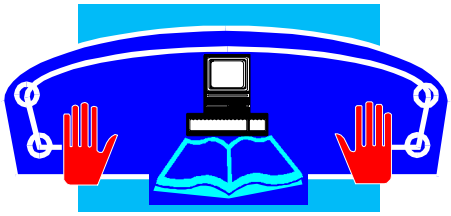

Status And Management Of Muskoxen In The Northwest Territories

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Catalogue Number: 5-3-11

WILDLIFE, FURS & ANIMAL BY-PRODUCTS

5 - 3 - 11

Management of muskoxen in the Northwest Territories

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Introduction

Muskox management in the Northwest Territories is still in its infancy and remains focused on the status of muskox populations and their ability to withstand harvesting, Management decisions are guided by dre demand for muskox harvests and the availability of animals. Systematic surveys have been conducted of most muskox populations in rftc Northwest Territories although some. such as those on the arctic islands, are outdated,

Here we describe nine muskox "populations" In the Northwest Territories. As information on the distribution and movement of muskoxen is limited, the definition of these populations is rather arbitrary.

The existing quota system was established in 1982. The management areas were baaed *on* the minimal muskox distribution data available and the community hunting areas. Quotas were based mainly on the demand for muskoxen and have been revised periodically since 1982 se a result of new information and requests from the Hunters' and Trappers' Associations (HTAs). Quotas am allocated to community HTAs for specific Muskox Management Areas. some have sex restrictions while others, mostly chose with expanding populations, do not. Some quotas are filled regularly and increases in the quota would be used while others have never been used.

Banks Island

Status

The muskox population on Banks Island has increased dramatically since the 1950's, when there were only sporadic sightings (Vincent end Gunn 1981), to en estimated population of 27500 ± 2050 (S.E.) in July 1985 (McLean et al. 1986) (Pig. 2; the legend for all maps is shown in Fig. 1). The population has continued to increase since 1985, however. as a slower rate (B. McLean. personal communication), indicated by a declins in productivity in 1987. Studies in 1986 and 1987 have revealed disease-related mortality.

Management

Muskox Management Area B1/1 covers all of Banks Island. The quota for the area is 2000 muskox/year with no age or sex restrictions. It was set in 1981, following systematic surveys by Vincent and Gurm (1981), wish the intent of slowing or halting the population increase to avoid possible damage to the range. The annual harvest has never exceeded 500 animals end is usually between 200 end 300. It is restricted to southern Banks Island even though the major concentrations of muskoxen are in the north. The harvest has therefore bed little effect on the population.

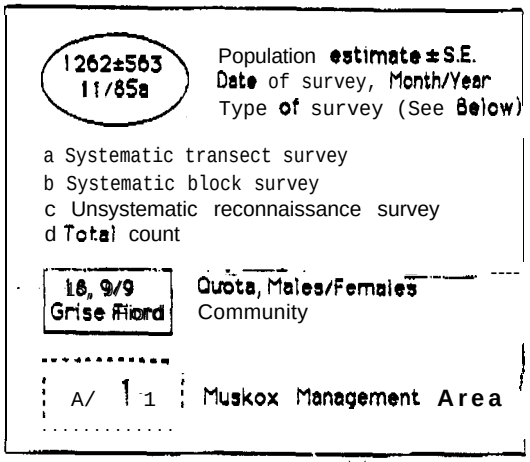

FIG. 1. Legend for Figs. 2-10,

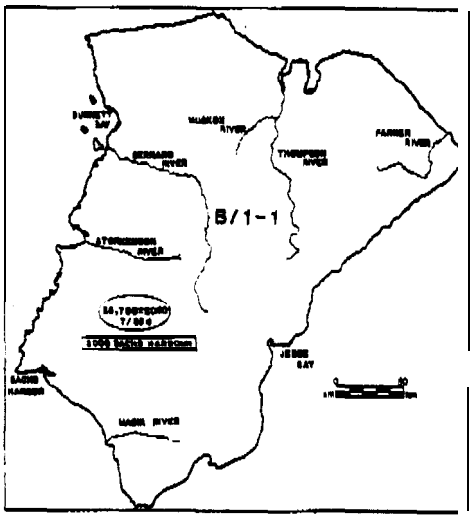

FIG. 2. The Muskox Management Ares. quota. and population estimate for Banks Island, N.W.T.

