thurso (site no 2, fig. 1). Two-thirds (53/78) of the 78 weeks of trapping occurred in the Outaouais river. Twenty-five percent (12 weeks/53) of banding effort done after September 10.

### RATIO young/adult

The observed ratio of 6:1 in the Outaouais river (Tab. .../3 is similar to the global ratio observed for Quebec for Black ducks (Table 5). Local variations occur; as in previous years, on the north shore this ratio is only 2:1 (Table 5). The disturbance in Baie Johan Beetz is almost non

BANDING

10,721 ducks were banded in Quebec in 1982 (Table 1). Emphasis was put on Black duck; at many sites, traps were removed when other dabblers like Blue-winged Teals became too abundant.

The quota of 300 Black ducks was reached in most sites. 2,600 Blacks were banded in Quebec in 1982 (Table 2), three times more than in the two last years (table 3) and as many as in all other eastern Canadian provinces in the two last years (Table 3). But the quota of 600 adults was not reached (Table 2) not even at the level of the total catch for the province.

On a regional basis, 1,508 Blacks were marked in the Outaouais river. The 1982 operations show for the first time the possibility of trapping and banding large samples of Blacks and Mallards in Eastern Canada. The banding effort was doubled in 1982 at the Thurso site (Thurso and Lochaber) but catch of Blacks and Mallards remained stable. It is then a good indication that if the banding effort has to be increased, it must be done not by increasing the number of traps in a local area but by spreading out the operations in numerous sites.

The choice of sites apparently more attractive to Blacks than to other dabblers explains part of success in Lake St-John and Gaspé; in those areas, banding operations done in the midsixties had given only small numbers of Blacks.

In 1982, more than 80 percents of the Black ducks were banded after August 20. This pattern has been observed for 30 years at Baie Johan Beetz; there, banding has a standard peak in mid-September. The tendency showed by Black ducks to leave their breeding territories in the hinterlands to congregate in larger bodies of water late in summer is probably explaining the observed banding pattern; pre-season banding has to stop in early September due to regulations on baiting, when hunters have access to the area. Longer banding operations as late as in October might help to obtain larger samples of Blacks.

RATIO young:adult

The observed ratio of 6:1 in the Outaouais river (Table 5) is similar to the global ratio observed for Quebec for Black ducks (Table 6). Local variations occur; as in previous years, on the north shore this ratio is only 2:1 (Table 6). The disturbance in Baie Johan Beetz is almost non



existent as opposed as the high frequentation of marshes located in the southern part of the province, like in the Outaouais river. Black duck is a very wary bird and prompt to be scared. This may explain the higher catches of adults in some area of low disturbance. Indications are nevertheless for a high ratio of young in the bait-trapping operations.

At Thurso, doubled efforts in 1982 did not changed the ratio young: adult from 1981 (6,02:1) (Table 4).

#### TRAPPING EFFORT

Banding of a large sample of Black ducks need<sup>s</sup> costly resources. In 1982, 327 trap-weeks were needed to band 5946 Blacks and Mallards in the Outaouais river (Table 7). The number of bands by trap-day in the marshes from Thurso to Shirley's Bay is 6 (1502/257) for Black duck and 16 (4220/257) for Mallards (Table 8). If one considers that 80 percent Blacks were banded after August 20, the daily rate of banding is increasing at approximately 11,4 (1502/(257-144 weeks before Aug. 20)) at the end of summer. Late trapping brings in more Black ducks. This tendency is shown also in Table 9; after September 10, each trap is catching more Blacks on a weekly basis than before that time.

#### COSTS

In 1982, the cooperative waterfowl banding program cost 100,000\$ in canadian funds (Table 10). 2/3 of which came through CWS support. The cost per Black duck was 9,28\$, an increase of 50 percent over the 1981 figure (Table 11), even if three times more Blacks were banded in 1982.

#### CONCLUSIONS

In 1982, the cooperative preseason waterfowl banding program in Quebec has shown great possibilities in Black duck banding:

- ducks were banded in four regions: North shore, Gaspé peninsula, lake St-John and Outaouais river.

Proposal for preseason banding in Quebec for 1983.

