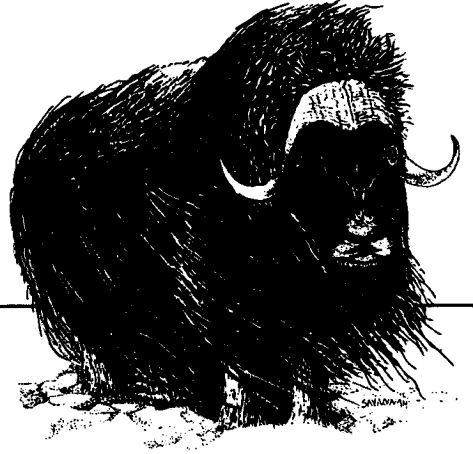
WILDLIFE BIOLOGUE

MUSKOX

Ovibos moschatus



Muskoxen have historically been associated with the hunting cultures of early mankind. Their meat and hides were used for food, clothing, and shelter, while the horns and bones were carved to make tools and crafts.

During the Ice Age, muskoxen were found as far south as Kansas, but as the ice and tundra receded northward, so did the muskox. They currently roam the arctic tundra of northern Canada and Greenland and have been successfully returned to Alaska and Russia. A small introduced population also exists in Scandinavia.

The muskox and the caribou are the only two arctic *ungulates*, or hoofed mammals, that survived the end of the Pleistocene Era (10,000 years ago).

The muskox is a member of the *bovine*, or cattle, family. Other wild North American bovines include mountain sheep, Dall sheep, mountain goats, and American buffalo. An identifying characteristic of bovines is their horns, which are carried by both males and females and are not shed. In contrast, only male members of the deer family have antlers (with the exception of caribou), and they are shed each year.

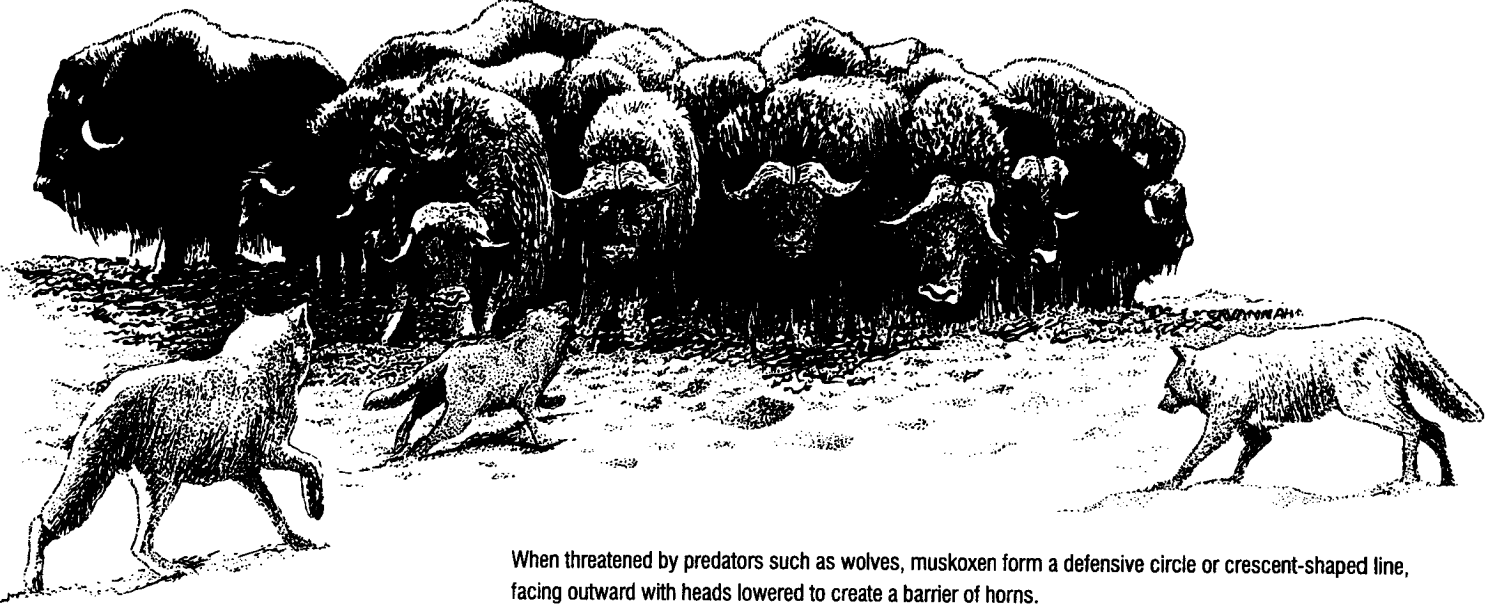
The long, thick coat of the muskox makes the animal look larger than it really is. Male muskoxen, called *bulls*, weigh between 400 and 900 pounds, while females, or *cows*, normally weigh from 350 to 500 pounds.