Printed in Canada / Imprimé au Canada

Can. J. Zool. 67: 1989 Canadian Journal of Zoology
May 1989 2nd ... Muskox Symposium — held in U. Sask., Saskatoon Oct 1987

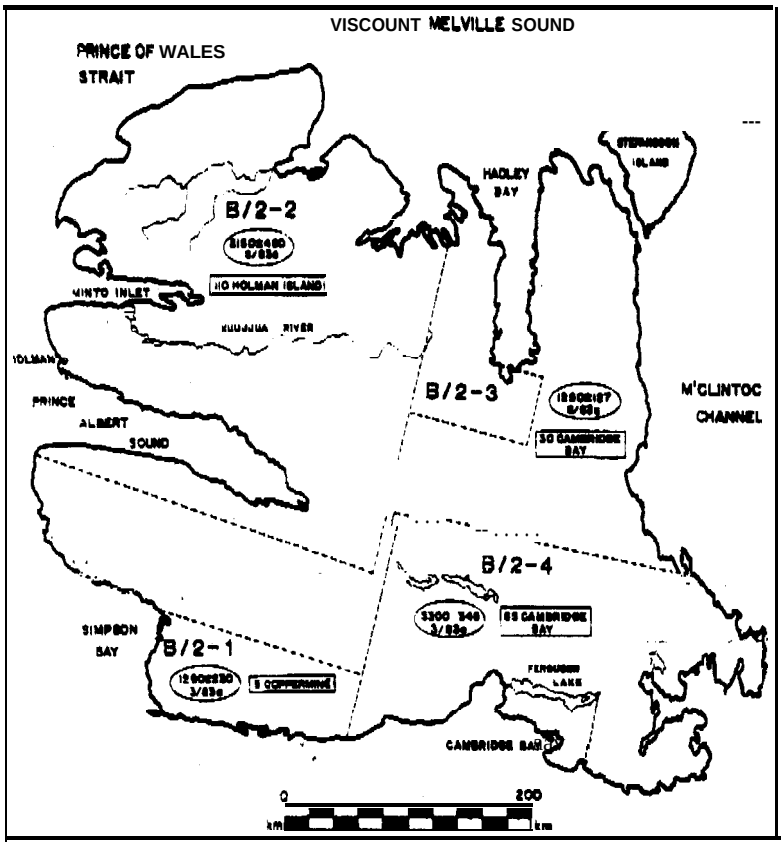

FIG. 3. The Muskox Management Areaa. quotas. and population estimates for Victoria Island. N.W.T.

Victoria Island

Status

The northwest. southwest. and southeast portions of Victoria Island were last surveyed in 1983 (Jingfors 1984, 1985; Poole 1984). *The* total population estimate for these areas was 11020 ± 650 (SE) (Fig. 3). Composition data indicating high productivity and calf survival suggest that the population is increasing.

Management

The current Muskox Management Areas and quotas were established in 1984. None of the quotas has been filled. However, the number harvested increased from 157 to 243 from 1985-1986 to 1986-1987. an increase of 55%. and the demand is expected to rise again in 1987. *The harvest* is concentrated around Holman *and* Cambridge Bay (areas B/2-2 and B/2-4). The quota for area B/2-3 is not used regularly because it requires a long snowmobile journey from Cambridge Bay. Muskox harvested in the area are usually taken by polar bear hunters. The quota in area B/2-1 was intended for use by Coppermine hunters who have an outpost camp there but it is now also being *used* by hunters travailing directly from Coppermine. Aa the current quotas are only 1.9% of tha 1983 population they could likely be increased.

