



DUCK AND GOOSE BANDING ON SELAWIK NATIONAL WILDLIFE
REFUGE, ALASKA, 1993

by
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Duck and Goose Banding on Selawik
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INTRODUCTION

Prompted by declining northern pintail (Anas acuta) numbers in North America and the need to monitor other dabbling species, the Selawik NWR (Refuge) embarked upon a trapping and banding effort.

During the 1992 waterfowl breeding population survey, the Refuge was second only to the Yukon Delta NWR in total number of pintail, yet had a higher density of all duck species than any other Alaskan stratum (Conant and Groves 1992). Mean-while white-fronted goose banding has continued on the Refuge in support of Migratory Bird Management's ongoing management effort.

Although little is known about the summer and winter distribution, age structure, and mortality of the Refuge's pintail population, continued trapping and banding of white-fronted geese further enhances that data which is currently on-hand. Further trapping and banding of both pintail and white-fronted geese provides baseline data and contributes towards building a sound waterfowl management program for the Refuge, and throughout Alaska.

METHODS

Northern pintail:

Two methods were employed to conduct the pintail aspect of the summers banding effort: 1) baited, swim-in traps; and 2) baited, rocket netting. Baited swim-in trapping occurred at two locations: Arctic Circle Lake (ACL) and Kotzebue, Alaska (Figure 1, Table 2). Methodologies followed those executed on the Yukon Delta NWR (Wege 1990) in previous years, with the exception of barley being used as bait. Swim-in trapping and baited, rocket-netting operations were conducted at the above sites from 15 - 28 August, and 1 - 20 September, respectively. The ACL trap site was established via watercraft and the traps were checked twice daily. The Kotzebue site was within the city limits and was accessed daily, and within walking distance of the Refuge headquarters.

Rocket netting activity was conducted only at Arctic Circle Lake (Figure 1, Table 2). Capture operations were conducted from 15 - 28 August. The net was placed on a large shoreline with a gentle slope, which was relatively vegetation free, and adjacent to a shallow waterbody.

Both rocket netting and swim-in trapping required that the trapping locations be pre-baited with barley. This occurred at the ACL site from 10 - 14 August. The ACL net location was re-baited on numerous occasions prior to net placement and firing.

White-fronted geese:

Drive trapping of white-fronted geese was conducted on 18 July, and was limited to 1 location within the Refuge boundaries (Figure 2, Table 3). The Refuge staff provide air support and post-capture advice to Migratory Bird Management staff during their capture effort. Methodologies employed were consistent with those which have become a common occurrence within Alaska: aircraft were used to drive the molting geese into leads and a catch pen.

RESULTS

Northern pintail:

A Total of 37 pintail were captured in baited, swim-in traps constructed of plastic coated wire (Table 1). Of this number 100% were young of the year, and females accounted for 60% of the local bird total. Trapping locations at ACL were not as susceptible to water level fluctuations, when compared to last years trapping location on the Kobuk River Delta -- winds would act upon the adjacent waters of Hotham Inlet causing the sloughs and lake waterbed to fluctuate by several feet.

A total of 9.9 hrs of flight time (PA-18 & C-206), at a cost of \$1,322.10 (including \$869.50 of chartered time), was expended for camp establishment & bait resupply. Pre-baiting and personnel changes were performed incidental to other Refuge conducted flights.

Attempted rocket net firing occurred on 7 occasions. The first attempt caught no birds due to equipment malfunction, one charge had apparently become damp and failed to ignite. The remaining attempts yielded a capture of 94 pintail (Table 1). Fifty-two percent of the total number of pintail captured with the use of the rocket net were females, while hatch year birds comprised 100% of the total.

In addition to the above outlined expenses, 14.7 hrs of PA-18 flight-time (cost: \$1,087.80) time was expended conducting reconnaissance flights to locate molting pintail and white-fronted geese. at locations which they were found during the previous years effort. The aerial reconnaissances were preformed in areas which several thousand molting pintail and white-fronted geese were found last season. No large groups of molting white-fronted geese were located. Only small aggregations, totaling approximately 300 geese were found. Likewise, large flocks of pintail were not a regular occurrence on the Refuge this season. A total of 2-3 larger flocks, containing 400-500 birds (total) were observed.

White-fronted geese:

MBM's goose banding activity took place on 18 July. One drive attempt caught 64 greater white-fronted geese (Figure 2, Table 3). The lack of significant molting flocks, the fact that a majority of

the geese were able to fly (post-molt), and other factors severely limited the effectiveness of banding and color marking efforts. Once molting geese were located, six days elapsed before additional aircraft could make it to Kotzebue to conduct the drive attempt.

