

## Northwest Territories Centennial 1970

At the time of Confederation Canada included only Nova Scotia, New Brunswick and a very small portion of the present provinces of Ontario and Quebec. Between the Canada of that day in the east and British Columbia in the west stretched the vast, undeveloped, largely unexplored and sparsely populated lands owned by the Hudson's Bay Company.

In 1868 the Rupert's Land Act by the British Imperial Parliament authorized the purchase by the Dominion of Canada of the immense tracts of land known as Rupert's Land and the North Western Territory. Full title to these lands was transferred to the Dominion of Canada in 1870 and an Order in Council established them as part of the Dominion of Canada to be known as the Northwest Territories.

Thus Canada grew from a small country huddled along the Great Lakes, the St. Lawrence River and the Atlantic seaboard to a mighty nation stretching north to the Arctic Ocean and west to the Pacific.

Apart from festivities in connection with the The Royal Tour in July, the Centennial was celebrated throughout the Northwest Territories in big booming towns and quiet settlements, with dog-sled races and snowmobile rallies; canoe expeditions and air adventure tours; fishing derbies and music festivals during the summer. In certain parts of the Territories celebrations began at midnight last December and will terminate only on New Year's Eve, 1970.

The history and meaning of the Centennial Symbol which appears on the cover of this issue of *Arctic* is in part as follows: A committee consisting of Councillor Simone Michael, Councillor Chief Tetlich, and Councillor Donald Stewart selected the final design for the Centennial Symbol which was then submitted to the Territorial Council in January 1969 and approved unanimously. It is basically circular in design. In the centre are depicted three figures in black with linked hands; in the original they are encircled by blue lettering. The linked hands are intended to express the image of unity of all the people of the North as well as the spirit of celebration. The figures represent the three broad geographic areas, Franklin, Mackenzie and Keewatin which together form the Northwest Territories. The figures can also be thought of in terms of the broad ethnic origin of the Canadians who live and work in the Territories: Eskimo, Indian and others.

It will be noted that the parka hood of one of the figures has been rounded off to represent the pattern worn by the people of the Mackenzie.

An official Centennial Medallion has been produced by Centennial Center. It is three dimensional and has the Centennial Symbol on one side and the Northwest Territories Coat of Arms on the other.

The medallion is the first commemorative coin to be struck in Canada in a special alloy of nickel, aluminum and bronze. Price: Bronze \$2.00; Silver \$15.00 each.

Enquiries for the medallion from outside the Northwest Territories should be directed to: The Sherrit Mint, Fort Saskatchewan, Edmonton, Alberta.

## The Killing of a Bull Muskox by a Single Wolf

Although there are many reports in the literature describing successful attacks of the wolf (*Canis lupus*) on muskoxen (*Ovibos moschatus*), the following observation of a single, male wolf attacking and killing a lone bull muskox is, to my knowledge, unique (see Hone<sup>1</sup> and Tener<sup>2</sup> for a review). The killing was observed from a distance of approximately 1 mile, using a 15 x 60 spotting scope, during a study of the behaviour of muskoxen (*Ovibos moschatus wardi*) on Bathurst Island, Northwest Territories.

On 28 May 1968, a lone bull muskox could be seen feeding on a river-bank in the broad valley 5 miles west of Goodsir Inlet, about 1 mile from a herd of 11 muskoxen. At 2020 hours, I saw a wolf galloping towards the bull from about 100 yards away. The wolf ran swiftly along the snow, following the slight depression of the snow-filled river bed in his approach. He ran close up behind and to the right of the bull, stopped suddenly, as yet unnoticed, hesitated, then darted aside as the muskox wheeled around and charged. There followed a series of charges with the wolf nimbly advancing and retreating, circling around as the muskox attempted to make contact. After several such charges the muskox seemed to collapse into a sitting position with lowered hind-quarters. This posture lasted only a few seconds and the bull rose again; meanwhile the wolf remained standing, motionless, in front of the bull. The bull continued charging, wheeling around and running at the wolf, forcing him to run out ahead to avoid the horns.

By 2030 hours there were brief periods

when both animals stopped and stood facing each other for several seconds. At times the muskox seemed to be slowing down and would back away from the wolf rather than charge towards him. Suddenly the wolf grabbed hold of the bull's face for a few seconds, but was shaken off. The size of the arena became smaller as the wolf circled constantly, the muskox wheeling around to follow him. Again both stood, facing each other, resting this time for 50 seconds. At 2047 the wolf again closed his jaws on the face of the muskox, this time hanging on for 15 seconds. Then more nimble circling and dodging and the wolf seized a hold again but only for an instant, and when the animals separated a great patch of blood appeared on the head of the wolf. At 2100 hours again the wolf moved in close, keeping low and avoiding the horns by coming straight in, this time grabbing a secure hold on the right eye orbit of the bull. The muskox charged forward and backed off swinging his great head vigorously side to side, only after some time dislodging the powerful grip of the wolf. At this separation the blood could be seen spreading over the right boss and entire face of the muskox, and over the face of the wolf as well.

The wolf faced the muskox constantly, bounding in with lowered forelegs, keeping the head low and close to the face and nose of the bull. Since the wolf kept right in front of the bull, each charge ended with a sharp upward toss of the bull's head, rather than the more dangerous sideways hooking of the horns. Each time the muskox charged forward, the wolf backed up, then instantly followed in again, moving so closely with the bull that they gave the impression of being tied nose to nose.

Several times the wolf stopped and stood looking back over his shoulder or briefly sniffing at the snow before renewing his constant circling attack.