North Great Bear Lake

Status

The most recent population estimate * t h e north Great Bear lake area (2020 ● 560 (SE)) is from March 1983 (Case and Poole 1985) (Pig, 4), The population was considered stable between 1930 and 1983 and subsequent Observations suggest that it has remained so (E. McLean, personal communication). Caae and Poole (1985) found high denairy areas around Fallaize and Delesse lakes, Brock River, and Stopover Lake. Muskox in this locality frequent treed areas and were browning on dwarf birch (*Betula glandulosa*) during the winter of 1983 (Case and Poole 1985).

Management

Only 5-10 animals have been taken annually from Paulatuk's quota over the past 3 years, with 3-5 of tftem being killed by sport hunters (B. McLean, personal communication). Moat of the hunting occurs *southwest* of Paulatuk and on Parry Peninsula. Tuktoyuktuk has not used its quota since it was

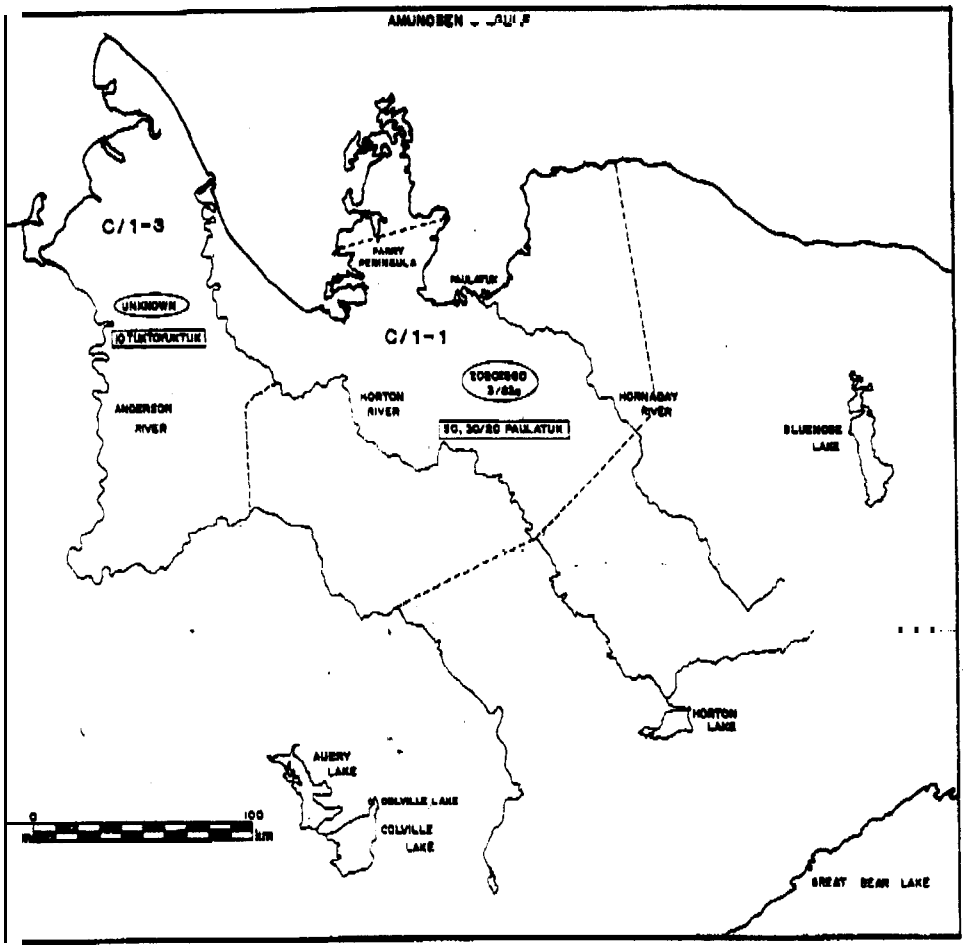

FIG. 4. The Muskox Management Areas, quotas, and population estimates for the north Great Bear Lake area, N.W.T.

established in 1985 (B. McLean, personal communication). Hunters from Fort Good Hope and Colville Lake are interested in a muskox quota in that area.

