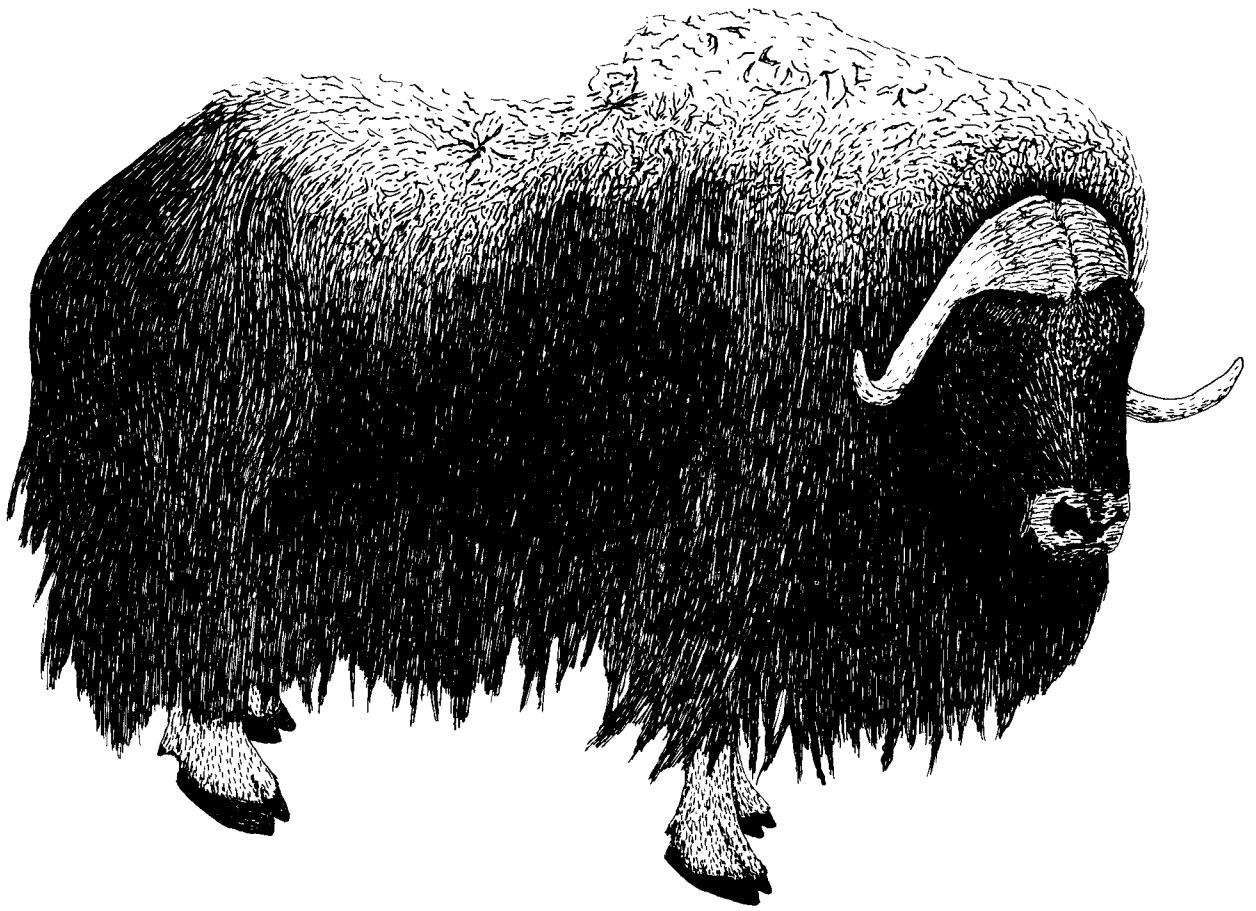
NUNIVAK
NATIONAL WILDLIFE REFUGE

1975 US-USSR MUSKOX TRANSPLANT



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Introduction

An introduction of Alaskan muskox to Russia became possible in 1972 following the signing of the Environmental Protection Agreement between the two countries, containing provisions for the exchange of biological expertise and wildlife species. Muskox were once native to Russia and the USSR was interested in reintroducing them to selected locations on Wrangell Island and the Taymyr Peninsula.

