



Current Status of Muskoxen in Alaska 1970-2009



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Introduction

Muskoxen (*Ovibos moschatus*) were reintroduced to Alaska after disappearing in the late 1800s. The first establishment of muskoxen from Greenland to rural Alaska was Nunivak Island in 1936. The Nunivak population acted as a source of animals for future relocations on historic range between 1967-1981. The relocation of 300 animals created five populations throughout Alaska: Nunivak, Nelson Island, Northeastern, Northwestern, and Seward Peninsula (Figure 1). The successful establishment of muskoxen populations and current cooperative management efforts have resulted in range expansion, population growth and stability, along with hunting and viewing opportunities.



Harvest

Hunting of reintroduced muskoxen first occurred on Nunivak Island in 1975. Four of the five populations are open to harvest on an annual quota and permit basis (Table 1). In 2008, the Board of Game adopted regulations that allow Alaskans to harvest muskoxen on the Seward Peninsula with a registration permit (Gorn 2009). The new hunts were created from recommendations from local advisory committees and Seward Peninsula Muskox Cooperators, a stakeholder group established in 1994.

Table 1. Harvest of Muskoxen in Alaska

Population	Hunting Began	Average Annual harvest Pre-1998	Average Annual Harvest 1998-2008	Available Harvest 2009	Hunt Structure 2009	Sex of Harvest	Available Harvest as % of population 2009
Nunivak Island	1975	56	81	85	•Drawing •Registration	•Bulls 1975-1976 •Cows & Bulls 1979-present	15
Nelson Island	1981	23	23	42	•Registration	•Cows & Bulls	8
Northeastern	1990	9	8	0	No Open Season	•Closed to harvest in 2006	0
Northwestern	1999	No Hunt	<3	6	•Tier II drawing	•Bulls 1999-present	1
Seward Peninsula	1995	13	76	187	•Tier I Registration •Drawing •Federal Permit	•Bulls 1995-2000 •Cows & Bulls 2000-present	7* *will be < 7% in 2010-2011 pending census results