At 2110 hours, as the wolf moved around past the muskox to the left, he suddenly swung around and moved in to the bull's left side, behind and below the horn, and pulled the bull down. The wolf circled around and moved in again with his head at the left side of the throat and his right forepaw up on the bull's shoulder. The muskox tried to lift himself up, got up onto his foreknees then collapsed. A second time the bull rose onto his forelimbs and again fell while the wolf stood motionless beside him. On the third attempt the muskox rose onto his foreknees and wheeled his forequarters around to face the wolf, tossing his head and horns at the blood-spattered wolf. The wolf moved

again, circling around, and the bull, still supported by the front legs, swung his head at the passing wolf, then fell, at this point still holding his body upright.

At 2113 hours, the bull's head remained partially lifted although he now lay over on his side; then as the wolf circled around again, the bloody head lifted towards him then flopped over onto the snow.

The wolf began tugging at the hair and wool on the dorsal side of the muskox, pulling out mouthfuls of wool and dropping them several feet away, using his paws to free his jaws of the clinging wool.

By 2115 hours he finished pulling out the wool and began feeding on a section of the back muscle over the ribs and next to the vertebrae. At 2120 he moved around to the left side and lay down on the snow, facing the carcass. Then he moved in to the throat, crouching down with his head in close and began feeding, probably on the tongue and area of the throat at this time. Then standing again, chewing, he gazed for several minutes back in the direction from which he had come.

At 2140 hours the wolf walked away from the carcass, stopped to urinate on a hummock some 100 yards away, and then trotted off down the valley to the west.

Examination of the battleground showed an area of trampled snow (only 2 to 3 inches deep) extending out for approximately 30 feet all around the carcass. The face of the muskox was covered with blood, the hair torn out in the area between the eyes and the right eye was torn out. The tongue and hyoid area of the throat was also torn out and eaten. These two areas plus the small 5-inch-square section eaten at the back were the only parts of the animal damaged. The nose and the legs were untouched.

The carcass was moved to our camp, 4 miles away and the wolf returned to feed on the carcass each day for the next 4 days and at least three other times during that summer (see frontispiece).

During the summer of 1969, the same wolf (identified by comparing photographs taken each year) accompanied by a female, visited the carcass and fed on it briefly 6 times from June to August. Additional tracks indicated that the wolves visited the area several other times as well.

The age of the muskox as shown by horn development and tooth wear is estimated to be 5 to 6 years. On cleaning the skull it was observed that the right eye orbit had been broken by the wolf during the attack and tooth puncture marks were present at the orbit's edge.

## ACKNOWLEDGEMENT

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<sup>1</sup>Hone, E. 1934. The present status of the muskox. *Special Publication of the American Committee for International Wild Life Protection*, No. 5. 87 pp.

<sup>2</sup>Tener, J. S. 1965. *Muskoxen in Canada*. Ottawa: Queen's Printer, 166 pp.

## Abnormal Migratory Behaviour in Swedish Reindeer

Much information has been gathered on the biology of genus *Rangifer* during the last decades, largely as a result of comprehensive investigations of caribou in Canada and Alaska. However, we still know little of the factors which cause and control migration and orientation in reindeer and caribou. No experiments have been performed to elucidate the problem, present knowledge being based on observation of free-ranging herds. Among authors discussing the causes of migration are Jacobi<sup>1</sup> and Herre<sup>2</sup>. Both stress escape from insect pests and summer heat, a necessary shift to new food supplies and changes in hormonal activity in the animals as likely causes for migration. As to the orientation problem, it is known that reindeer and caribou often use the same migratory routes year after year. This is shown in many of the studies on caribou mentioned above. Kelsall<sup>3</sup> points to three important factors which may aid orientation during migration. These are topography along the routes, vegetation and snow conditions. A comprehensive survey is also given in Kelsall's work on what is known of migration and orientation in caribou.

Here I will present a case of disturbance in the migratory behaviour of Swedish rein-

deer, most likely caused by introduction of a new method of moving the animals from the summer area to the winter range. Instead of letting the reindeer migrate in their traditional way some Swedish reindeer farmers have moved their reindeer by trucks from the summer range in the mountains to the winter range. The method has been used in recent years when grazing conditions in the mountains, and along the migration routes were so poor that quick movement of the starving animals was regarded as necessary. Several tens of thousands of reindeer have been moved 150 to 300 km. by truck in autumn during the last four years. The return in spring has mostly been in the traditional way. However, it has been noticed that abnormal numbers of animals from the herds do not follow the spring migration but stay on the winter range through summer without showing much urge to return to the mountains. This has caused much trouble to the reindeer owners.

Although no quantitative data are yet available it seems evident that the mode of autumn movement is closely related to the success of spring migration. No abnormal behaviour has been reported from areas maintaining traditional spring and autumn migrations. The Lapps believe that the transported reindeer have "lost their orientation ability" and are unable to find their way back to their traditional summer areas. This theory seems to be likely and there are several factors involved.

Most of the factors governing migration and orientation in reindeer are still obscure, but there are indications that migratory behaviour is strongly related to tradition (i.e. the behaviour is transmitted from generation to generation by learning). There are certainly genetic and hormonal factors involved also, but these alone are presumably not sufficient to elicit the behaviour. This is demonstrated by the fact that single animals or small groups of reindeer are usually unwilling to undertake goal-directed movements over long distances. Thus it seems necessary for a reindeer group to be of a certain minimum size in order to elicit the migratory behaviour.

Owing to the strong tendency of reindeer to congregate into herds, the large-group requisite for migration is in most cases fulfilled. For an optimal function of single animals in the herd, and also for an optimal function of the herd as a unit, it is necessary that intragroup agonistic behaviour be kept at a low level. This has been achieved by the development of hierarchal systems within groups in which, in ideal form, reindeer A

# the lonely kill

A wolf approaching the carcass of  
the lone bull muskox he had killed.

Photograph by *David R. Gray*  
(see short paper pp. 197-199).