Rae–Richardson Valley

Status

The population wax estimated at 129S ± 279 (SE) in March 1983, indicating that it had increased by 49% since 1980 (Case and Poole 1985) (Fig. 5). An attempted survey in August 1987 waa thwarted by the scattered distribution of the muskoxen. The proportion *of* calves *and* yearlings in the population was low in August 1987, so further increases in the population are unlikely until calf survival or production increases.

Management

The demand for muskox is high 10 this area. The quota of 35 muskoxen set in 1983 wee uaad consistently. It was increased to 50 in 1986 and again was filled completely. Another increase in the quote has been requested for 1987. The Coppermine HTA is involved in outfitting nonresident hunters and offers a combination hunt for muakox, caribou, and grizziy bear. The harvest is concentrated in the Rae-Richardson Valley *between November and March.* The Department of Renewable Resources would like to see an expansion of the muskox population east of Coppermine River and south towards Dismal Lakes.

Central mainland

Status

The first systematic muskox survey Of the area around Bathurst Inlet and Contwoyto Lake waa conducted in 1986 and the population waa estimated at 3408 ± 404 (SE) (Gunn[1]) (Pig. 6).

Muskoxen were distributed throughout the area. with some

[1]Gunn, A, Abundance and distribution *of* muskox *on* the central mainland. NWT. Manuscript in preparation.

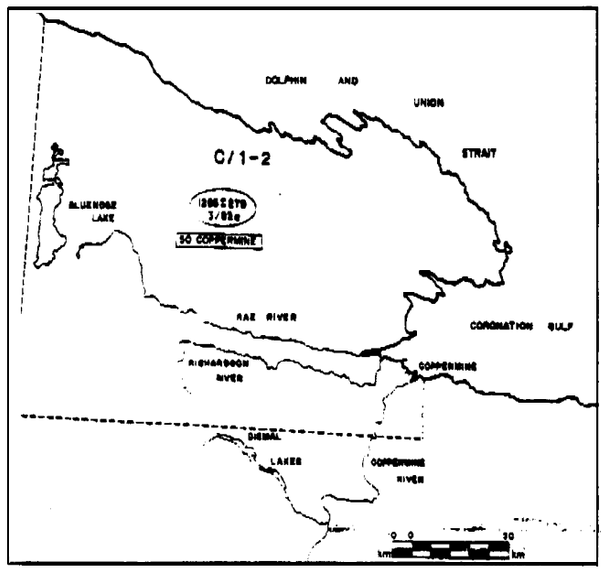

FIG. 5. The Muskox Management Area, quota, and population estimate for the Rae–Richardson area, N.W.T.

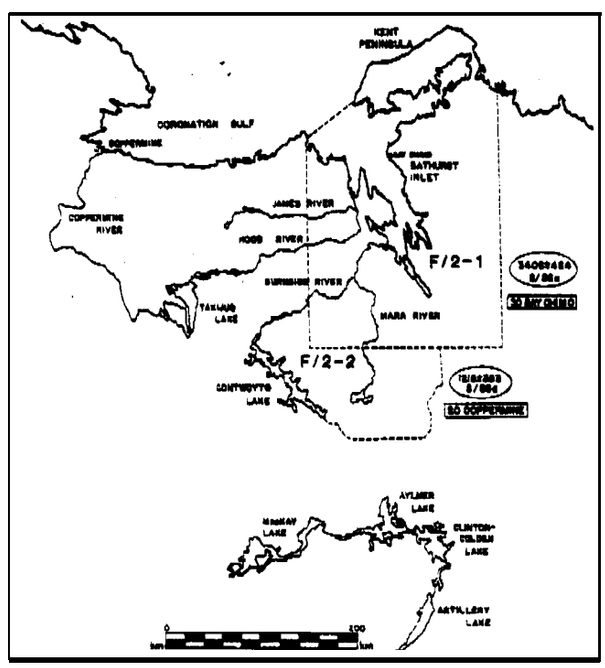

FIG. 6. The Muskox Management Areas, quotas, and population estimates for the central mainland, N.W.T.