Following a number of delays, changes in plans and extended deadlines, the transplant operation got underway on March 21 and was terminated on April 14 when forty muskox were loaded aboard a Russian airplane at Bethel, Alaska.

Personnel participating in the Nunivak phase of the operation are listed below:

Name	Title and Organization
Jerry L. Hout	Refuge Manager - United States Fish and Wildlife Service
Dr. Peter Lent	Assistant Leader - Alaska Cooperative Wildlife Research Unit
Dr. Sava Uspenski	Biologist - USSR
Vadim Tarchov	Biologist - USSR
Raisa Petroff	Interpreter - United States Fish and Wildlife Service
Dan St. John	Interpreter - On contract to United States Fish and Wildlife Service

In addition to the above, twenty-two residents of Nunivak Island were employed in the operation. The entire operation was filmed by Don Meier Productions for the Wild Kingdom TV Show. The TV crew consisted of two cameramen: Ralph Nelson and Rod Allin, host: Marlin Perkins, and a snowmachine mechanic: Bob Thompson. A German TV cameraman: Joseph Vilsmeier, a free lance photographer: Dennis Cowals; Andrew Chikoyak, a TV cameraman from the Bethel Station, KYUK, and Lael Morgan, a reporter from the Alaska Magazine, were also present to document and report on the transplant for their organizations.

Methods

Two six-man capture crews were selected from the twenty-two men signed up to work on the transplant. The remaining men with snowmachines and sleds were assigned to haul the captured animals from the field to Mekoryuk. Each of the two capture crews was assigned an area on the island where concentrations of animals are known to occur. One crew going to the south side of the island where they worked out of the United States Fish and Wildlife Service cabin at Duchikthluk and the other crew to the west side of the island where they operated out of Nash Harbor and the United States Fish and Wildlife Service cabin at Mikisagimiut.

The capture crews were instructed to catch the yearlings by hand (bulldogging) in the manner used in previous transplants. After the animals were captured they were taken to the base camps and put into improvised corrals. These

corrals were nothing more than a pit dug into the snow. The snow corral at the Duchikthluk camp measured approximately 10'x16' with six to seven foot walls.

Two-year-old animals were captured with the use of a net in the method perfected on previous transplants. The net, made of nylon shroud cord by the Eskimos in the fashion of their seal nets, was either dropped over the animal or the animal was driven into the outstretched net (see photo section).

After a number of animals were captured, word was sent to Mekoryuk for the hauling crew to come out and pick up the animals. Each member of the hauling crew was provided with burlap bags filled with hay to be used as pillows to protect the fragile horns of the yearlings. On arrival at Mekoryuk all the animals were unhobbled and released into the holding pen. The yearlings and two-year-olds were kept in separate pens to reduce injuries and to keep the older animals from dominating the feed troughs. Timothy hay, purchased in Anchorage, was fed to the animals both in Mekoryuk and during their stay in Bethel.

Prior to shipping each animal was checked again to determine its sex (initial sexing in field at time of capture), and tags and colored streamers put on each ear. The animals were then loaded into shipping crates and sledded to the airport. A Skyvan capable of hauling six yearlings or four two-year-olds was used to transport the animals to Bethel. In Bethel the animals were turned loose in a large warehouse to await the arrival of the Russian plane.

Results

In the period between March 25 and April 5, a total of fifty-four muskox were captured (Table 1, Figure 1). Discounting the three days lost to weather, only seven days were required for the actual capture operation.

Only one animal, a two-year-old female, was lost as a direct result of the transplant. This animal was carrying a nearly full-term fetus and it is suspected that the animal died of ketosis. The hide, skull and fetus from the two-year-old female were given to the Russians. A femur from this animal was sent to the Alaska Cooperative Wildlife Research Unit. One other animal, an adult bull, was found with a broken leg and in a very weakened condition. This animal was shot by one of the Eskimos. No parts were salvaged from the bull.