- 9 banding stations were operated for a total of 78 trap-weeks.
  - 5 new stations were experimented in the Outaouais river for the purpose of banding a maximum number of Black ducks on a regional basis.
  - again in the Outaouais, 25 percent of the trapping effort in trap-week was extended after September 10, the usual finishing date.
  - 10,721 ducks were banded in Quebec during the preseason banding operations: 2603 Black ducks, 4444 Mallards and 864 Wood ducks.
  - it was shown that large samples of Black ducks can be banded through the preseason program. Three times more Blacks than normal low level operation were banded. This is also possible on a regional basis: 1500 Blacks were banded on the Outaouais river.
  - ratio adult:juvenile from banding is low both for Blacks (1:5) and for Mallards (1:6). 467 adult Blacks were banded, well below the target quota of 600.
- A bait-trapping operation in summer (preseason) means a large proportion of juveniles banded.
- strong indications are that banding<sup>g</sup> for Black ducks through<sup>c</sup>out September and October can increase by 30 percent the number of birds banded. But this has to be done in restricted and well<sup>g</sup> protected areas as the opening of the waterfowl hunting season generally<sup>r</sup> occurs in the third week of September.

- plan B. Expand banding in many known areas from which we can reasonably expect a standard performance of 300 (from 250 to 350) Black ducks and keep on going with these for at least five years; surveys should be undertaken in winterlands to find out any possible extension of Black duck captures in the near future (figure 2).

- plan C. Work out A and B in putting enough effort to catch some 1000 Blacks in each region (table 12) so that large samples of Black ducks would be available from four regions in eastern Canada (table 13, figure 2)

Proposal for preseason banding in Quebec for 1983.

In planning a banding program, many factors are to be considered. Better catch levels of Black ducks occur late in summer, when the birds are initiating their southward migration. At that time, it is however nearly impossible to determine which population the estimates relate to (Brownie et al., 1978). Banding during the hunting season induces mortality during banding period, an undesirable situation (ibid). How about quotas? On large scale basis, it is possible to band in some years fairly large numbers of Black ducks, but Brownie et al. (ibid) point out that for the Mallard, 1500 adult males should be banded each year to get a good precision on estimates of survival. If this is needed, large numbers of birds need to be banded. If only distribution of harvest need to be known, spreading out of the banding operation is desirable. Also, because reporting rates are relatively low, larger banding quotas are needed. Banding large quotas turns out to be much of a luxury at the present time.

For 1983, in view of the 1982 results, three strategies are offered:

- plan A. Continue banding in the two stations for which we have a long set of data.
- plan B. Expand banding in many known areas from which we can reasonably expect a standard performance of 300 (from 250 to 350) Black ducks and keep on going with these for at least five years; surveys should be undertaken in hinterlands to find out any possible extension of Black duck captures in the near future (figure 2).
- plan C. Work out A and B in putting enough effort to catch some 1000 Blacks in each region (table 12) so that large samples of Black ducks would be available from four regions in eastern Canada (table 13, figure 2)

Figure 1. Saguage coop 1982 sites de marquage du Québec.

Coop banding 1982 banding sites in

Funding proposal: 1983 cooperative Black duck banding program in Quebec.

	Plan A (2 sites)	Plan B (8 sites)	Plan C (13 sites)
Canadian support	10000 \$	60,000\$	160,000\$
COOP funding	15000	25,000	45,000
TOTAL	25,000	85,000	205,000



