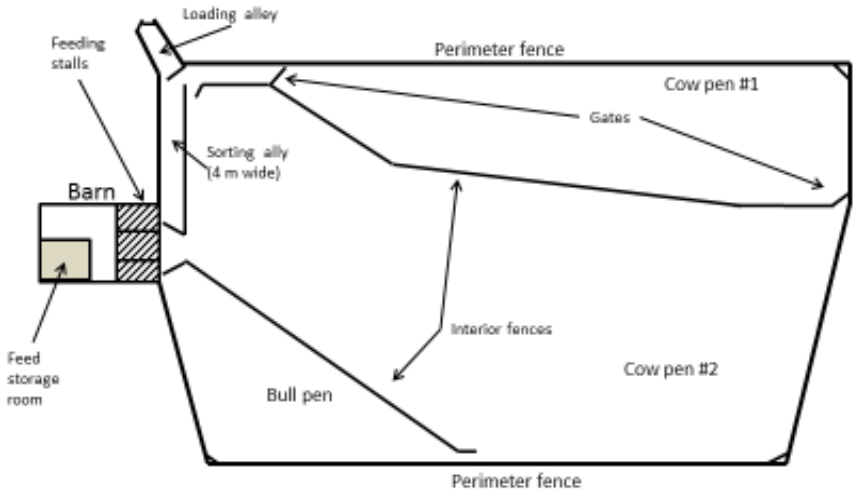
NCASI Prepares for Arrival of Caribou in Dryden, Ontario in 2017

For the past four years, NCASI (Drs. John and Rachel Cook) and the University of Northern British Columbia (UNBC) (Dr. Kathy Parker and Ph.D. candidate Kristin Denryter) have been collaborating on a caribou nutrition research program, the first phase of which took place at the University of Alaska Fairbanks. This work has illustrated that: (1) some caribou herds, but not all, evidently exist in nutritionally limited environments; (2) nutritional limitations for caribou in summer can be substantially more common than often believed; (3) many habitats commonly used by caribou in the mountains and boreal forests in northeastern British Columbia provide levels of nutrition to caribou that are significantly below the summer nutritional requirements of female caribou that are raising a calf; (4) roughly 50-90% of undergrowth in many habitats is unsuitable caribou forage either due to low levels of energy and protein and/or high levels of toxic plant compounds; and (6) abundance of suitable forage is often higher in young seral stages after logging or burning, but this varies considerably depending on ecological site conditions.

Overall, our work shows that nutritional limitations, particularly in summer, are important and should be considered for caribou conservation programs. Our data also help identify what plant community types provide good and poor nutrition for caribou, and specifically what attributes of plant communities influence caribou nutrition. Such data are essential for understanding specific causes of nutritional limitations and to develop forest management recommendations that better support recovery efforts for caribou. To enable a more comprehensive and geographically robust understanding of the potential nutrition limitations in play for woodland caribou, field studies in the eastern boreal forest of Canada must be conducted. We have been preparing to do so in Ontario.

A central component of NCASI's caribou research involves foraging trials in native habitats using tame, captive caribou. Much of our preparatory work so far involves moving the caribou to Ontario from British Columbia. Our caribou will require a base facility to house them between field trials in native habitats and during the winter. With this in mind, NCASI has worked since spring 2016 with the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) and the Ontario Ministry of Natural Resources and Forestry (OMNRF) to receive approval for construction of a new base facilities near Dryden to undertake this final phase of field research between spring 2017 and fall 2018. Domtar, the host member company for our work in Ontario, has graciously facilitated use of private land for the new caribou holding facility for two years. Substantial financial contributions were also made by Resolute Forest Products during the base camp selection and construction process over the past year, along with construction materials provided by Weyerhaeuser, Domtar and EACOM. In October 2016, construction began, the main facility is now completed, and OMAFRA has formally approved the facility and licensed the site for the study.

Photo: Diagram of the caribou base camp design, as approved for construction



While NCASI's needs for the project are relatively simple, requirements of OMAFRA and OMNRF for animal welfare and security and the needs of the landowner for a permanently constructed barn have been satisfied.

Photo: Construction begins with the framing of the caribou base facility barn.

Photo: Final barn (rear view, near feeding stalls).

In addition to the barn, a 2-ha paddock was fenced in to provide a holding area for the caribou. Given the timing of the construction, only the external fencing and electrification were constructed, leaving the internal fencing for construction in the spring, after the caribou have arrived.

Photo: View of paddock and fencing.

Photo: In addition to grassland, the paddock also incorporates forested area to provide shelter during harsh weather.

On November 25th, a virtual tour of the facility was presented by John Cook to representatives of OMAFRA, OMNRF and UofA to help better visualize the facility and its readiness to receive the caribou.

During the eastern Canada component of our field research, Dr. Evelyn Merrill of the University of Alberta will be responsible for ensuring the research is carried out according to Canadian animal research requirements under the Canadian Council on Animal Care, through UofA's Animal Care Committee (ACC). NCASI is in the midst of working with UofA to prepare the standard operating procedures that will be reviewed by the ACC for approval prior to OMAFRA permitting the base camp for use. As this step is tied off, we will begin preparing for transporting the caribou herd from our base camp in Fort St. John, BC, expected to occur in early April, 2017.