Dog Banding Moulting Waterfowl

Snegamook Lake

Labrador, 1983

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Introduction

In 1980 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 dog banding crew 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 mid-50's, he used Labrador Retrievers to band flightless birds in the Chignecto area. 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 transit 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 1981-85 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 identitical 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 this data has changed greatly since 1982. A more accurate theory will be achieved when the dog banding data is combined with that 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 (9.6% 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 as a dog banding area.

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 dog 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
							628750-20970 -75034
						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 Dog 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 73346	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

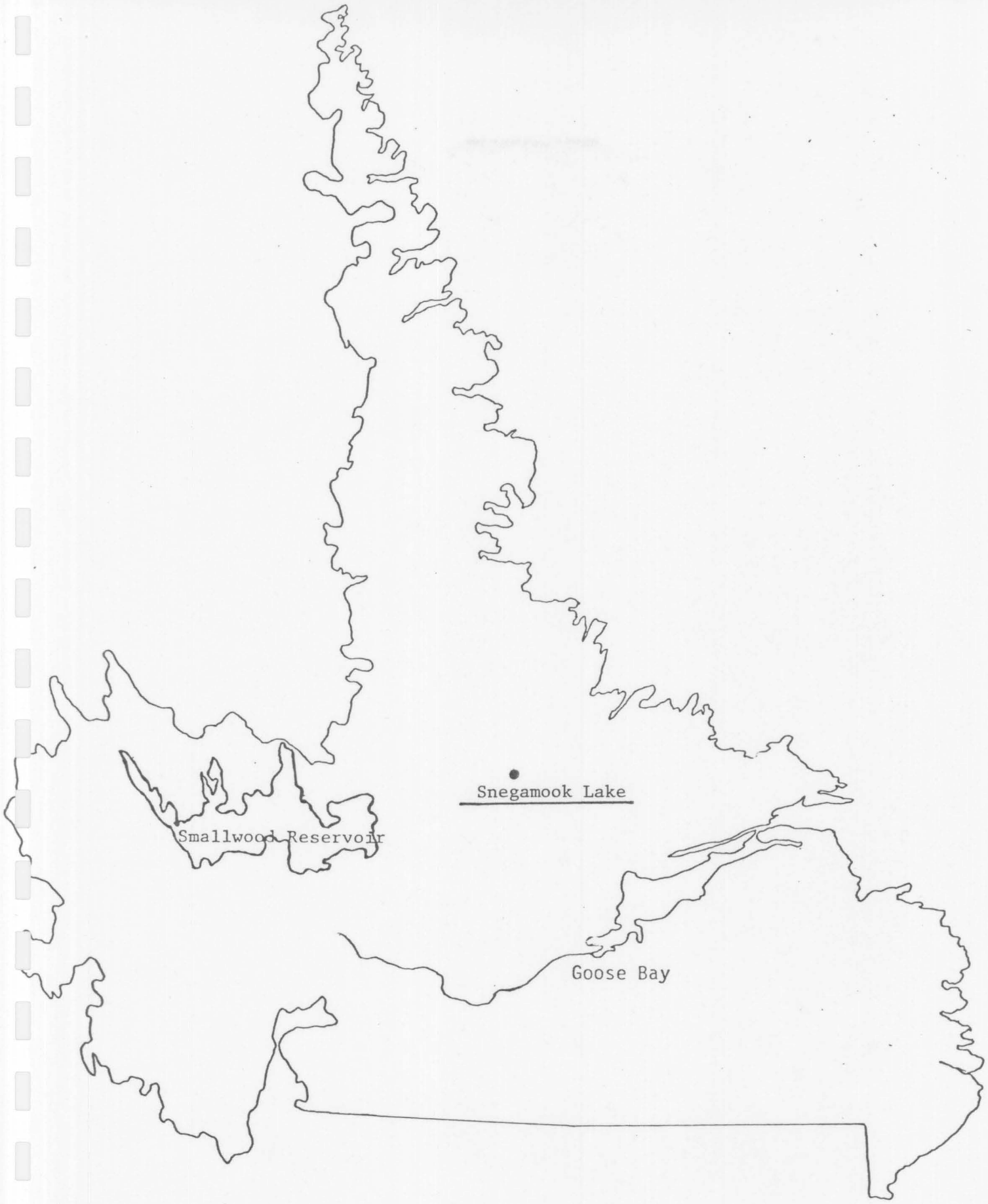


Figure 1. Dog banding location Labrador 1983.