No problems were encountered in holding the animals in the pen at Mekoryuk. The yearling animals ate well, consuming approximately four bales of hay daily. The two-year-olds ate, but did not seem to have the appetite of the younger animals.

Prior to shipping to Bethel each animal was ear tagged. A numbered ear tag and colored nylon streamer was attached to each ear tag. Different colors were used for each sex and age group (pink=yearling males; yellow= yearling females; blue=two-year-old males; orange=two-year-old females). A list of the tag numbers, streamer colors, date of capture and fate of

Table 1. Sex, age and location of muskox captured in 1975 transplant.

Date	Location	Yearlings		Two-year-olds	
		Male	Female	Male	Female
3/25	West Side	1	1		
3/25	South Side	1	1		
3/28	West Side	2	4		
3/29	South Side	3	4		
3/30	West Side	7	9		
3/30	South Side	1	1		
3/31	West Side	3			
3/31	South Side	6			
4/1	Twin Mountains			1	5
4/5	VABM 789			1	3
	Totals	24	20	2	8

Figure 1. Location of muskox captures - 1975 US-USSR Transplant.

West End

M	F	
12	13	Yearlings
1	1	Yearlings

Twin Mountains

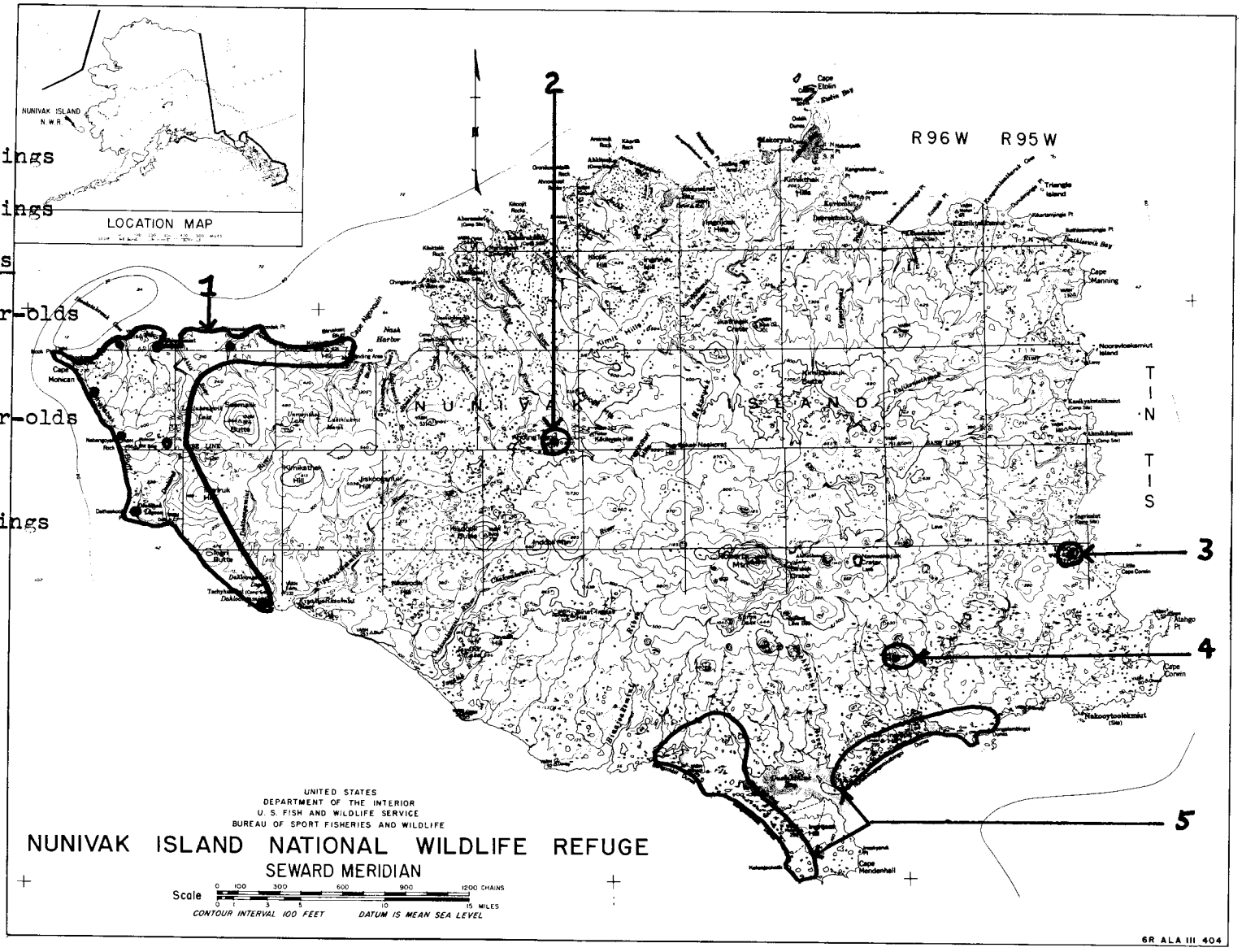
M	F	
1	5	2-year-olds

VABM 789

M	F	
1	3	2-year-olds

South Side

M	F	
11	6	Yearlings



each animal is recorded in Tables 2 and 3.

On April 8 the first load of animals was sent to Bethel. A total of eight trips was required to move all the animals with the last load reaching Bethel on April 11. The Russian plane arrived on April 12. The animals were crated on April 13 and the plane departed for Russia with the muskox and Dr. Uspenski and Mr. Tarchov on board on April 14.

Discussion and Recommendations

General

In all the capture operation went well. The men hired on the island did an outstanding job and required very little supervision. The low mortality reflects the ability of the Eskimo crews in capturing and transporting the animals. The only unfortunate circumstance was the number of yearlings with horns damaged either during the sled haul from the field to Mekoryuk or in the pen when being captured for crating. This has been a problem on every transplant and is difficult to control. Burlap bags filled with hay and foam rubber were used to cushion the animals' heads, but were not completely satisfactory. A folded reindeer hide seemed to be the most effective cushion. The snow was exceedingly rough this year, particularly on the west side of the island and this situation further contributed to the problem of horn damage.

