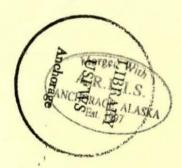


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CAPTURING, BANDING, AND TRANSPLANTING
OF
ALEUTIAN CANADA GEESE, BULDIR AND AGATTU
ISLANDS, ALASKA 1982,



Fred Deines, Don Dragoo
Tom Early, and Leslie Slater



Restrictions: Internal Document, not for publication

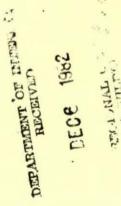
Key Words: Aleutian Canada Geese

Endangered Species
Aleutian Islands
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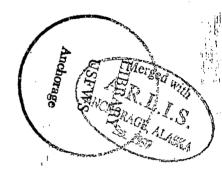
Aleutian Islands Unit
Alaska Maritime National Wildlife Refuge
P. O. Box 5251
FPO Seattle, WA 98791



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TITLE Capture, Banding and Transplant of Ale	utian Canada	DATE
Geese, Buldir and Agattu Islands, Alaska 198	2	I.D. NO.
AUTHOR(S) Fred Deines, Don Dragoo, Tom Early, Leslie Slater	CITATION	
OBJECTIVE Capture 100 Aleutian Canada geese efforts to re-establish a nesting population	and transplant to on Agattu Island.	Agattu Island to continue
METHOD OF STUDY Geese were captured on Buldi edge of the lowland tall plant association wo offer succulent food. When the geese were consists a numbered colored plastic leg band and after capture, the birds were transported to and released at Goose Creek in Aga Cove.  MAIN FINDINGS A total of 150 geese were capt	here tall plants of aptured, they were 7B FWS leg band. Agattu via the cha	offer cover and short plants e sexed, aged and banded within 24 to 72 hours arter vessel "Sea Spray"
banded and released on Buldir, three died in release on Agattu. This represents a 3% m transplanted. A total of 138 Aleutian Canad successfully transplanted and released on Ag	captivity on Bulc ortality factor fo a Geese; 109 gosl:	dir and two died after or the birds captured and
CONCLUSIONS The capture and transplant of wil is the most efficient method to reestablish islands cleared of foxes where they historic foxes near the turn of the century.	nesting population	ns of this subspecies on
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PROGRAM		•

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#### EXPEDITION MEMBERS

	Biologist, Endangered Species Office, Anchorage, AK Refuge Biologist, Aleutian Islands Unit, AMNWR, Adak, AK
Don Dragoo	Volunteer Biologist, Adak, AK
Tom Early	Assistant Manager, Alaska Maritime NWR, Homer, AK
Doug Forsell	Biologist, Wildlife Research, Anchorage, AK
Van Klett	Assistant Manager, AIU, AMNWR, Adak, AK
Natasha Kline	Volunteer Biologist, Adak, AK
Forrest Lee	Biologist, Northern Prairie Wildlife Research Center Jamestown, ND
Konrad Schmidt	Volunteer Biologist, Adak, AK
Gunnar Forseman	Captain of Charter Vessel "Sea Spray", Seattle, WA Cook of Charter Vessel "Sea Spray", Seattle, WA Engineer of Charter Vessel "Sea Spray", Seattle, WA

#### SPECIAL THANKS

Special appreciation must be extended to Don Dragoo, Natasha Kline, and Konrad Schmidt for their help in the 1982 Aleutian Goose capture, banding and transplant efforts. Their enthusiastic and professional participation as volunteer biologists helped complete the efforts in a timely manner under difficult working conditions. Thanks must also be given to the "Sea Spray" crew members for their assistance in our goose capture and transplant efforts.

#### INTRODUCTION

The Aleutian Islands Unit of the Alaska Maritime National Wildlife Refuge is attempting to reestablish the endangered Aleutian Canada goose to historic nesting areas on fox-free islands in the western portion of the Aleutian Chain (Figure 1.). To accomplish this goal, hand-reared birds have been transplanted to some of these islands in hopes that they would reestablish a nesting population. This was not successful, because the birds had no knowledge of the migration route to the California wintering grounds, and they subsequently perished. The next step was to release a combination of hand-reared birds, and transplanted wild birds from Buldir It was hoped that the experienced wild adults transplanted from Buldir would serve as "guides" for their goslings transplanted with them and the hand-reared birds. The young of the year would then return to the island at which they first became capable of flight, and establish a breeding population. This combination of hand-reared and wild geese was used on Agattu in 1978, 1979, 1980 and again this year. Although many of the wild qoslings returned to the island of their release, again there was little success with the hand-reared birds. Therefore, 1982 was the last year that attempts will be made to include hand-reared birds in the transplant program.

