

Up close and personal with moose and caribou

by Stephanie Rickabaugh

When the subject of moose or caribou comes up in a conversation, it usually revolves around the bulls. But have you ever considered the energy requirements of the cows? Their nutritional requirements and the additional needs for calving and raising calves is one of the projects that I spent the last four winters researching at the Moose Research Center (MRC). Working with 25 moose and 17 caribou at the MRC certainly had its moments—both scary and hilarious.

The MRC is run by the Alaska Department of Fish and Game (ADF&G) but it is located within the Kenai National Wildlife Refuge. It consists of four fenced pens, each one square-mile in area, research buildings and living quarters, and is located at the end of Swan Lake Road south of Coyote Lake.

The MRC was constructed in the mid-1960's to study the relationship between moose and vegetation. Research has focused on moose browse, and more recently on nutritional effects and carrying capacity. Under the sometimes distant (30+air miles from Soldotna) supervision of ADF&G's Tom Stephenson and Kris Hundertmark we repaired miles and miles of fencing, built pens, repaired roofs and trucks, and converted to solar- and wind-generated electricity.

One of our projects monitored body parameters and feed intake of cow moose. Before feeding trials began, I observed the cows throughout the rutting season. Moving animals around and setting up a breeding plan for each cow, in addition to confirming when they became pregnant proved to be a tricky and often scary task. When a bull moose in rut sees you as a threat to his status, you know you have a problem!

Most cows will breed during the first or second estrus (heat) cycle, which usually begins near the end of September. I would go into the pens to locate the cows and observe their behavior. From such behavior as body posturing, vocalizations, rubbing, and proximity to one another, I could tell when cows were coming into heat and could estimate their best breeding times.

As soon as the rutting season was finished, we started preparing for feeding trials. Using two different pelleted feed rations, we simulated high and moderate quality winter diets. There were many aspects to these trials but one I will always cherish was getting

ten moose and six caribou trained to use an individual-specific feeding-gate system. I had to train the animals to recognize which gate was theirs and how to open their private gate using a censored magnetic "key" on a collar around their necks. Since these research animals are still instinctively wild animals, even just getting the cows habituated to my presence was a very challenging task, let alone teaching them to use magnetic keys to open individualized feeding-gates.

Once the animals were trained to the gate system, we began weighing the amount of feed offered and refused for each animal in the feeding trial. This enabled us to determine the consumption levels for each individual. We also collected bi-weekly body weights on the animals... another daunting task that required maneuvering these animals onto a stock scale! Consider, if you will, getting a moose into a horse trailer—now you're getting the picture! Nonetheless, by the end of my third winter, with many tricks behind me, I think that I had educated these cows to their "assignments."

During the trials we also collected blood samples and used an ultrasound to measure body fat and determine pregnancy and twinning. Measurements of body fat provide an index of the animal's body condition. The thicker the body fat, the more overall stored energy the cow has for calf development and survival through harsh winter conditions. This provides important information in assessing habitat quality and thus overall productivity and survivability of a given population of moose. Over the last several years, Fish and Game biologists, in conjunction with federal and other state agencies, have been collecting similar data from moose populations around Alaska for comparison.

Since pregnant cows were used in these trials, it was important to continue monitoring them throughout the spring and summer. The number of calves born and their birth weights are key indications of the condition of the cow. Thus, a cow living in poorer habitat (or given a poorer pellet ration) may have less body fat, more difficulty in winter, and produce a weaker calf or calves.

Here on the Kenai Peninsula, we have seen outstanding moose habitat as a direct result of the 1947

and 1969 wildfires. But as the forests in these massive areas mature, the quality of the habitat for moose populations decreases, leaving few areas with good quality moose browse (i.e., willow, birch and aspen). The research being done at the Moose Research Center is directly applicable to “real life” moose populations and continues to help biologists assess the moose/habitat relationship on the Peninsula and around the state.

I’d like to thank the folks connected to the MRC for giving me the chance to work with and learn from them. I am definitely worn, but wiser for having spent four challenging and COLD winters at MRC.

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