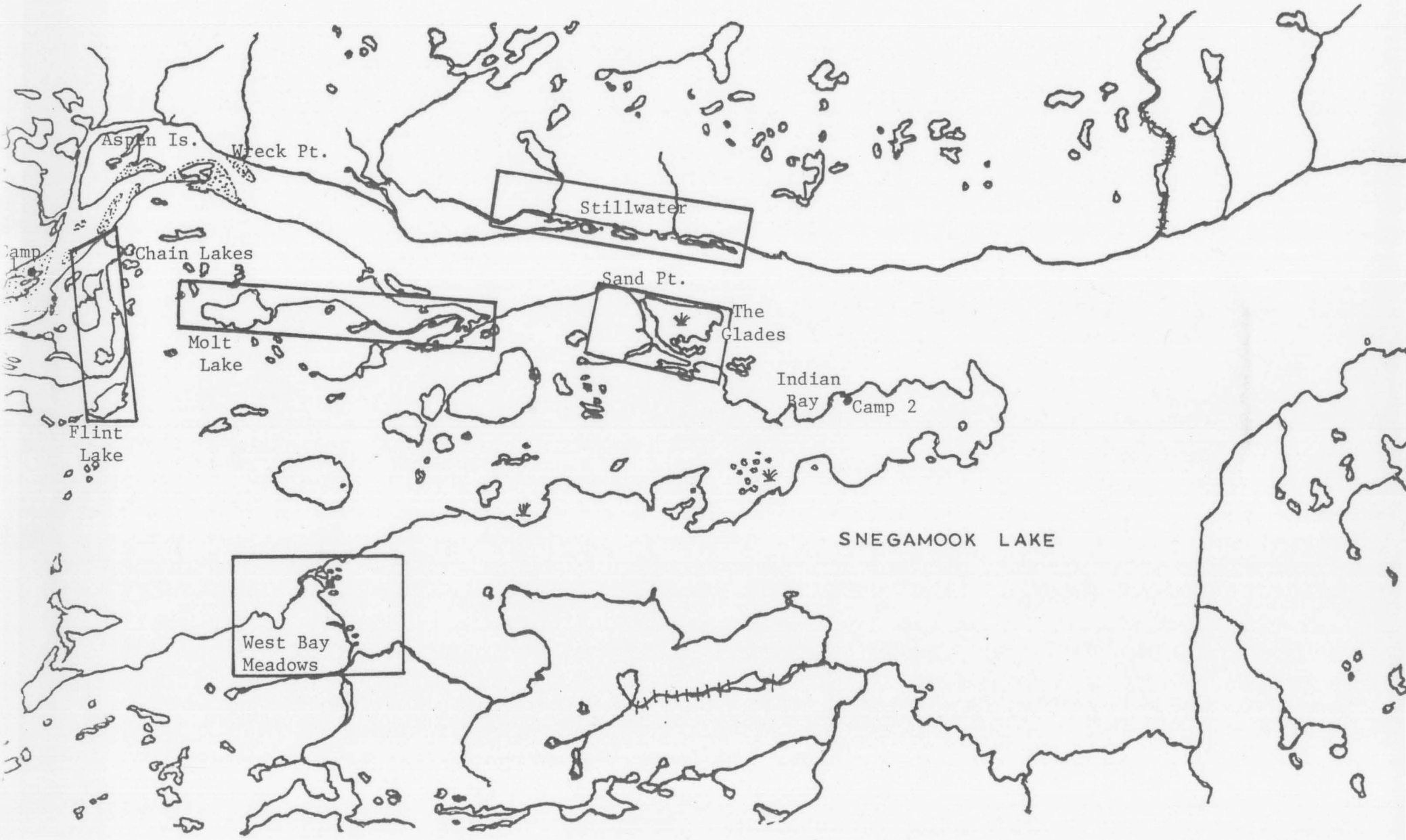


Figure 2. Snegamook Lake Banding Locations 1983.