The goal for the 1982 season was to capture and transplant 100 geese from Buldir to Agattu. Every effort was made to keep the family groups together although this was not possible in all cases.

#### METHODS AND MATERIALS

Work was conducted on Buldir and Agattu Islands from 28 July to 6 August 1982. All personnel participated in some or all of the capture efforts of wild Aleutian Canada geese on Buldir Island this season, with the exception of Forrest Lee. Forrest arrived via chartered aircraft on 5 August, and was primarily involved with the transport and release of hand-reared geese on Agattu. The geese captured on Buldir were transported to Agattu via the charter vessel "Sea Spray". Messrs Amaral, Blenkers, Deines, Early, Forsell, Forseman, Klett and Lee all participated on one or more goose releases on Agattu on 31 July, 3 August, and 5 August. Birds were transported and released as soon as possible to reduce stress caused by handling and to increase their chances for survival.

#### A. SEARCHING FOR AND CAPTURING MOLTING GEESE

Most methods used when searching for molting geese were based on information obtained from past work on Buldir, Byrd and Woolington (1978), indicated that most family groups could be found near the upper edge of the Lowland Tall Plant Association and the lower edge of the Upland Short Plant Association where tall plants offer cover and the short plants offer succulent foods.

When searching for geese, only one person usually walked in the short plant community and the others walked at a slightly lower elevation in the tall plant community. Depending upon vegetation and topography, personnel usually walked abreast about 10 to 30 meters apart. (Early and Henry 1979)

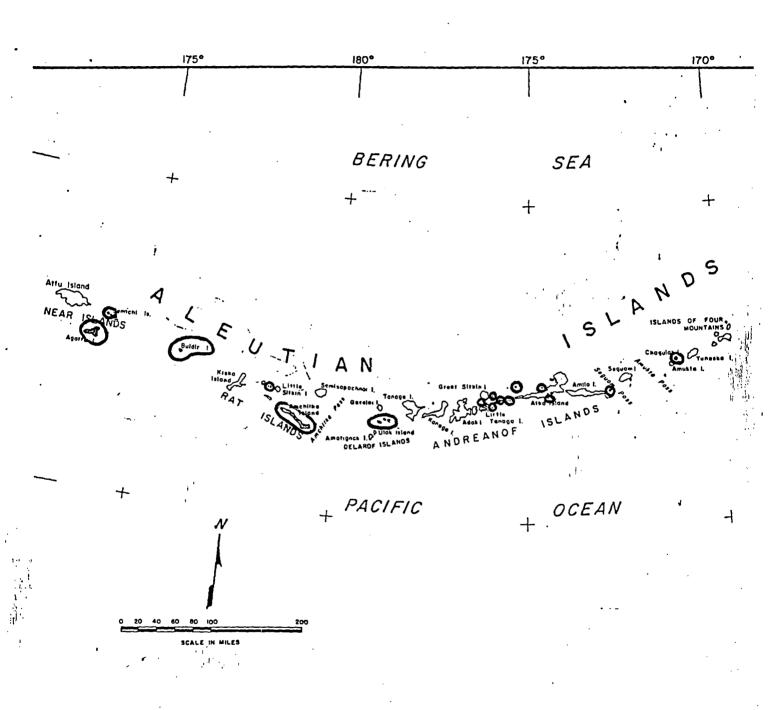


Figure 1. MAP OF THE WESTERN AND CENTRAL ALEUTIAN ISLANDS

black circles

Note-red indicate fox-free islands

Most geese were encountered in the tall plant community near the upper edge to about 200 meters downhill. A 1 meter  $x \stackrel{1}{\sim}$  meter long handled dip net was used at times to aid in catching geese. The net was most efficient when working in faily even terrain and moderately short vegetation (Early and Henry 1979).

Usually, when one bird was sighted, others could be located in the same area. This occurred with non-breeders as well as family groups of geese.

It also became readily apparent that fresh goose droppings and clipped vegetation indicated geese were in the area. If no such sign was seen, very few, if any, geese were ever found (Early and Henry 1979).