Of those birds which were captured and handled, blood samples were taken from ten, after-second year females (Table 4).

A total of 6.6 hrs of PA-18 time (cost: \$488.40) were expended in the Refuge aircraft, to assist MBM with their white-front banding effort. This elapsed time consisted of the Refuge biologist and seasonal pilot, providing air support.

The total Refuge's, aircraft associated costs for both the pintail and goose banding effort came to \$2,898.30 (31.2 hrs of PA-18 and C-206 time). This sum does not reflect the additional expense for grain, seasonal employee salaries, field subsistence, and equipment expenses.

DISCUSSION

Northern pintail:

In previous years, Refuge staff believed that sufficient pintail numbers did not exist on the refuge to warrant trapping and banding activities. Adequate numbers still existed at ACL to justify trapping and banding activities.

However, the window of opportunity for their capture was much shorter than last season. On August 7th, an over flight to check the status of pintail numbers at ACL, revealed 200-300 ducks on the waterbody. When pre-baiting of ACL first occurred (10 August) this number had grown to a couple of thousand dabblers. Yet, by 20 August, this number had once again decreased to approximately 200 birds (of which, 50% of these were captured and banded).

This decrease in observed pintail and other dabbler species may be explained by several different factors. This spring was very mild compared to last year. This may have effected our capture operations in two different ways: 1) this may have lead to a higher production, hence, a lower proportion of failed breeders utilizing the lake; and/or 2) the lack of spring storms, which usually block the mouth of a slough which drains the lake. This resulted in lower than normal water levels, which provided for easier and safer access, yet resulted in less productive habitat. Tidal fluctuations caused a higher salinity content throughout the summer.

The lack of trapping and netting activity on the Refuge proper, resulted in the staff not being able to make a determination as to whether ACL was being used as a staging area, as hypothesized last season (see Peltola 1992). Another remote possibility is that birds congregated in another area. Although, in the hours flown on

reconnaissance missions and other incidental refuge flights, no major congregations were found.

As one can see from the capture data (see Results and Table 1), the majority of this years total were hatch year and female pintail. ACL still provides for a location which is logistically feasible for operation out of the headquarters and possesses the potential for a adequate capture of dabblers. If funding allows for a capture attempt next season, more attention should be focused on this location. Increased pre-baiting efforts and allotment of seasonal staff-time should be centered on ACL.

White-fronted geese:

Final capture and banding totals were lower than anticipated. A very mild spring more than likely resulted in fewer fall breeding birds within the population. This would be consistent with the similar occurrence within the pintail population. Other factors may have contributed to the low capture total.

Literature Cited

Conant, B. and D.J. Groves. 1992. Alaska - Yukon Waterfowl breeding population survey. Unpubl. rept. U.S. Fish & Wildlife Serv., Juneau, AK. 25pp.

Peltola, G., Jr. 1992. Duck and goose banding on Selawik National Wildlife Refuge, Alaska, 1992. Unpubl. rept. U.S. Fish & Wildlife Servc., Kotzebue, AK. 9 pp.

Wege, M.L. 1990. Pre-season duck banding on Yukon Delta NWR, Alaska, 1990. Unpubl. rept. U.S. Fish & Wildlife Servc., Bethel, AK. 4pp.

Table 1. Northern pintail and American green-winged teal banded on Selawik National Wildlife Refuge, Alaska, 1993.

Date	Northern Pintail					Am. Green-Winged Teal					Total
	AHY		HY		Total	AHY		HY		Total	
	Male	Female	Male	Female		Male	Female	Male	Female		
<u>Rocket Netting:</u>											
08/25	0	0	1	0		0	0	0	0		
08/26	0	0	5	18		0	0	0	1		
08/27	0	0	28	15		1	0	0	1		
08/28	0	0	13	14		0	0	0	0		
Subtotal	0	0	47	47	94	1	0	0	2	3	99
<u>Swim-In Trapping:</u>											
08/21	0	0	0	2		0	0	0	0		
08/22	0	0	2	4		0	0	0	0		
08/23	0	0	4	6		0	0	0	0		
08/25	0	0	6	5		0	0	0	0		
08/26	0	0	3	3		0	0	0	0		
09/06	0	0	1	0		0	0	0	0		
09/11	0	0	0	1		0	0	0	0		
09/18	0	0	0	0		0	0	1	0		
Subtotal	0	0	16	21	35	0	0	1	0	1	36
Total	0	0	63	68	131	1	0	1	2	4	135

Table 2. Northern pintail and other dabbling capture and banding
banding locations, Selawik National Wildlife Refuge, Alaska, 1992.