Recent Range Expansion

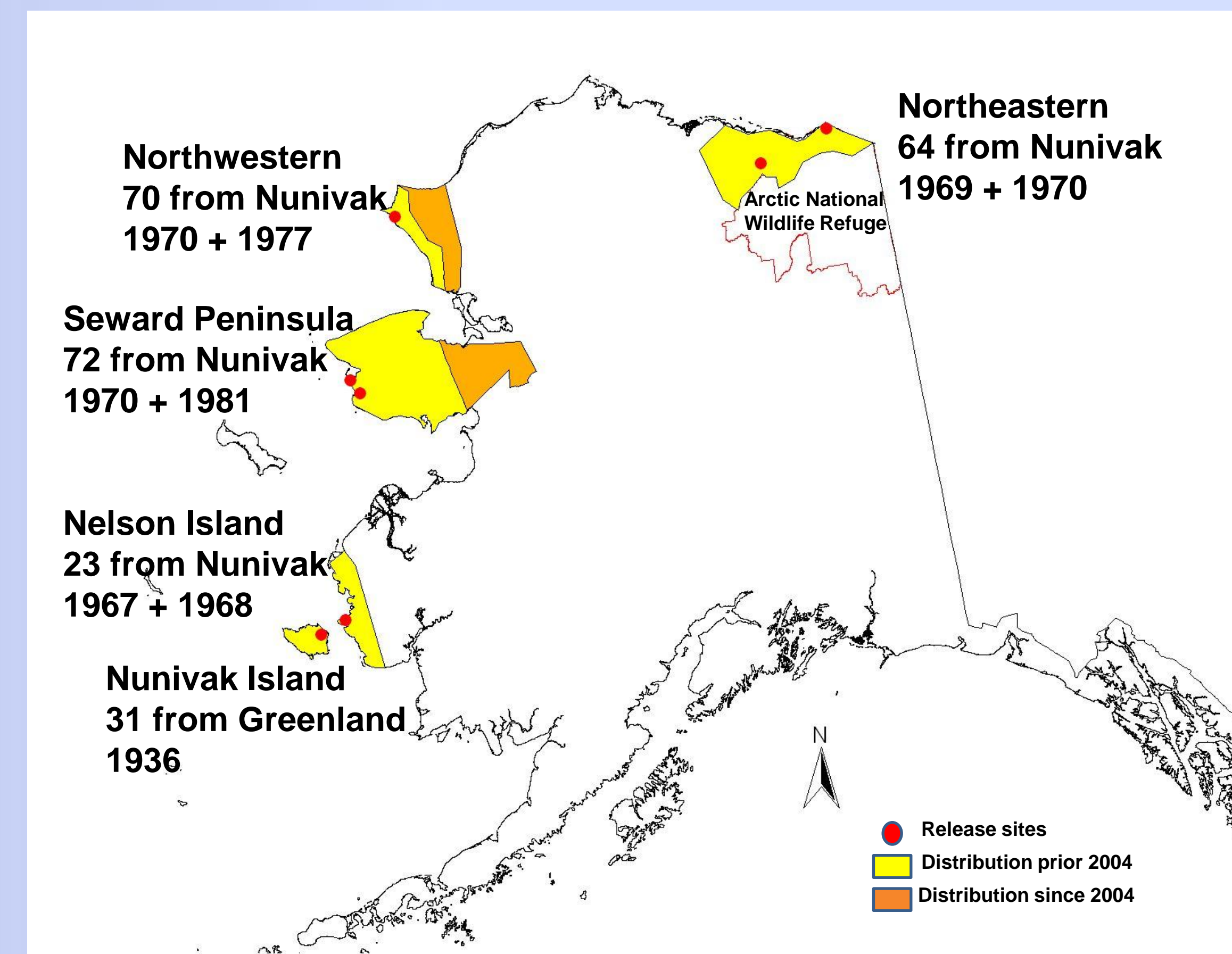


Figure 1. Reintroduction sites and group distribution of muskoxen populations

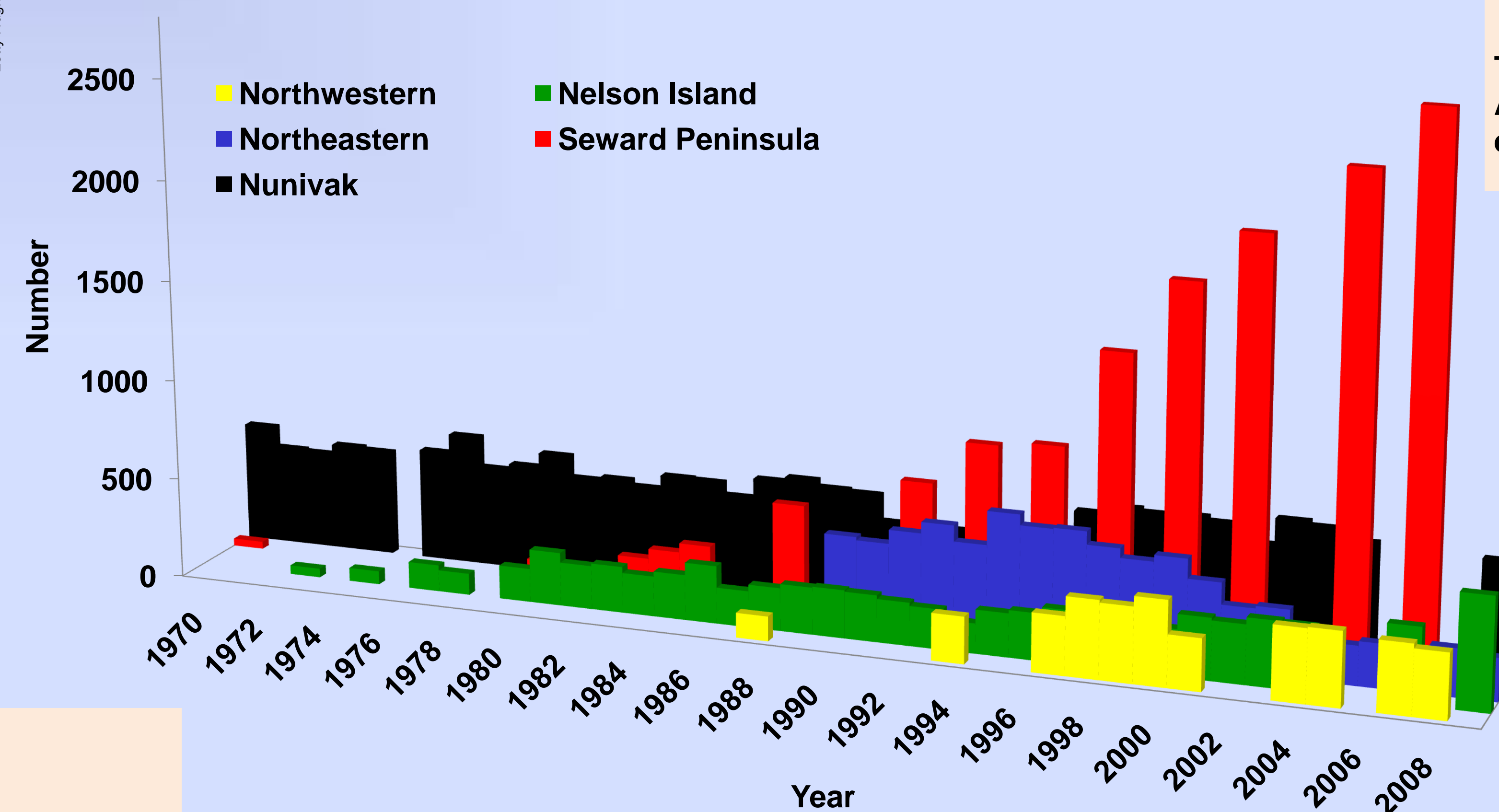


Figure 2. Historic counts of Alaska muskoxen populations 1970-2009

Population Growth

During the 74 years since 31 muskoxen were first established on Nunivak Island, populations have increased to over 4400 animals in Alaska (Table 2). The Seward Peninsula population is the state's largest, and continues to expand eastward (Figure 1) as the population increases (Figure 2).

Table 2. Current size of Alaska muskoxen populations

Population	Population Size	Date of Estimate	Status
Nunivak Island	567	Oct. 2009	•16% from 1947-1968 •Stable since 1970
Nelson Island	557	Jun. 2009	•22% from 1968-1981 •6% from 2004
Northeast	200-250*	Apr. 2008	•650 muskoxen by 1995 •Declined 60% 1996-2006 •Stable from 2006-2009
Northwest	324-424 ^a	Jan. 2008	•8% from 1970-1998 •Stable from 1999-2008
Seward Peninsula	2688 ^b	Mar. 2007	•14% from 1970-2000 •6% from 2000-2007
Total minimum Alaska population estimate	4486		

* Westing 2009
^a Gorn 2009
^b Northern Canada animals excluded

Table 3. Mortality type in Northeastern population 2007-2009

Mortality Type	Adults	Calves	Total
Bear Predation	16	36	52
Disease	2	2	4
Vehicle collision	3	0	3
Other non-predation	4	10	14
Total	25	48	73

Mortality and Disease Surveillance

Seward Peninsula

- Predation relatively low compared to Northeastern
- Chlamydia present (Gorn 2009)
- Low in copper
- Negative for iron, zinc, selenium (Gorn 2009)
- Composition surveys show 30 yearlings:100 cows since 2002 (Gorn 2009)

Northeastern

- Predation a significant mortality factor (Table 3)
- Mortalities from drowning and stranding on sea ice
- Chlamydia present (Lenart 2009)
- Copper deficient (Lenart 2009)
- Low calf recruitment and low calf:cow ratios (Lenart 2007)

Future Management

The reintroduction of muskoxen to Alaska continues to be successful. Population growth and range expansion provides opportunities for consumptive and non-consumptive uses of muskoxen. Continued investigation of population parameters and health assessments along with public input will enhance future management of Alaska muskoxen.

References

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