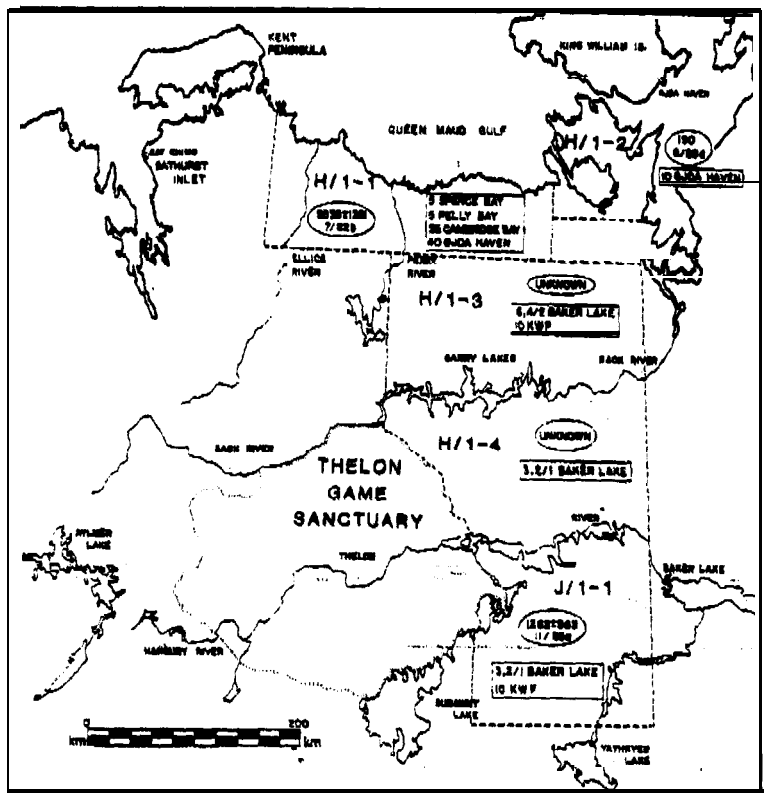

FIG. 7. The Muskox Management Areas. quotas. and population estimates for the Queen Maud Gulf area and eastern mainland, N.W.T.

concentrations in the area of the Burnside and Hood rivers. Reports by hunters and geologists suggest that the muskoxen have been slowly spreading through the area since the 1970's. The proportion of calves (12.2%) suggests that the population is increasing.

Management

The quota for Bathurst Inlet - Bay Chimo wss increased from 10 to 30 in F/2- I as a result of the 1986 survey. Muskox Management Area F/2-2 was also established in 1986 and a quota of 20 muskox for the area was allocated to Coppermine. The low quotas (1.5%) are expected to allow the population to continue to increase and to expand into unwed habitat to the wear and southwest and to augment populations to the south.

Queen Maud Gulf ettd eastern mainland

Status

Gurm and Csae (1984) estimated the population at S53S ± 1381 (SE) in this area (H/1-1 and H/1-3) in 1982 (Fig. 7). It has been expanding to the south and east (Gunn et al. 1984) and muskoxen em now found as far east as Adelaide peninsula and Chantrey Inlet. The status of the muskox is unknown between Garry Lakes snd Thelon River (H/1-4) but information from caribou calving-ground surveys indicate low densities. The current status in the Thelon Game Sanctuary is also unknown; however. the population is likely stable or only increasing slowly, as the density of predators (wolves and grizzly bears) is relatively high.