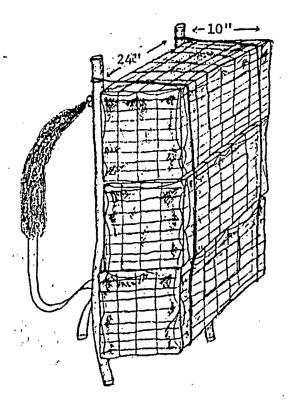
#### B. HANDLING OF THE GEESE

Several years in capturing and transplanting geese brought about the following handling procedures which appears to place less stress on the geese and reduces injuries to birds prior to release. When a goose was captured its age and sex was determined, and was banded with a size 7B FWS leg band. The date and location of capture was recorded in a field log, along with the other information. It was then placed in a small burlap bag with one corner clipped to allow the bird's head and neck to extend outside of the bag. These bags were pre-cut to snugly fit the geese and help prevent injury. The end of the bag was then tied with a short piece of rope to limit the bird's movement.

The bagged geese were then placed in a burlap-lined, welded wire cage for transport to Main Camp. Three wire cages were attached to a backpack frame. Each compartment could hold 3-5 adult geese or 4-6 goslings (Figure 2). Unnecessary walking with birds in the pack was avoided. Usually if one particular area was worked for a time the packs were removed while crew members chased other geese. Hiking back to camp was attempted without unnecessary delays or rough treatment to the birds.

Upon return to the Main Camp at North Marsh the geese were taken out of the backpack cages and burlap bags and released into a fenced enclosure. The fenced enclosure was approximately 5 X 30 meters in size, and built of poultry wire, hog rings and metal fence posts. It also had a roof made of poultry wire and burlap was attached to the sides, to make a visual barrier for the birds. A small plywood table was put at the far end of the pen to afford the geese some protection from the elements. The area within the enclosure provided natural vegetative food and cover. Water and commercial goose feed were also provided. As an added precaution, the captured geese were tube feed about 20 cc of the mixture described in Table 1.

Figure 2. ALEUTIAN CANADA GOOSE TRANSPORT SYSTEM



Note: Cages constructed of one-half inch wire mesh lined with burlap, and attached to a standard aluminum backpack frame.

Table 1. Goose Tubing Solution

Ingredient	Small mix (1 qt.)	Large mix (1 gal.)
ProSobee	1-13 oz. can	4-13 oz. cans
Electrolyte Powder	.75 tablespoon	3 tablespoons
Shaklee Protein Power	2 tablespoons	8 tablespoons
Nutrical	2.5 tablespoons	10 tablespoons
Water	sufficient to make l qt. of solution	sufficient to make 1 gal. of solution

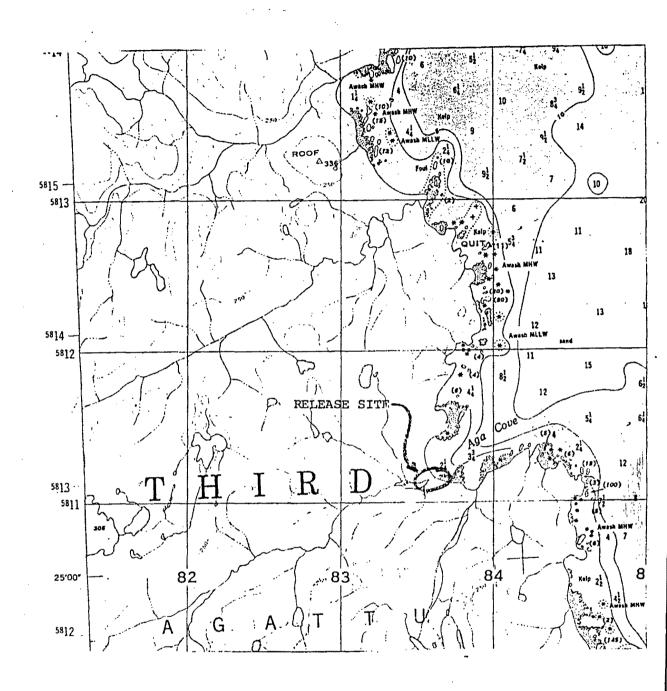


Figure 3. 1982 GOOSE RELEASE SITE AT AGATTU ISLAND

#### RESULTS AND DISCUSSION

A total of 150 Aleutian Canada geese were captured on Buldir Island (Table 2). Of the 150 birds, seven were banded and released on Buldir, three died in captivity on Buldir, and two died after release on Agattu. This represents a three percent mortality rate for the 150 birds handled. The seven geese were released on Buldir for the following the reasons:

1) one adult bird escaped from the holding pen, 2) one adult bird was banded while still incubating a nest, and 3) five goslings were banded and released due to their young age and our inability to capture their parents. A total of 140 geese were released on Agattu of which 138 survived. As shown in Table 2, there were 109 goslings and 29 adults released. Again it should be noted that not all these birds represent family groups, although every attempt was made to capture entire families.

The Bean Goose Lake area was the most productive capture location, providing 1.6 birds per staff hour (Figure 4). It should be noted however, that it was also the closest to camp. The other areas took two to four hours of walking time which somewhat inflated the man hours of capture effort. The overall average was 0.75 geese per staff hour. In reality, the Dip Camp and Dry Lake areas were the most fruitful for capturing geese. The least successful area was the Upper Glissade and Petrel Valley areas which involved a search of 12 staff hours and produced no geese. The lack of success in these areas was due to bad weather (fog) and the fact that the Upper Glissade Valley had been searched before for geese. The birds may have departed the area or at least become more wary. Approximately 100 geese were seen on Kittiwake Lake 29 July and several were heard on the lake during the second search of the area but time, weather, and previous bad experiences in catching these geese prevented a major capture effort.

Even though nearly all the geese encountered were incapable of flight, they were still able to move quite rapidly over the rough Buldir terrain. The geese were often able to outrun us in open areas, especially if they were headed uphill. On several occasions the capture crew was spotted by wary geesa before we saw them. The only view of these birds which subsequently followed was one of them proceeding out of the area with all expediency. They were impossible to capture with such a head start. Our efforts to circle around ahead of them and capture them proved fruitless. Our capture efforts were most successful when we searched along the zone where the tall vegetation (Elymys-Umbell) gave way to the short vegetation (mossy-Willow).

Although every effort was made to minimize the impact of capture and handling on the geese, some still showed signs of partial stress paralysis when they were released into the holding pens on Buldir or Agattu. Generally, however, the affected birds, seemed to have recovered within about 24 hours. A few birds sustained some minor abrasion injuries during the handling and transport. These injuries were treated by spraying the injured area with antiseptic. In general, the birds received less injuries and showed less stress related paralysis than during previous years' work.

Of the geese capture on Buldir and released on Agattu, 89 individuals were released on Agattu within 24 hours after capture, 31 within 48 hours and 20 within 72 hours.

A selection of photos of this season's capture, banding and transplant effort is contained in Appendix B.

TABLE 2

RESULTS OF CAPTURE, BANDING AND TRANSPLANT EFFORTS ON ALEUTIAN CANADA GEESE FROM BULDIR ISLAND TO

AGATTU ISLAND, 1982

							*								
Capture Date	*Capture Location	Staff Hours	# Of 0		Captured anded:	# Of Ge And Re		anded -Buldir	Mort Buldir	ality Aga	ttu	# Geese Transp.		essfully gattu	
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<sup>\*</sup> A = Upper Glissade Valley