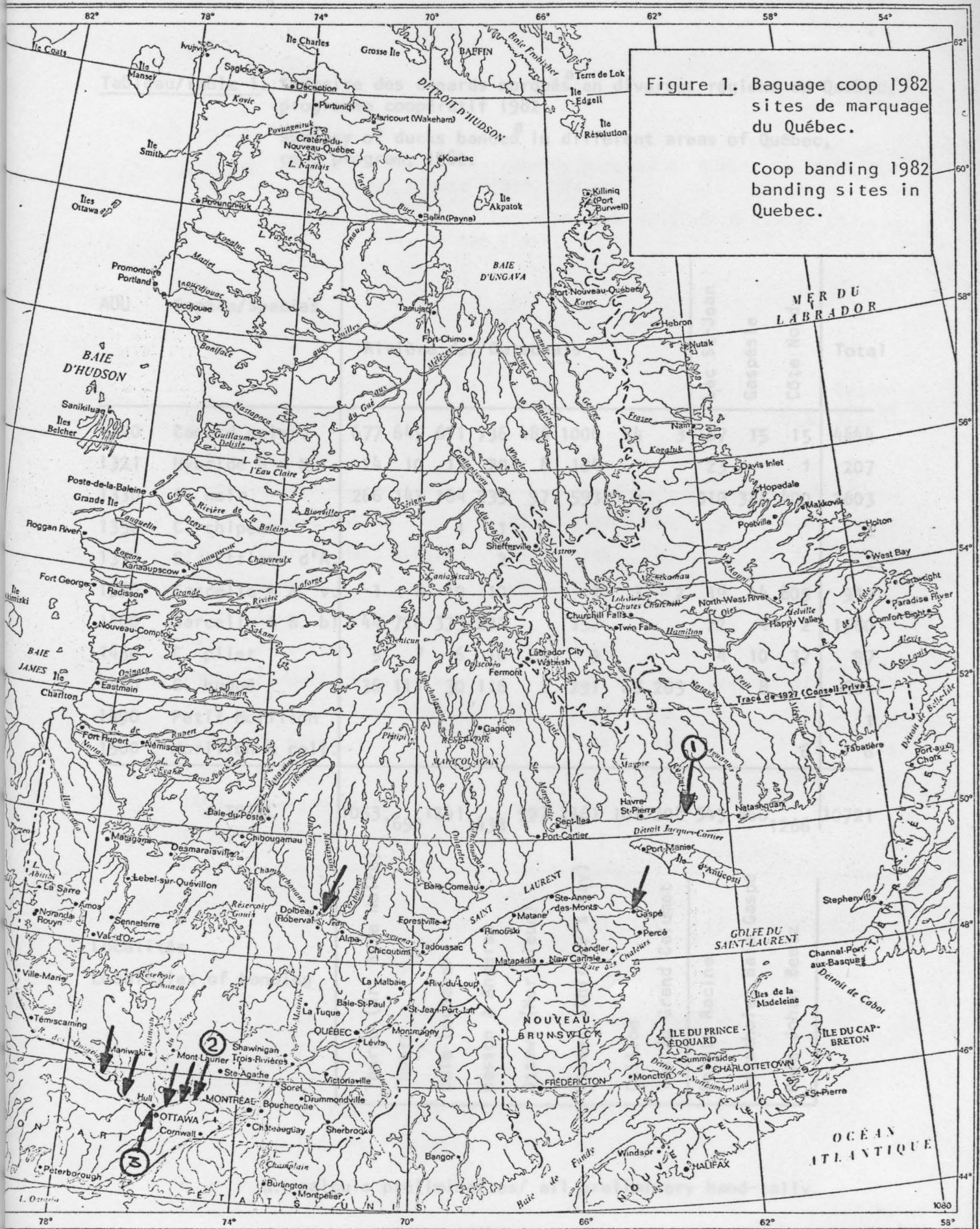


Figure 1. Baguage coop 1982 sites de marquage du Québec.  
 Coop banding 1982 banding sites in Quebec.

Tableau/Table 1. Sommaire des canards marqués<sup>a</sup> en diverses régions du Québec, programme coopératif 1982.

Summary of ducks banded<sup>a</sup> in different areas of Québec, coop program, 1982.

AOU	Espèce/Species	Rivière des Outaouais								Lac St-Jean Gaspésie Côte Nord			Total
1320	Canard malard	677	645	671	736	485	1006	24	3	167	15	15	4444
1321	Hybride M x N	24	10	17	20	8	104			23		1	207
1330	C. noir	266	143	164	239	97	593	6		310	385	400	2603
1350	C. chipeau			1	1								2
1370	C. siffleur d'A.				2								2
1390	Sarcelle à a. v.	1	8	19	10	3	1	3	2	19	44	805	915
1400	Sarcelle à a. bl	44	726	333	292		157			22	4	2	1580
1430	C. pilet	5	7	6	16	3	9			4	10	37	97
1440	C. huppé	36	111	30	116	1	291	68	203		8		864
1490	Petit Morillon				1								1
1500	Morillon à coll.											6	6
TOTAL		1053	1650	1241	1433	597	2161	101	208	545	466	1266	10721

Localités Localities of banding	Thurso (Gr. Baie Noire)	Thurso	Baie Lochaber	Masson à Angers	Ottawa (Mer Bleue)	Ottawa (Shirley's Bay)	Quillon	Ile du Grand Calumet	Pointe Racine	Barachois, Baie Gaspé	Baie Johan Beetz

a: calculs préliminaires/ all preliminary hand-tally.