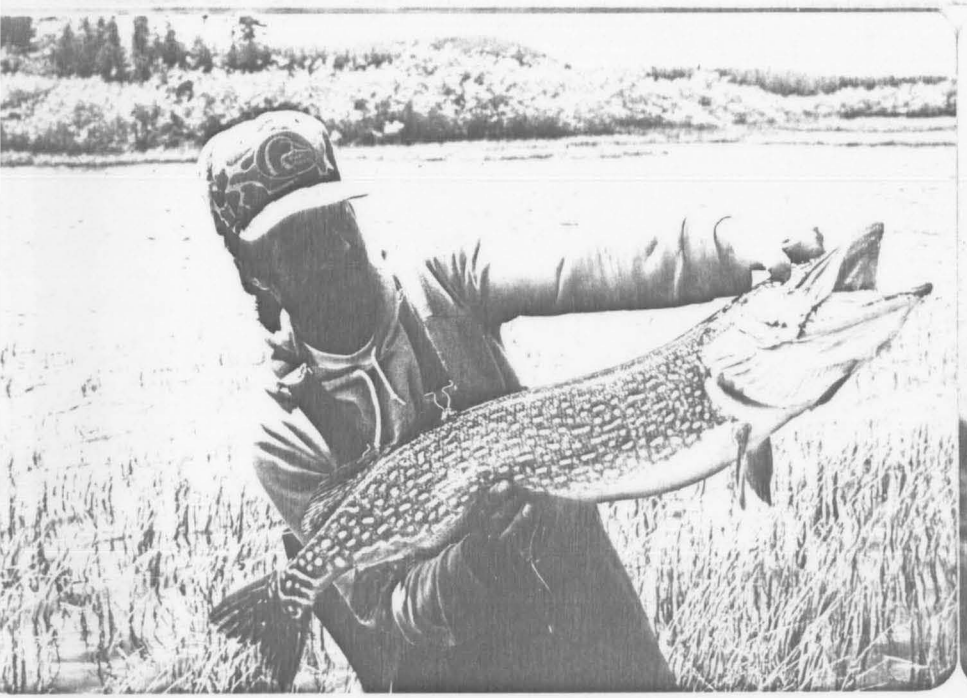
Appendix A. Brood Production, Snegamook Lake, 1983

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
"	Canadian 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	

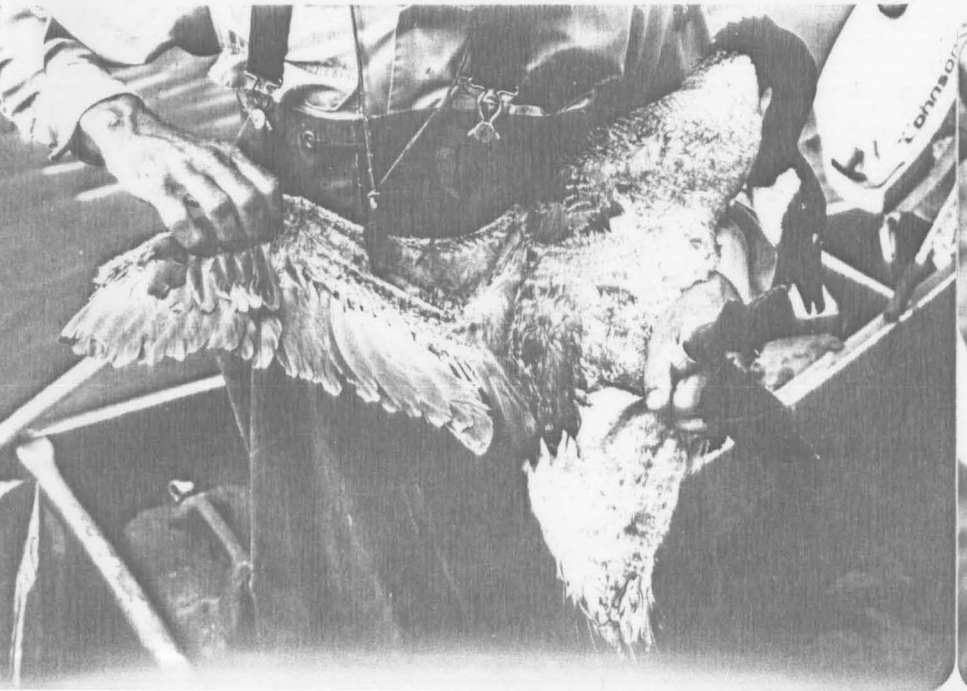
Appendix A. (continued) Additional Wildlife Observations