<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>
Arctic Circle Lake	66° 27.85'	161° 51.75'

Table 3. White-fronted geese captured and banded on Selawik National Wildlife Refuge, Alaska, by Migratory Bird Management, 1993.

Color Marker Code	Age-Sex	Date	Location
5J0 ^a	SY-M	07-18-93	1 ^b
5J1	ASY-M	07-18-93	1
5J2	ASY-M	07-18-93	1
5J3	ASY-M	07-18-93	1
5J4	ASY-M	07-18-93	1
5J5	ASY-M	07-18-93	1
5J6 ^c	ASY-F	07-18-93	1
5J7	ASY-M	07-18-93	1
5J8	SY-M	07-18-93	1
5J9	ASY-M	07-18-93	1
5K0	ASY-M	07-18-93	1
5K1	ASY-F	07-18-93	1
5K2	ASY-F	07-18-93	1
5K3	ASY-F	07-18-93	1
5K4	ASY-M	07-18-93	1
5K7 ^c	ASY-F	07-18-93	1
5K6	ASY-F	07-18-93	1
5K5 ^c	ASY-F	07-18-93	1
5K8	ASY-F	07-18-93	1
5K9	ASY-M	07-18-93	1
5M0	ASY-M	07-18-93	1
5M1	ASY-F	07-18-93	1
5M2	ASY-M	07-18-93	1
5M3	ASY-M	07-18-93	1
5M4	ASY-F	07-18-93	1
5M5	ASY-F	07-18-93	1
5M6	ASY-M	07-18-93	1
5M7	ASY-M	07-18-93	1
5M8 ^c	ASY-F	07-18-93	1
5M9	ASY-F	07-18-93	1
5P0	ASY-M	07-18-93	1
5P1	ASY-F	07-18-93	1
5P2	ASY-M	07-18-93	1
5P3	ASY-F	07-18-93	1
5P4	ASY-M	07-18-93	1
5P5	ASY-M	07-18-93	1
5P6 ^c	ASY-F	07-18-93	1
5P7 ^c	ASY-F	07-18-93	1
5P8	ASY-M	07-18-93	1
5P9 ^c	ASY-F	07-18-93	1

^a All neck collars were red, with white alpha-numeric codes.

^b Location was between Selawik and Inland Lakes, in the 10 minute block of 66° 20', 160° 00'.

^c Blood sample taken.

Table 3 (Cont.) White-fronted geese captured and banded on Selawik National Wildlife Refuge, Alaska, by Migratory Bird Management, 1993.

Color Marker Code	Age-Sex	Date	Location
5R0 ^a	SY-F	07-18-93	1 ^b
5R1	SY-M	07-18-93	1
5R2	SY-M	07-18-93	1
5R3	ASY-M	07-18-93	1
5R4	ASY-F	07-18-93	1
5R5	ASY-F	07-18-93	1
5R6	ASY-M	07-18-93	1
5R7 ^c	ASY-F	07-18-93	1
5R8	ASY-F	07-18-93	1
5R9 ^c	ASY-F	07-18-93	1
5T0 ^c	ASY-F	07-18-93	1
5T1	ASY-M	07-18-93	1
5T2	ASY-M	07-18-93	1
5T3	ASY-F	07-18-93	1
5T4	ASY-F	07-18-93	1
5T5	ASY-M	07-18-93	1
5T6	ASY-F	07-18-93	1
5T7	ASY-F	07-18-93	1
5T8	ASY-M	07-18-93	1
5T9	ASY-M	07-18-93	1
5U0	SY-F	07-18-93	1
5U1	ASY-F	07-18-93	1
5U2	ASY-M	07-18-93	1
5U3	ASY-F	07-18-93	1

^a All neck collars were red, with white alpha-numeric codes.

^b Location was between Selawik and Inland Lakes, in the 10 minute block of 66° 20', 160° 00'.

^c Blood sample taken.

Table 4. Data recorded for white-fronted geese captured on Selawik National Wildlife Refuge, 1993, from which blood samples were taken.

Age-class & Sex	USFWS Band 4007-	Collar Code	Weight (Kg)	Culmen Length (mm)	Head Length (mm)	Bill Width (mm)	T. Tarsus Length (mm)	Brood Patch?	9* Primary (mm)
ASY-F	39207	5J6	01.5	50.9	106.4	23.3	65.4	NO	76.8
ASY-F	39218	5K5	01.9	52.0	106.8	22.7	73.7	NO	167.2
ASY-F	39216	5K7	01.7	50.4	102.1	24.0	67.4	NO	153.7
ASY-F	39229	5M8	02.0	48.8	103.6	24.6	70.1	NO	152.2
ASY-F	39237	5O6	01.9	49.2	101.6	24.6	70.2	NO	170.1
ASY-F	39238	5P7	02.2	53.7	108.5	24.0	70.9	NO	168.8
ASY-F	39240	5P9	01.8	49.1	101.5	24.2	74.1	NO	174.0
ASY-F	39248	5R7	02.0	51.3	102.7	24.5	70.4	NO	134.4
ASY-F	39250	5R9	02.0	48.4	101.9	24.5	66.3	NO	141.9
ASY-F	39251	5T0	01.9	50.7	103.0	23.1	67.7	NO	166.7

Figure 1. Locations for the Selawik National Wildlife Refuge, pintail banding banding efforts, 1993.