Tableau/Table 2. Sommaire des canards marqués<sup>a</sup> au Québec en 1982, par classe d'âge.

Summary of preseason duck banding<sup>a</sup> in Quebec in 1982, by age class.

Tableau/Table 3. Niveaux de captures de C. noir au Canada, marquage d'été, 1980 à 1982.  
Back duck banding levels in eastern Canada, 1980-82.

AOU	Espèce/Species	L	HY	AHY	U	TOTAL	Ratio: $\frac{L + HY}{AHY}$
1320	Canard malard	48	3747	644	5	4444	5,98
1321	Hybride Mal. x Noir	9	156	47		207	3,48
1330	C. noir	64	2069	467	3	2603	4,57
1350	C. siffleur d'Am.		2			2	-
1370	C. chipeau		2			2	-
1390	Sarcelle à ailes v.		825	89	1	915	9,27
1400	Sarcelle à a. bleues	45	1377	156	2	1580	8,47
1430	C. pilet	3	76	18		97	4,33
1440	C. huppé	125	509	230		864	2,76
1490	Petit Morillon		1			1	-
1500	Morillon à collier		6			6	-
TOTAL		289	8770	1651	11	10721	-

a : calculs préliminaires/preliminary hand-tally.

L : caneton / local duck

HY : jeune de l'année / hatching year duck

AHY : adulte / after hatching year duck

U : inconnu / unknown

Tableau/Table 4. Comparaison des rendements 1981<sup>a</sup> et 1982<sup>b</sup> à Thurso<sup>c</sup>

Comparison between 1981<sup>a</sup> and 1982<sup>b</sup> results in Th

**Tableau/Table 3.** Niveaux de captures de C. noir au Canada, 82  
marquage d'été, 1980 à 1982.  
Black duck banding levels in eastern Canada,  
preseason banding, 1980-82.

AOU	Espèce/Species	L	HY	MY	TOTAL				
Year									
1320	Canard Noir		1030	256	274	1310			
1321	Hybride Ha. x Noir		21	18	9	5	30		
	Province		1980		1981		1982		
	Terre-Neuve/Ile du P. Edouard		130		106		N/A		
	Nouvelle-Ecosse		735		733		N/A		
	Nouveau-Brunswick		2096		1047		N/A		
	Québec		951		777		2603		
	Ontario		511		420		N/A		
1440	C. huppé	28	12	10	51	24	148	62	141
	<b>TOTAL</b>							1875	2889

a) Effort de trappage : 1 équipe et 7 trappes  
Banding effort : 1 crew and 7 traps.

b) E.tr. : 2 équipes et 14 trappes  
B.e. : 2 crews and 14 traps.

c) Thurso et/and Lochaber.



Tableau/Table 5. Sommaire des canards marqués dans la région de la rivière des Outaouais (Coop. 1982) : rapport jeune/adulte

Tableau/Table 4. Comparaison des rendements 1981<sup>a</sup> et 1982<sup>b</sup> à Thurso<sup>c</sup>.

AOU		Comparison between 1981 <sup>a</sup> and 1982 <sup>b</sup> results in Thurso <sup>c</sup> .						HY+L/AHY	
Espèce/Species		L		HY		AHY		TOTAL	
Année/Year		81	82	81	82	81	82	81	82
1320	Canard malard	40	3581	621	5	4247	5,83		
1321	Hybride M x N	1	138	44		183	3,16		
1330	C. noir	20	1257	229	2	1508	5,58		
1350	AOU chipe								
1370	C. siffleur								
1390	Sarcelle à ailes v.								
1400	1320 Canard malard	44	23 11	1031 1030	256 274	1310 1316			
1430	1321 Hybride Ma. x Noir			21 18	9 9	30 27			
1440	1330 C. noir	125	0 6	319 338	53 63	372 307			
1490	1390 Sarcelle à ailes v.	30	1 0	2 20	6 7	9 27			
	1400 Sarcelle à s. bleues		16 21	47 943	26 94	89 1058			
	1430 C. pilelet			2 12	1 1	3 13			
	1440 C. huppé.		28 12	10 51	24 148	62 141			
Région/Area		Nombre de C. Noir marqué.				Ratio L+HY/AHY			
TOTAL						1875 2889			
Outaouais		1506				5,58			
a) Effort de trappage : 1 équipe et 7 trappes Banding effort : 1 crew and 7 traps.						10,04			
b) E.tr. : 2 équipes et 14 trappes B.e : 2 crews and 14 traps.						4,42			
c) Thurso et/and Lochaber.						1,87			

