

Moose

Alces alces



Other common names

Scientific name may be listed as *Alces americanus*.

Introduction

The moose is the largest member of the deer (Cervidae) family, and it is the largest mammal in New York State. It's easy to read about the size of a moose in a book, but seeing how huge they are in person can be a humbling experience. The increased population of moose in New York is a sign of regeneration of forests, providing increased habitat. There is plenty of high quality moose habitat on the Rensselaer Plateau, and as of 2016 the plateau was home to an estimated 12 breeding pairs of moose.

Physical Description and Anatomy

Moose have a dark brown or black body with long greyish-white legs. Their coat is made up of dense woolly underfur, covered by coarse hollow guard hairs. They have a long face with fleshy lips and noses. There is a flap of skin that dangles under the throat called a bell or dewlap, which is much larger in mature males, or bulls, than in younger males and females, or cows. Cows have a light brown face and a white patch of skin under the tail, whereas bulls have a dark face and no white patch under the tail. They have long legs, which allow them to travel through snow 40 inches (102 cm) deep or more. Their front legs are even longer than their back legs, giving them a humped appearance at the shoulder.

Moose stand 5 – 7 feet (1.5 – 2.1 m) tall at the shoulder, and weigh anywhere from 600 – 1800 lbs (273 – 816 kg). Males are larger than females, and may be as much as 25% heavier. Bulls grow a new set of antlers every year, beginning in March or April, that are used for fighting as well as digging for plants. These antlers can reach 5 – 6 feet (1.5 – 2.1 m) across on a healthy mature bull, and weigh up to 40 lbs (18 kg). The antlers are initially covered in a soft skin called velvet which contains a network of blood vessels that nourish them for growth. This velvet is shed by August or September, and the antlers themselves are shed after the mating season from November to January.



Moose skull.

Identifying features (tracks, scat, calls)

Moose tracks are larger than any other tracks, so size is the main determinant when looking at moose tracks. They may also leave an impression of dewclaws, which are lacking in whitetail deer. Moose scat may resemble deer scat, but again larger. Scat is highly variable with diet.

Look for browse lines along trees at a height of 7 – 8 ft (2.1 – 2.4 m). Moose will eat the bark of some trees, and nibble the twigs and branches off of others. They also scrape their antlers along branches to mark their territory or when they shed the velvet, which is an itchy process. Signs of moose antler scrapes are at a height of 7 – 8 ft (2.1 – 2.4 m), distinguishing them from deer rubs, which are lower. Other signs include moose beds where they lay down to sleep, or wallows in soft mud during summer and mating season. Finally, after mating season, look for shed antlers on the ground.



Moose feeding sign.



Moose antler scraping.



Assorted moose scat.

Habitat

Moose inhabit boreal and mixed deciduous forests in the northern hemisphere. They are often found near swamps and wetlands within forests, as they feed on wetland vegetation. You won't find them south of New York because they can't tolerate temperatures over 75°F (24°C) for very long.

Behavior and Diet

Moose are solitary creatures, living up to 15 – 20 years. They are most active from dusk to dawn, browsing on leaves, twigs, buds, and bark of hardwood and softwood trees and shrubs. Their preferred foods are willow, birch, maple, balsam fir, viburnum, aspen, and mountain ash. They often break off

branches or target saplings small enough to bend, straddling the trunk and browsing as they push it over and walk to the crown. In summer months they feed heavily on aquatic plants found in ponds and wetlands, wading into the water and reaching beneath the surface to feed. A single adult moose can eat 40 – 60 lbs (18.1 – 22.7 kg) of food every day. They are ruminants, having a 4-chambered stomach like cows, and will regurgitate their food and re-chew it for better digestion.

Salt is also an important required nutrient for moose, and in summer they seek out sodium-rich aquatic plants. When wetlands are frozen over in winter, making these plants inaccessible, moose will take advantage of salt accumulation along roadways, and are even known to lick salt residue off cars. If you ever find a moose licking your car, don't approach it or attempt to push it away. They can be extremely dangerous if they feel threatened. Either honk your horn or simply wait for it to move along on its own.

Moose are near-sighted, and since they don't wear glasses they rely on their sense of smell and hearing to warn them of nearby threats. They can dive and swim up to 6 mph (9.7 kph), and run up to 35 mph (56.3 kph). To deal with warm summer temperatures they will often submerge themselves in water, and will wallow in mud to escape pesky biting insects like black flies and mosquitoes.