Time of Transplant

Normally transplants are scheduled for late February or early March and we were very fortunate with the late start this year in having good snow conditions throughout the capture portion of the operation. However harassment of females carrying near term calves may result in undetected mortalities. For that reason and the problem of adverse weather and snow conditions, future transplants should not be planned for completion later than mid-March.

Cost of Transplant

The final costs of the transplant are not yet known, but to date expenditures total $24,500.00. This sum includes $4,500.00 for transportation of the animals from Nunivak to Bethel for which the Russians are obligated. Excluding transportation, cost of hay and fuel and permanent salaries, the operation on the island cost $12,000.00 for the capture of fifty-four animals or $223.00/animal. This amount could have been reduced had there not been so many people involved nor the extra time and effort been expended on the TV documentary. One beneficial effect was the expenditure of $12,000.00 directly into the economy of the Natives on Nunivak Island. Of the $12,000.00 over $10,000.00 was spent on salaries and the remainder for goods and services.

Publicity

Notwithstanding some amount of bad press generated by the transplant, the United States Fish and Wildlife Service received considerable publicity from the project. The Wild Kingdom Show to be shown on national TV next fall will hopefully further the USFWS image to the public. However, this publicity

was not without its cost to the project and to the welfare of the animals. Considerable time was spent in filming scenes which were of no benefit in accomplishing the primary objectives of the project. Far worse was the unnecessary handling and harassment of the animals in order that the desired footage be obtained by the TV camera crew.

Summary

In spite of a number of obstacles the operation was generally successful and nearly all objectives were met. The forty animals were delivered to the Russians in nearly the desired age and sex ratio. There are now thirteen known age animals marked on the island which will be of great importance in future studies. Only one animal was known to be lost as a direct result of the transplant. The United States Fish and Wildlife Service will receive considerable publicity as a result of the project and much was accomplished in the way of public relations with residents of the island.