Tableau/Table 5. Sommaire des canards marqués dans la région de la rivière des Outaouais (Coop.1982): rapport jeune/adulte

Summary of pre-season duck banding in the Outaouais river (Coop.1982).: ratio young/adult

AOU	Espèce/Species	L	HY	AHY	U	Total	Ratio HY+L/AHY
1320	Canard malard	40	3581	621	5	4247	5,83
1321	Hybride N x M	1	138	44		183	3,16
1330	C. noir	20	1257	229	2	1508	5,58
1350	C. chipeau		2			2	
1370	C. siffleur d'Am.		2			2	
1390	Sarcelle à a.vertes		34	12	1	47	2,83
1400	S. à a. bleues	44	1358	148	2	1552	8,80
1430	C. pilet		34	12		46	2,75
1440	C. huppé	125	509	222		856	2,85
1490	Petit Morillon		1			1	
<b>T O T A L :</b>		<b>230</b>	<b>6916</b>	<b>1288</b>	<b>10</b>	<b>8444</b>	<b>5,47</b>

Tableau/Table 6. Rapport jeune: adulte des captures de C. noir, 1982 au Québec.

Ratio young: adult of Black ducks banded, Quebec 1982.

Région/Area	Nombre de C. Noir marqué. Number of Blacks banded	Ratio L+HY/AHY
Outaouais	1506	5,58
Lac St-Jean	309	10,04
Gaspésie	385	4,42
Côte Nord	400	1,87

Tableau/Table 7. Effort de trappage dans la région de l'Outaouais, 1982.  
 Trapping intensity in the Outaouais region, 1982.

	Nombre de stations	Nombre de trappes (t)	Nombre de trappes/sem. (w)	Nombre de canards bagués (b)			
				Number of ducks banded			
				1320	1321	1330	TOTAL
Thurso-Lochaber Bays	2	14	96	1993	51	573	2617
Masson-Templeton-Angers.	3	12	72	736	20	239	995
Ottawa-Shirley's Bay	2	10	89	1491	112	690	2301
Quyon	1	6	30	24	0	6	30
Ile du-Grand-Calumet.	1	5	40	3	0	0	3
<b>T O T A L :</b>	<b>9</b>	<b>47</b>	<b>327</b>	<b>4247</b>	<b>183</b>	<b>1508</b>	<b>5946</b>

Tableau/Table 8. Indices\* du succès de trappage, Outaouais, 1982.  
 Index of trapping success, Outaouais, 1982.

	1320		1330		Total	
	b ÷ t	b ÷ t <sup>w</sup>	b ÷ t	b ÷ w	b ÷ t	b ÷ w
Thurso-Lochaber	142	21	41	6	187	27
Masson-Templeton-Angers.	61	10	20	3	83	14
Ottawa-Shirley's Bay	149	17	69	8	230	26
Others	2	tr	1	tr	3	tr

Indice/Index:  $b \div t$  et/and  $b \div w$  (cf. tableau/table 7.)

Tableau/Table 10. Fonds appliqués au programme de baguage 1982, Québec.  
Funding for 1982 waterfowl banding program, Québec.

Tableau/Table 9. Indice du taux des captures avant et après le 10 septembre.

		Rate of banding before and after September 10			
		avant/before	après/after	avant/ before	après/after
		10 sept.	10 sept.	10 sept.	10 sept.
Financement canadien/Canadian funding					
Programme d'emploi d'étudiants d'été	53,955 \$				
Summer students employment program					
P.E.E. orientés sur la carrière	8,956 \$				
Carrier oriented S.E.P.					
SCF / CWS					
		Malard et hybride		Noir	
		Mallard and hybrid		Black	
			6,855 \$		
		Sous-total	69,766 \$		
Contribution Coop/Coop Funding					
Fonds coopératifs	28,750				
Coop funding					
			99,516 \$		
Est d'Ottawa					
East of Ottawa	29,7	25,4	7,9	12,5	
Ottawa	13,5	24,1	7,4	7,8	
TOTAL	43,2	49,5	15,3	20,3	

Tableau/Table 11. Prix de revient des C. noir norouest: comparaison 1982-81.  
Cost for Black Duck banding: comparison 1982-81.