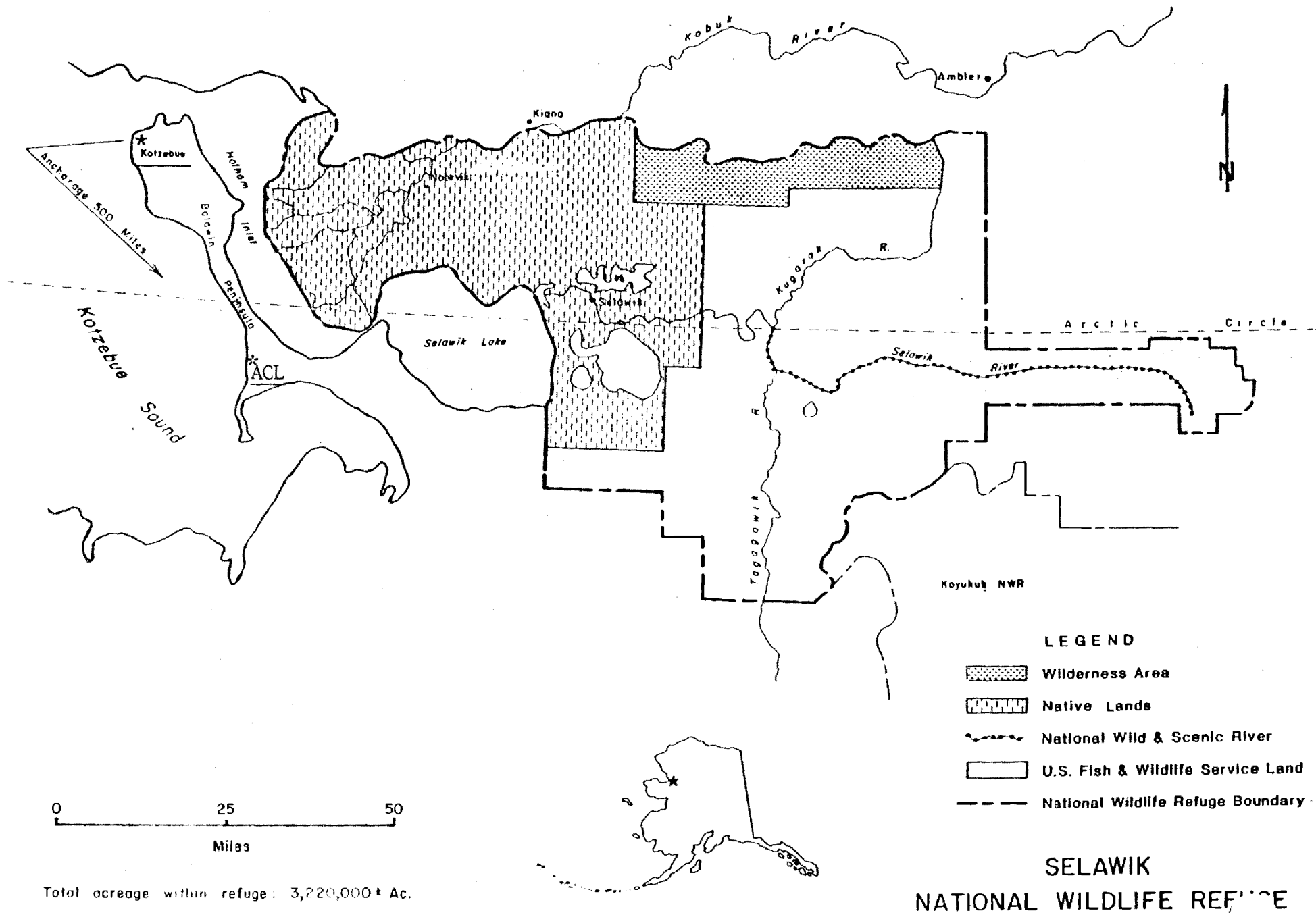


Figure 2. Location for Migratory Bird Management's white-fronted goose banding effort on the Selawik National Wildlife Refuge, 1993.