Human Interactions

Vehicle collisions are a significant cause of mortality for moose, and 1 – 2% of moose-car collisions result in human fatality as well. Moose are so tall that vehicles pass under their



Moose tracks.

Front: 3.5-6.5 inches long by $3 \frac{3}{16}$ – 4.5 inches wide

Hind: $3 \frac{7}{16}$ – $6 \frac{1}{8}$ inches long by $2 \frac{9}{16}$ – $4 \frac{5}{16}$ inches wide

bodies, causing them to come over the hood onto the roof. Their height also means their eyes are above the reach of most car headlights. Currently, the best way to avoid hitting a moose is to slow down. In some areas, wildlife bridges built over roadways allow animals to pass safely across roadways, reducing vehicle collisions and preventing millions of dollars of damage every year.

Reproduction

Breeding season, or rut, runs from late September to early October. It is during this time that the most moose sightings are reported, as adults are ranging farther in search for mates. Bulls compete for cows by fighting with other males, with the older, larger, more experienced bulls winning and doing most of the mating. A single bull may mate with 5 – 6 females during the rut. Bulls focus so much attention on fighting and mating that they don't have time to feed and lose a lot of weight. They have to feed heavily after mating season to make up for it and prepare for winter.

Cows become reproductively mature at 1.5 years, but they usually don't breed until 2.5 years. Younger females usually have one calf, but healthy females in their prime often have twins, or occasionally triplets. Gestation lasts 230 days and calves are born in late May to early June. Calves start at 20 – 25 lbs (9.0 – 11.3 kg), and reach 300 – 400 lbs (136.1 – 181.4 kg) by fall. Calves less than 9 weeks old may be preyed on by black bears, wolves, and occasionally coyotes. They remain with their mother until the following year, when the cow has another calf.

Fun Facts

In the Algonquian language, the word moose means “eater of twigs”, an apt description for this large herbivore.

A bull moose's antlers can grow more than 6 ft (1.83 m) across.

Moose can run up to 35 mph for short distances (56.4 kph). For comparison, Usain Bolt can only run 27.8 mph (44.64 kph).