(Indice: nombre de captures / nombre de trappe-semaines.)

(Index : number of bands / number of trap-weeks.)

	Black D. banded (N)	Total ducks banded (N)	Costs (C)	Cost per Black D. $\frac{N \times C}{N}$
1981	777	2499	15000	6,04
1982	2603	10721	99516	9,35

Tableau/Table 10. Fonds appliqués au programme de baguage 1982, Québec.  
Funding for 1982 waterfowl banding program, Quebec.

		1982		Objectif	N.S.E.U.
PROJETS ET LOCALITES:		En-Auto			
Financement canadien/Canadian support		x	53,955 \$	400	
Programme d'emploi d'étudiants d'été		x		250	
Summer students employment program.		x		600	
P.E.E. orientés sur la carrière		x	8,956 \$	400	
Carrier oriented S.E.P.		x		400	
SCF / CWS		x	6,855 \$	400	
		x		300	
	Sous-total	x	69,766 \$	300	
Contribution Coop/Coop Funding		x		500	
Fonds coopératifs		x	28,750	400	
Coop funding		x		400	
	Total	x	99,516 \$	400	
5 - Lac St-Jean	(2 stations)	x		500	
7 - Maritimes	SCF	x		1000	
8 - Labrador	SCF	x		800	
9 - Rte Port-Cartier	exploration				
Gagnon.					
10 - Route Canapiscou	"				

Tableau/Table 11. Prix de revient des C. noir marqués: comparaison 1982-81  
Cost for Black Duck banding: comparison 1982-81

	C.Noir bagués Black D. banded (N)	Total canards bagués Total ducks banded (M)	Coûts Costs (C)	Coût par C.noir Cost per Black D. $\frac{N}{M} \times C$ N
1981	777	2499	15000	6,0\$
1982	2603	10721	99516	9,3\$

Tableau/Table 12.

Projet de baguage de C. Noir pour 1983  
 "Preseason banding"  
 Coop - SCF - Atlantic Flyway.

Figure 1. Sites de marquage de Canard noir proposés en 1983

PROJETS ET LOCALITES:		Eté-Automne		Objectif	N.S.E.O.
1 - Rivière des Outaouais	Thurso	x	x	400	
	Templeton	x		250	
	Shirley'sB.	x	x	600	
2 - Baie J. Beetz			x	400	
3 - Abitibi	Rouyn	x	x	400	
	Riv. Maine	x		300	
	Riv. Antoine	x		300	
4- Baie James	R. Roggan	x	x	500	
5 - I. Anticosti/Gaspé	Pte ouest		x	400	
	East Pt.		x	400	
6 - Lac St-Jean	(2 stations)	x		500	
7 - Maritimes	SCF	x		1000	Maritimes AR
8 - Labrador	SCF	x	x	800	AR
9 - Rte Port-Cartier-Gagnon.	exploration				
10 - Route Caniapiscau	"				

Tableau/Table 13.

Perspective de marquage de C.Noir en 1983

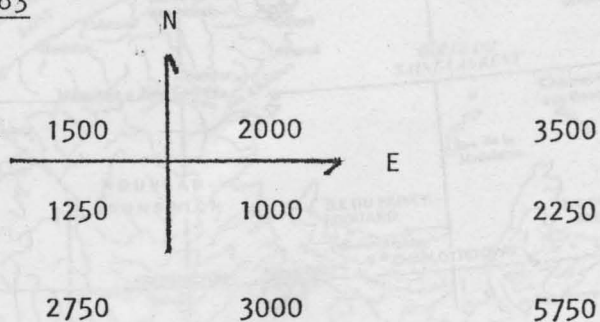




Figure 2. Sites de marquage de Canard noir proposés en 1983.  
 Black duck banding sites proposed for 1983.

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Torrington, Connecticut.

Technical Section.  
Feb. 27-Mar. 4/83.

Name

Date