

Research News

To The Members of The West-Central Alberta Caribou Standing Committee



Issue 10, April 2005

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Woodland Caribou Habitat Selection During Winter and Along Migratory Routes in West-Central Alberta.

Joanne Saher, MSc.
University of Alberta

Woodland caribou (*Rangifer tarandus caribou*) are a threatened species throughout Canada. Special management is therefore required to ensure habitat needs are met, particularly because much of their current distribution is heavily influenced by resource extraction activities. Although winter habitat is thought to be limiting and is the primary focus of conservation efforts, maintaining connectivity between summer and winter ranges has received little attention.

We used Global positioning system location data, from caribou inhabiting the Narraway range in west-central Alberta, to assess habitat selection patterns at multiple spatial scales during the winter and along spring migratory routes using resource selection functions (RSFs).

In winter, caribou selected habitat patches with high area to perimeter ratios and low terrain ruggedness, and forest stands with a larger component of black spruce (*Picea mariana*) and greater abundance of *Cladina mitis* (terrestrial lichen).

During the spring migratory period, caribou movement was punctuated. Non-linear models indicated that caribou traveled for some distance (movement behaviour) followed by a pause (resting/foraging behaviour). Based on these two behaviours, we identified two patterns of habitat selection (travel and foraging/resting) for caribou during the migratory period.

Caribou selected travel routes through less rugged areas that were closer to water, and rested/foraged in older forests with a greater component of pine, further from water. Arboreal lichen was more abundant at resting/foraging sites than traveling sites, suggesting importance as a food resource during migration.

RSF models provide a quantitative, spatially explicit predictive assessment of caribou occurrence and are therefore important tools that can be used in land use and conservation planning.



S. Hazenberg

Acknowledgements

Thank you to Dr. Fiona Schmiegelow, Dr. Luigi Morgantini and Dr. Bob Hudson. Alberta Sport, Recreation, Parks and Wildlife Foundation, ACA Grants in Biodiversity, the Natural Sciences and Engineering Research Council of Canada (NSERC), Weyerhaeuser Company, the Wilburforce Foundation, the Yellowstone to Yukon (Y2Y) Science Grants Program, and the Federation of Alberta Naturalists. Kim Lisgo, Tracy Gartner, Theresa Hannah, Charlene Nielsen, Shasta Rudyk, and Craig Hartel. Cam Aldridge, Jacqui Frair, Scott Nielsen, Chris Johnson, Meg Krawchuk, and Jesse Whittington, Sophie Czetwertynski, Roger Korth, Shawn Leroux, Layla Neufeld, Landon Shepherd, and Shannon Stotyn, Delbert Ellis, Warren Fleming, Robbie Gordey, Saakje Hazenberg, Randy Poole and my parents.

Caribou and Wolf Capture Update 2005

Winter caribou captures were completed at the end of February. The status of collars on each herd is as follows:

A la Peche Herd (ALP)

One GPS collar was recovered and replaced with a VHF collar on the ALP herd. Currently, there are 20 ALP caribou with VHF collars, and 1 caribou along Highway 40 carries a GPS collar.

Little Smoky Herd (LSM)

Ten new GPS and 9 VHF collars were deployed on the LSM caribou. Eight GPS collars were collected from the LSM herd in late February.

RedRock Prairie Creek Herd (RPC)

Eleven new GPS and 1 VHF collars were deployed on RPC herd in October 2004. There are 12 active GPS collars and 16 VHF collars on the RPC herd.

Little Smoky Wolves (LSM)

Four wolf packs in the LSM area carry GPS collars. Six GPS collars were collected from the Horse Creek (N=3), Simonette (N=1), Buckbean (N=1), and Muskeg (N=1) packs in late February.

Congratulations Joanne!

Joanne successfully defended her Master's thesis in March. A copy of Joanne's thesis is available on the WCACSC webpage www.rr2.ualberta.ca/research/caribou/publications.htm

'Research News' is intended to update members of the West-Central Alberta Caribou Standing Committee (WCACSC) about recent highlights of supported research, that are being prepared for final products. All results are preliminary and for information purposes only, and cannot be used without permission by the authors. For enquiries regarding the newsletter, contact Kim Lisgo (editor) at kim.lisgo@ualberta.ca.