D = Dip Camp

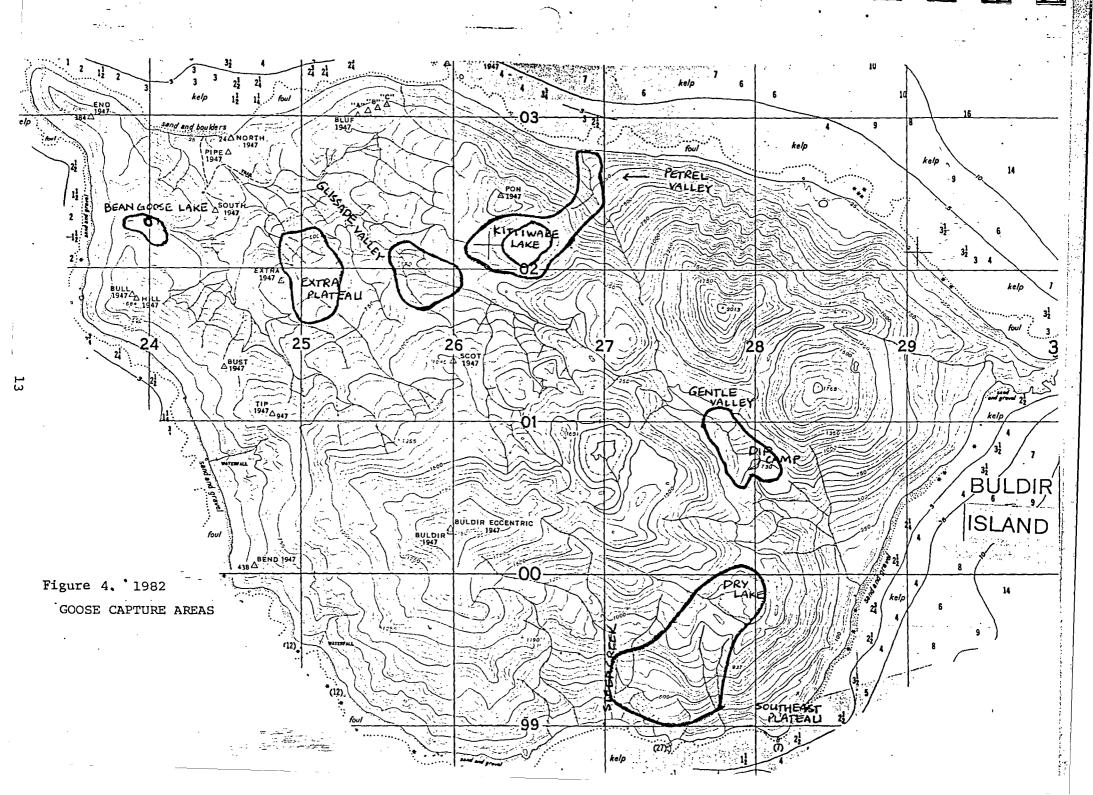
E = Dry Lake

F = Upper Glissade Valley, Petrel Valley and Kittiwake Lake

\*\* Includes three birds previously banded

B = Bean Goose Lake

C = Extra Plateau



#### RECOMMENDATIONS

- 1. The minimum number of goose capture personnel should be six; any fewer is not as efficient. Six to eight people should be considered optimal.
- 2. The use of nets should be viewed as optional because their efficiency varies with the terrain.
- 3. The optimum number of backpacks required to carry geese is six.
- 4. The goose cages and pack frames should be left on Buldir.
- 5. Investigate either finishing the opening on the burlap goose-carrying bags or buying some commercially made product if available.
- 6. Attach FWS metal bands in the field and the colored plastic bands just prior to transport.
- 8. Tube feed the geese daily beginning one day after capture including the day of transport and just prior to their release. Geese suffering from paralytic shock should be tube fed when captured.
- 9. Remove unnecessary fencing from the Goose Creek area at Agattu and use the materials to repair and/or modify the small holding pen. This would remove all barriers in the Goose Creek area. Any excess material should be stored at the cabin site and any unwanted material removed from the island.
- 10. When the holding pens on Buldir and Agattu are not in use, two ends should be left open to prevent them becoming a barrier to birds.

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## APPENDIX A

1982 BANDING SCHEDULES FOR WILD AND HAND-REARED ALEUTIAN
CANADA GEESE RELEASED ON AGATTU ISLAND, ALASKA

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U.S. bandings to: Bird Banding Laboratory, Office of Migratory Bird Management, Laurel, Md. 20811. O.M.B. No. 42-R1435.
Consider bandings to: Canadian Wildlife Service, Environmental Management Service, Department of the Environment, Ottawa, Ontario. KIA OE7. Approval expires May 31, 1981.

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Consider bandings to: Canadian Wildlife Service, Environmental Management Service, Department of the Environment, Ottawa, Ontario, KIA OE7, Approval expires May 31, 1981.

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Consider bandings to: Canadlan Wildlife Service, Environmental Management Service, Department of the Environment, Ottawa, Ontario, Ca KIA OE7. Approval expires May 31, 1981.

### APPENDIX B

SELECTION OF PHOTOS SHOWING THE 1982 CAPTURE, BANDING AND TRANSPLANT EFFORTS OF ALEUTIAN CANADA GEESE