Management

The Muskox Management Ames and quotas for the Queen Maud Gulf (H/1-1, H/1-3, and H/1-4) were established in 1976 and revised after a systematic aetiel-survey in 1982 (Gunn and Case 1984). Area H/1.2 and the quota *of 10 were* established in 1985 to enable Gjoa Haven hunters to harvest muskox during& summer travels along the coast. In 1987 Pelly Bay aod Spence Bey were *given* a *quota* of five muskoxen each in area H/1-1 in response to their frequent requests. The quota for the central mainland (J/1-1) wee established in 1983 and was increased in 1985 Ss a result of tfte 1985 survey by Case end Graf (1986). Only Baker Lake regularly fiffs its quotas. The management areas am remote from the other communities with quotas, although hunters from Rankin Inlet and Eskimo Point have travelled to H/1-3 to harvest muskox under the Keewatin Wildlife Federation quota (R. Toews. personal communication). Hunters from Cambridge Bay increasingly travel m dra western part of area H/l. 1 to guide nonresident muskox hunters. Gjoa Haven hunters mostly harvest in the eastern part of H/1-1 once *the quota in* H/1-2 is used.

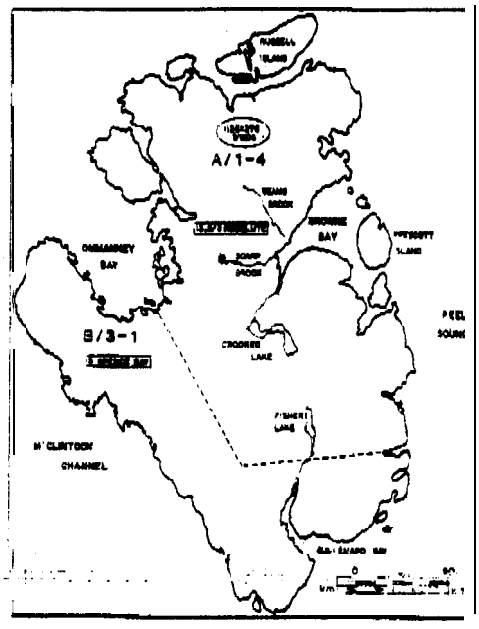

FIG. 8. The Muskox Management Areas, quotas, and population estimates for Prince of Wales Island, N. W.T.

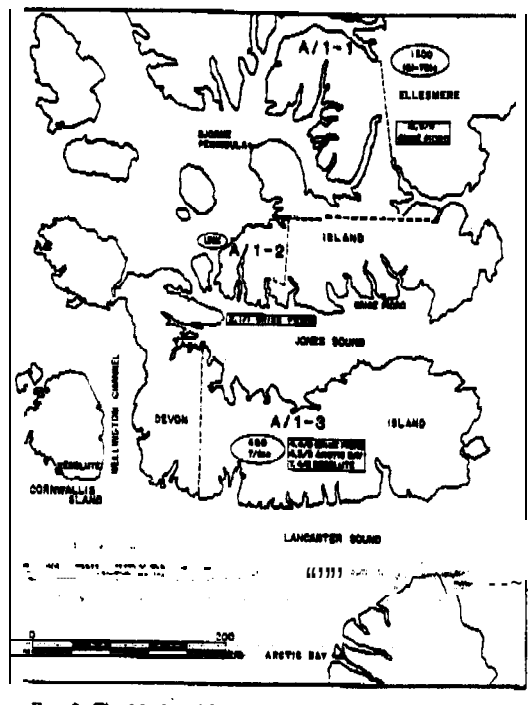

FIG. 9. The Muskox Management Areas, quotas, and population estimates for Ellesmere and Devon islands, N.W.T.