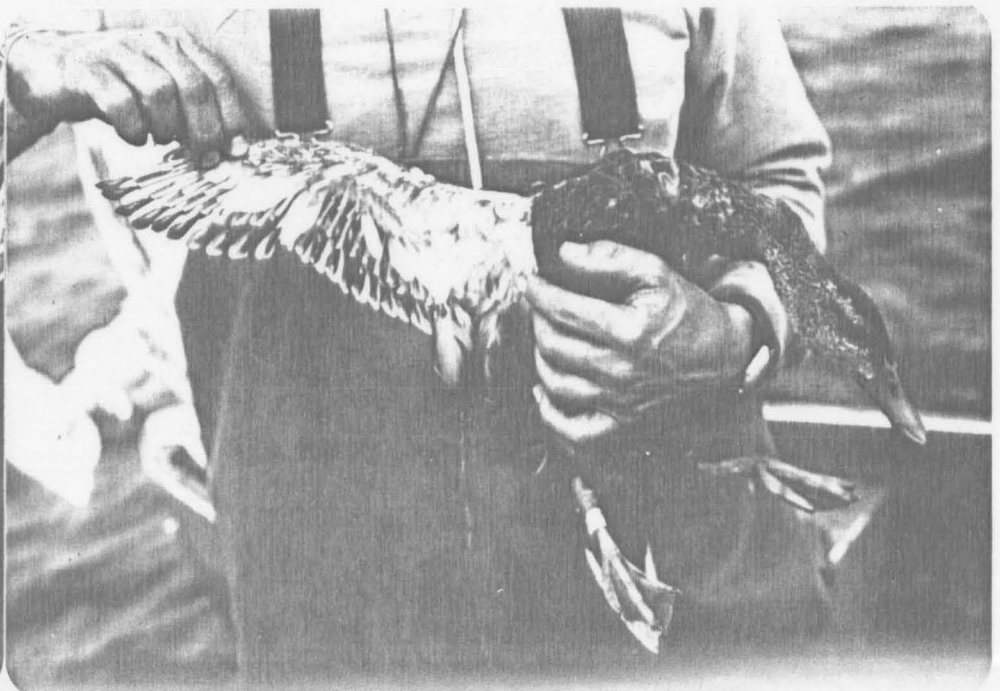
Date	Sighting		Comments
4 July	Black bear and cub		Flight to Snegamook
	Moose and calf		"
	150 Black Ducks	West Bay	
	30 Canada Geese		
	30 Black Ducks		
	60 Canada Geese		
	150 Black Ducks	The Glades	20 min. aerial survey
	5 Black Ducks	Malt Lake	
	35 Black Ducks	Flint Lake	
	25 Goldeneye		
	110 Black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

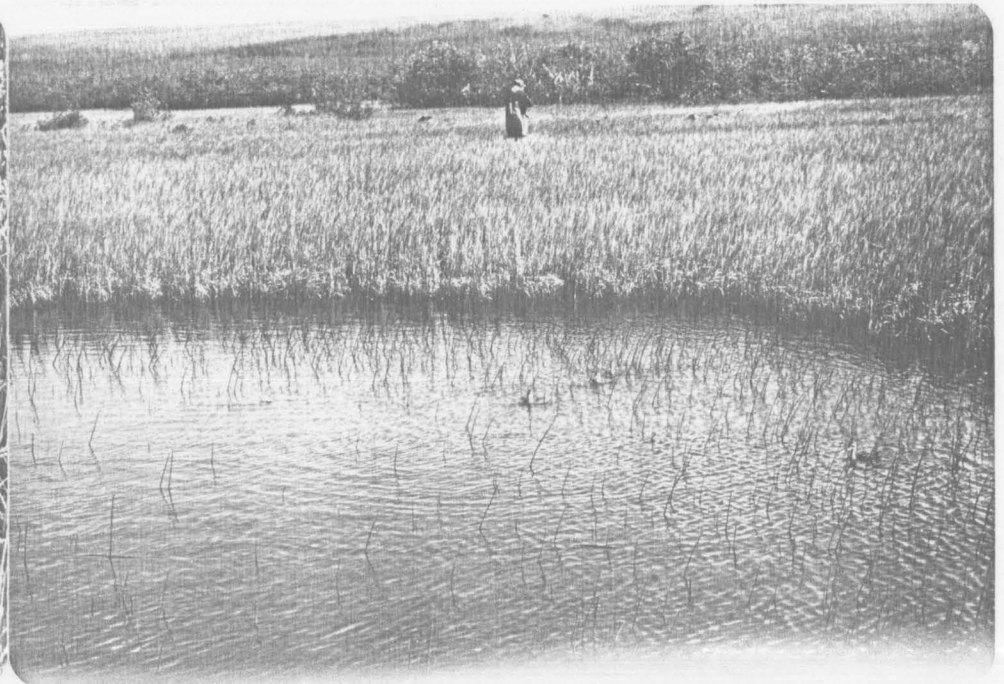


Fish, Flies and Flightless Waterfowl Frequent Snegamook Lake





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



SNEGAMOK 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 Snegamok 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 Snegamok 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 have 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.

Snegamok 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 Snegamok 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 ~~the~~ with Snegamok 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
1237-584	12	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