

Size Matters for the Moose

By Dr. Reese Halter

Weighing nearly one tonne, moose are the second largest land animal in the West exceeded only by the North American bison. They are remarkable creatures that have exquisite human-like features making them part forester and part poker player.

At 10 feet (3 meters) long and 6.5 feet (2 meters) high, its long nose and ears, bell-shaped flap beneath the neck, dark color on its humped shoulders and sides, rust brown on top of head and neck, and very long, gray legs make the moose an unmistakable resident throughout the forested West, excluding coastal forests.

Named aptly by the Algonquin First Peoples - mongswa, because it's a twig eater in winter and a deep pond and lake diver in the summer. In order to attain and maintain 1,852 pounds (840 kilograms) of body weight the moose must constantly eat. Its four-chambered stomach is perfectly designed to extract nutrients and digest grasses, water plants and wood.

One of the difficulties in being a herbivore is that the moose is constantly on the lookout for sodium. It is a critical element used for transmitting electrical impulses along nerves, maintaining pressure within billions of cells and regulating movements of compounds through all of its living membranes.

How are these essential needs satisfied? Moose rely on water plants that live in ponds or lakes which contain up to 400 times more sodium than land plants. Moose are expert divers and can easily reach 20 feet (6 meters) underwater to feed on bottom dwelling plants. They can eat more than 60 pounds (27 kg.) of water plants a day and store sodium in their stomach fluids which make up to 15 percent of their summer body weight. Most of that sodium is depleted by winter's end.

Moose are solitary. Their long legs are specially adapted to moving through snow with ease and stepping over downed logs and brush. They are fire specialists and expert pruners. After a fire they browse on young alder, birch, poplar, aspen, red oiser dogwood, willows and balsam and subalpine fir. They nip the terminal bud and promote sprouting and growth of smaller buds along the side of branches.

Females don't grow antlers, but invest their energy into growing placentas. Males, on the other hand, invest in growing antlers. Size matters! The bigger the rack the more successful during the rut. It's not uncommon for a moose rack to weigh more than 90 pounds (41 kg). Until full grown, antlers are covered with blood-rich velvet which feeds it enough energy to grow 6 inches (15 centimeters) a day. The massive rack looks like the palm of Paul Bunyon's hands. Females select males with the biggest rack because it indicates their level of fitness and ensures that the dominant genes are

passed to the next generation.

In December antlers are shed. It costs male moose a lot of phosphorus and calcium to grow antlers. Nature is thrifty. Mice, voles, squirrels and porcupines recycle antlers by gnawing them and utilizing these minerals.

Wolves, black and grizzly bears and cougars prey on moose. Moose have dagger like hooves and the ability to kick front or back with lethal force. Wolves often encircle a moose and attack its nose. The moose is a master bluffer, but the odds are stacked against them. As long as a moose holds its ground it will win. If it runs, wolves will kill it.

It's remarkable three-layer coat and billions of heat-generating bacteria in its gut enable it to survive as many as 27 winters. Much like the Peruvian Indians who chewed cocoa leaves to numb the high elevation pains, moose rely on the pain-killing properties of aspirin in willow bark to fend off winter starvation pains.

Logging has actually increased moose habitat throughout the West. I have encountered almost every animal in the wild in the West and one of my most memorable moments was an awesome experience with a majestic bull moose in the mountains near Golden, British Columbia.

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