

Wildlife Ecology

Dale Seip, Ph.D, P.Ag., R.P.Bio.
Wildlife Ecologist
Northern Interior Forest Region, Prince George

Dale's current research program is focused on understanding the habitat requirements of several woodland caribou herds. He is also involved in recovery planning for numerous threatened caribou populations. Elena Jones, of Resources North, is a collaborator in all aspects of Dale's current research program.



2008 Projects

1. Core habitats of Threatened caribou herds in the South Peace:

Radio-collared caribou are being monitored in 5 different herds in the south Peace to determine seasonal movements and habitat selection. Some of these caribou select windswept alpine habitats for winter range, whereas others use low elevation boreal forest stands. The results are being used to delineate Ungulate Winter Ranges and Wildlife Habitat Areas, and to help evaluate the potential impact of other industrial activities such as mines and wind farms. Funding for this year was provided by MOFR, ILMB, West Moberly First Nation, West Fraser Timber, Western Coal, Peace River Coal and First Coal.

2. Impact of Mountain Pine Beetle on Woodland caribou Pine-Lichen Winter Range:

This study is evaluating the impact of MPB attack on the pine-lichen winter range of the Kennedy Siding caribou herd. Some of the winter range has been salvage logged, but the remainder is being retained as standing dead forest to provide habitat for the caribou. Radio-collared caribou have continued to use the forest despite the MPB attack. The impact of the MPB attack on lichen availability, snow depth and caribou foraging behaviour is also being monitored. The results are being used to evaluate if retained stands of MPB killed forest continue to provide suitable caribou winter habitat. This project is funded by the FIA/FSP program, Project # Y091010.

3. Relationships between landscape features and wolf predation on Threatened caribou herds:

Wolf predation is often a major cause of mortality for caribou herds, and it appears that human-caused landscape alteration can result in increased levels of predation. Creation of early seral forests can enhance moose and deer populations leading to increased wolf numbers within caribou range. Roads and linear corridors can facilitate wolf movements into caribou habitat. This study is monitoring the movements and habitat use of wolves in the South Peace area adjacent to the caribou herds we are also studying. The results will indicate if forest harvesting and other industrial activities are associated with increased levels of wolf predation on the caribou. The project involves a graduate student from UNBC, and is funded by the Canadian Association of Petroleum Producers.

4. Recovery Planning and Extension:

Dale's extension work includes preparation of a Recovery Plan for the Kennedy Siding caribou herd, and active membership in the following stewardship/research groups:

- Science Advisory Group for National Boreal Caribou Recovery
- Provincial Mountain Caribou Science Team

- South Peace Shared Stewardship Committee
- Mountain Caribou Habitat Team for Omineca Region
- Science advisory team for Sulphur-8 Mile Stone's Sheep Project

Publications in 2007/08

- McDevitt, Allan D., Stefano Mariani, Mark Hebblewhite, Nicholas J. DeCesare, Luigi Morgantini, **Dale Seip**, Byron Weckworth, and Marco Musiani. *in press*. Survival in the Rockies of an endangered hybrid swarm from diverged caribou (*Rangifer tarandus*) lineages. *Molecular Biology*.
- Seip, Dale** and Bruce McLellan. 2008. Mountain caribou . In: Hummel, Monte and Justina C. Ray (editors). *Caribou and the North. A Shared Future*. Dunburn Press. Toronto.
- Seip, Dale R.** 2008. Mountain caribou interactions with wolves and moose in central British Columbia. *Alces* 44: 1-5.
- Johnson, Chris. J. and **Dale R. Seip**. 2008. Relationship between resource selection, distribution and abundance: a test with implications to theory and conservation. *Population Ecology* 50: 145-157.
- Heard, Douglas C., Lana M. Ciarniello, and **Dale R. Seip**. 2007. Grizzly bear behaviour and GPS collar fix rates. *Journal of Wildlife Management* 72: 596-602.
- Jones, Elena S., Michael P. Gillingham, **Dale R. Seip**, and Douglas C. Heard. 2007. Comparison of seasonal habitat selection between threatened woodland caribou ecotypes in central British Columbia. *Rangifer Special Issue No. 17*: 111-128.
- Ciarniello, Lana M., Mark S. Boyce, **Dale R. Seip** and Douglas C. Heard. 2007. Grizzly bear habitat selection is scale dependent. *Ecological Applications* 17: 1424-1440.
- Seip, Dale R.**, Chris J. Johnson, and Glen S. Watts. 2007. Displacement of Mountain caribou from winter habitat by snowmobiles. *Journal of Wildlife Management* 71: 1539-1534.
- Ciarniello, Lana M., Mark S. Boyce, Douglas C. Heard, and **Dale R. Seip**. 2007. Components of grizzly bear habitat selection: Density, habitats, roads and mortality risk. *Journal of Wildlife Management* 71: 1446-1457.