The muskox's coat ranges in color from dark brown to almost black, with the lower legs, faces, and backs light brown to white. The coat consists of two parts: long, coarse outer hairs, called *guard hairs*, that reach almost to the ground and shed rain and snow; and a soft, dense undercoat called *qiviut*. Qiviut is the warmest, lightest wool in the world. The heavy guard hairs and insulating qiviut protect the muskox from the severe cold and high winds of the Arctic.

The muskox's short, stocky legs and large, rounded hooves enable the animal to move through shallow snow and to be an agile climber on snow and rock. From the humped shoulders, the muskox's back slopes slightly toward its narrow hindquarters.

Muskoxen have sharp horns with rounded bases on the forehead which curve down and outward, and then upward like large hooks. The bull's horns are much larger than the cow's and are used during fights over females. Both males and females use their horns to dominate other muskoxen and to fight off predators.

Muskoxen are distinguished by their long, shaggy hair and hook-like horns. Males are larger than females and have larger horns.



When threatened by predators such as wolves, muskoxen form a defensive circle or crescent-shaped line, facing outward with heads lowered to create a barrier of horns.

Muskoxen are plant eaters, feeding primarily on sedges, grasses, and willows. Since green plants are available for only a few weeks during the arctic summer, for most of the year, muskoxen must paw through snow to feed on dried plants.

Muskoxen have a low reproductive rate with single calves born annually or every 2 to 3 years. At 3 years of age, cows normally bear their first calf. Environmental factors such as availability of food and severity of weather affect the age of first breeding and whether calves are born annually or at longer intervals. Mating takes place in August and September with most calves born in late April or May. Within a few hours of birth, calves are able to follow their mothers back to the protection of the herd.

Wolves, bears, and man are the primary predators of muskoxen. They are also vulnerable to accidents, such as falling from cliffs or drowning, and starvation if deep snow or ice covers their food. Cows may live more than 20 years, but the average lifespan is much less. On the average, bulls probably die at a younger age than cows due to the increased risks during fights over females.

Pictures of muskoxen often portray one of their most unique behaviors: group defense. When disturbed, muskoxen run together to form a tight circle, or crescent-shaped line, with their rumps to the center and sharp horns facing outward. Adults may dart out of the circle or line with heads lowered to pursue an approaching predator.

Muskox populations were extirpated from Alaska in the late 1800s, and apparently declined in Canada and Greenland by the early 20th Century. Although scientists are not sure about the exact causes of the decline, hunting and climatic changes may have been factors. Concerns that the muskox could become extinct resulted in efforts to reintroduce the species into areas of its former range.

A small number of muskoxen originally from Greenland was reintroduced on Alaska's Nunivak Island in 1935–1936. The population grew over the years and supplied animals for other reintroduction efforts in northern Alaska from 1968 to 1981. Today, a population of about 2,300 muskoxen resides in Alaska. Muskox hunting is permitted in Alaska, but strictly controlled to keep population numbers stable or increasing.

Muskoxen also have been reintroduced in Russia, to Wrangell Island and on the Tamayr Peninsula. Worldwide, muskoxen now number about 125,000.

The muskox is one of the few large mammals capable of living year-round in the severe arctic environment. Wildlife managers are working to identify and carry out management practices that will maintain a proper balance between muskoxen and human activities in the Arctic.

Biologue Series

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