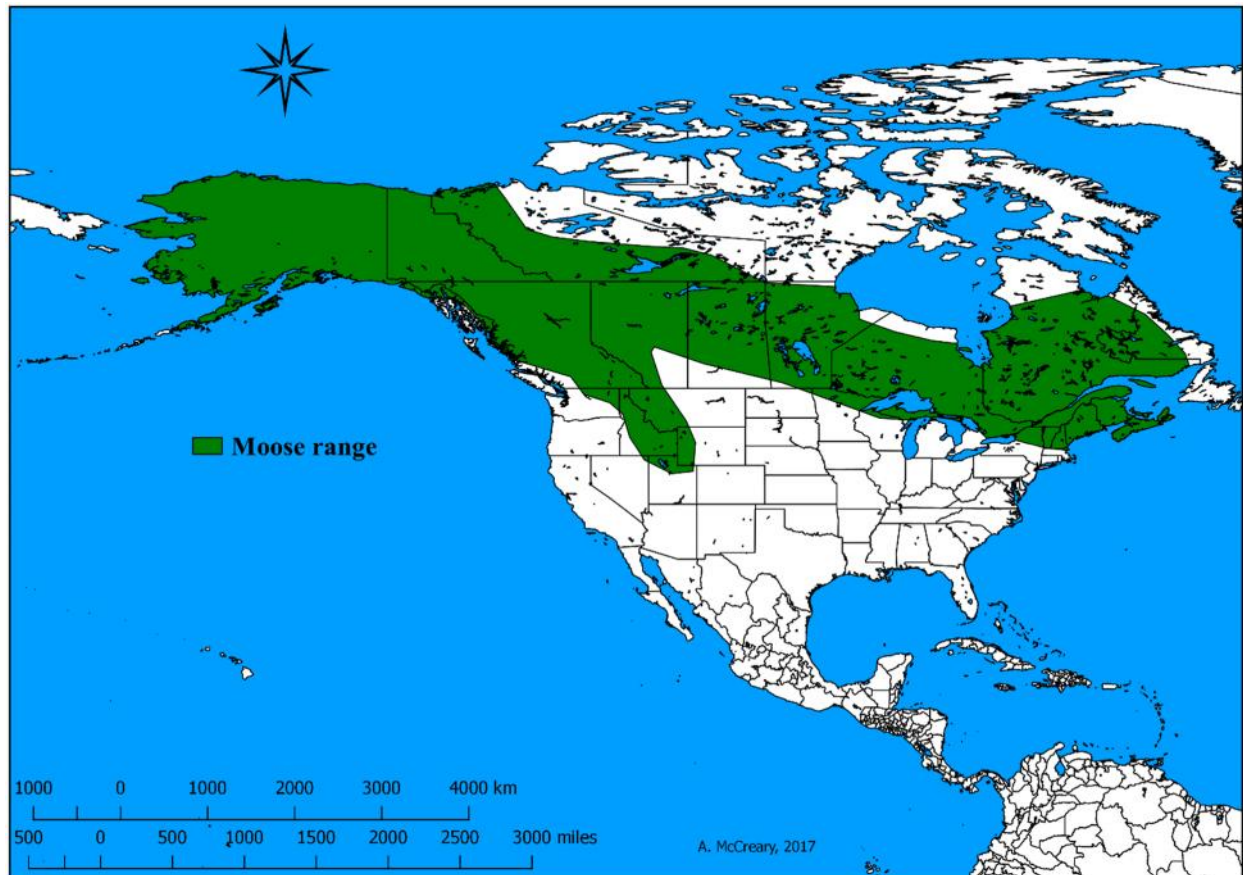
Range and Status

Moose have a circumpolar distribution, existing in suitable habitats in higher latitudes of the Northern hemisphere, including Canada, Alaska, Scandinavia, and Russia. In North America they're found from Alaska east to the Atlantic Ocean, south to the Rocky Mountains in Utah, and around the Northern Great Lakes and in the Northeast United States.

Moose are currently somewhat rare in New York, though their numbers have fluctuated greatly in response to human activities. Prior to heavy human settlement, moose were common in New York, but were eradicated by the 1860s due to hunting and habitat alteration. New regulations on hunting and regenerating forests created opportunities for moose traveling from other areas, and they began returning to New York on their own in the 1980s. In 2010, biologists with the New York Department of Environmental Conservation estimated there were between 500-800

moose in New York, and populations in New York and many other areas continue to increase. They are still threatened by habitat alteration, reduction, and fragmentation.

Other threats to moose include winter ticks, which can transmit disease, as well as cause serious hair loss and weakness due to blood loss and energy expended grooming to remove the parasites. Serious winter tick infestations can lead to death, and in areas where they are present they can be a significant factor of mortality in moose populations. According to the DEC, winter ticks have not yet been documented in New York, but as moose populations in the state increase, so does the likelihood of winter tick infestation.



Management and Research in New York

Currently, moose hunting is allowed in some areas, but not in New York, where they are a protected species. However, allowances are made if one is struck by a vehicle, and you can contact the state to get a special permit to keep and make use of the carcass. It is also illegal to put out food to intentionally attract moose, as it alters their natural feeding habits.

Several organizations perform research on moose, including the DEC, SUNY College of Environmental Science and Forestry (SUNY-ESF), Cornell University, Biodiversity Research Institute, and the Wildlife Conservation Society Adirondack Program. In 2011, the DEC composed the Moose Response Manual to provide for official action in response to reported moose presence. In January of both 2015 and 2016, researchers fitted moose with GPS collars to

track movements and calf production. They also use dogs specially trained to locate moose scat to analyze diet and health of individuals.

Pictures



This picture was taken from the back porch of a resident near Dyken Pond.

At Dyken Pond

As of 2016, there were 12 breeding pairs of moose on the Rensselaer Plateau.

Links

More information on moose can be found at the following links:

Moose Management

<http://www.dec.ny.gov/animals/74663.html>

New York State Moose Response Manual

http://www.dec.ny.gov/docs/wildlife_pdf/mooseresponse2011.pdf

New York Moose Research

<http://ny-moose.weebly.com/>

Report a Moose Sighting

http://www.dec.ny.gov/docs/regions_pdf/moosereport.pdf

Sources

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