Jerry L. Hout
Acting Refuge Manager

Table 2. Tag numbers, sex, age and weight of muskox captures in 1975 US-USSR transplant.

Tag No. Right	Tag No. Left	Streamer Right	Streamer Left	Sex	Age (Months)	Weight (lbs.)	Date Transported to Bethel
3	4	Yellow	Yellow	F	11	100	4/8/75
6	7	"	"	F	11	109	"
8	11	"	"	F	11	138	"
10	22	Pink	Pink	M	11	148	"
12	13	"	"	M	11	178	"
14	15	Yellow	Yellow	F	11	135	"
16	17	"	"	F	11	210 ?	"
18	19	Pink	Pink	M	11	202	"
21	20	Yellow	Yellow	F	11	173	"
23	24	"	"	F	11	100	"
25	26	Pink	Pink	M	11	206	4/10/75
28	27	Yellow	Yellow	F	11	155	"
30	29	Pink	Pink	M	11	170	"
32	31	"	"	M	11	177	"
33	34	"	"	M	11	155	"
5	35	"	"	M	11	?	"
36	38	Yellow	Yellow	F	11	?	"
39	40	"	"	F	11	182	"
42	41	"	"	F	11	136	"
43	44	Pink	Pink	M	11	185	"
45	46	Yellow	Yellow	F	11	?	"
48	50	"	"	F	11	181	"
52	51	"	"	F	11	217	"
53	55	"	"	F	11	126	"
56	57	"	"	F	11	225	"
59	58	"	"	F	11	145	"
60	61	"	"	F	11	157	"
62	63	"	"	F	11	?	4/11/75
64	65	"	"	F	11	168	"
66	67	Blue	Blue	M	23	278	"
69	68	Orange	Orange	F	23	?	"
72	71	Blue	Blue	M	23	330	"
73	74	Orange	Orange	F	23	?	"
75	76	"	"	F	23	?	"
78	80	"	"	F	23	?	"
81	82	Pink	Pink	M	11	206	"
85	83	"	"	M	11	211	"
91	92	Orange	Orange	F	23	?	"
94	93	"	"	F	23	?	"
95	96	"	"	F	23	?	

Table 3. Muskox tagged and released on Nunivak Island - 1975.

Tag No. Right	Tag No. Left	Streamer Color (Right Ear Only)	Sex	Age (Months)	Date Released	Location
C809[1]	C810	Yellow	M	11	4/2/75	Duchikthluk Cabin
C811	C812	"	"	"	"	"
C813	C814	"	"	"	"	"
C815	C816	"	"	"	"	"
C817	C818	"	"	"	"	"
C819	C820	"	"	"	"	"
84[2]		Orange	"	"	4/14/75	Dunes at North Side Duchikthluk Bay
87		"	"	"	"	"
88		"	"	"	"	"
89		"	"	"	"	"
90		"	"	"	"	"
10149[3]		"	"	"	"	"
10150		"	"	"	"	"

1/ Metal ear tags marked Alaska Game Commission - Juneau
2/ White plastic ear tags
3/ Metal ear tags (large - marks ?)

PHOTOGRAPH SECTION

All photos by J. L. Hout



Participants in the 1975 transplant included (L-R) Dan St. John (USFWS Interpreter), Dr. Peter Lent (ACWRU), Dr. Sava Uspenski (USSR), Vadim Tarchov (USSR) and Marlin Perkins (Host of Wild Kingdom Show).



The entire transplant operation was filmed by Don Meier Productions. The camera crew shown here is filming some of the Eskimos leaving the village to capture muskox.



Two-year-old animals were captured with the aid of a nylon net made by the Eskimos.



Captured animals were lashed to a sled and hauled to the holding pen near the village - a distance of up to 50 miles.



On arrival at the holding pen the animals were sledded into the pen.



-- and released. Note the depth of snow within the seven foot high enclosure.



Two-year-old animals were caught out of the pen with the aid of a rope. Prior to shipping to Bethel each animal was sexed and ear tagged.



Crated animals were sledded to the airport and loaded aboard a chartered Skyvan. Eight trips were required to transport the 40 animals to Bethel.