Prince of Wales Island

Status

The current status of muskoxen on Prince of Wales Island is not elm. as rfte last systematic survey was conducted in 1980 when Gurm and Decker (1984) estimated that 112± 276 (SE) muskoxen were present (Fig. 8). Hunters have not reported any evidence of a decline since then. In 1980, most of the muskoxen were on the eastern side of the island with only scattered groups in the south.

Management

The initial quotas for the island set in 19S2 were 6 for Resolute and 3 for Spence Bay, The Resolute quota was increased to 12 in 1983 and the Spence Bay quota, to 5 in 1987. Hunters from Resolute regularly fill the quota and conduct some (3–5) outfitting of nonresident hunters. Spence Bay has never used its quota as it is too far to go for 3 muskoxen and travel conditions to the island arepoor. The quota increase to 5 animals was to make rite trip from Spence Bay worthwhile. The low quota (1.5% of the 19S0 population) reflects the need to be conservative. as weather-related fluctuations in productivity and mortality are typical of arctic island populations.

Ellesmere and Devon islands

Status

The current status of muskoxen on Ellesmere Island is unknown. as there have been no systematic surveys since Riewe (1973) estimated that there were 1120 animals on Bjourne Peninsula (A/1-1) in 1973 (Fig. 9). Evidence from other arctic islands suggest that the population would have increased only slightly since then, Observations of muskoxen on northern Devon Island indicate that the population may have declined since 1984 to only 6S animals (D. L. Pattie, personal communication). Before 1984 the population had been relatively stable u around 140.

Management

The quotas for Ellesmere and Devon islands were ser in 1981, with the exception of the Arctic Bay quota which was established in 1986. The ordy onethat is used to any extent is Grise Fiord's quota of 18 fn A/l-1. Some of this is used by nonresident hunters outfitted by the Grise Fiord HTA. Muskoxen are rare in A/1-2 and the quota of 2 is seldom used. Travel conditions across Jones Sound to A/1-3 on Devon Island are often poor so this quota is only filled every 2-3 years. The Resolute quota *on Devon* Island has *never* beers used because ice conditions in Wellington Channel prevent Resolute hunters from making the journey. The quota established for Arctic Bay is not expected to be used often, as rhe ice in Lancaster Sound is rarely good enough to encourage travel.

Melville Island

Status

Melville Island was surveyed in 1987 when the muskox population was estimated at S500 animals (F. Miller, personal communication) (Fig. 10). The population is probably increasing slowly. Bailey Point on Melville Island is considered a muskox refugium for the Arctic Islands (Thomas et al. 198 1).

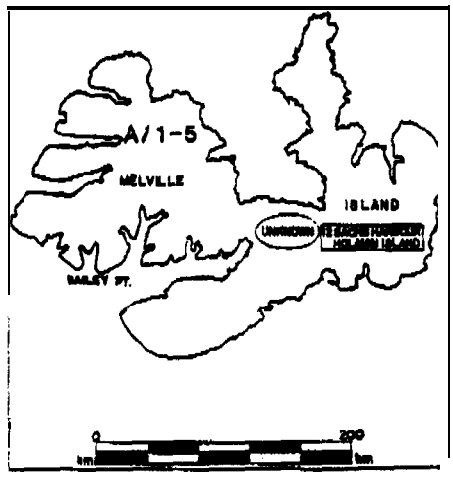

FIG. 10. The Muskox Management Area, quota, and population estimate for Melville Island, N.W.T.

The Melville Island quota was set in 1983 in response to requests from the Holman and Sachs Harbour HTAs to allow combined polar bear – muskox hunts for nonresidents. The quota was set at 12 to match the 12 polar bear tags available in the area. The quota is usually not filled, with only 8–10 muskox being harvested. The quota is expected to have a minimal impact on the population as only bulls are taken.

Summary

Muskox management in the Northwest Territories has developed greatly in recent years but quotas are still being set at rather conservative levels because of the lack of detailed information. When more is known, it may be possible to relate more closely the level of use of this renewable resource and the productivity of the population.

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