Caribou Conservation through Better Cutblock Design: Year 1

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When humans cut mature forest for timber, roads, or any other reason, we are converting caribou habitat into moose, deer, and elk habitat. This is driving the decline of Alberta's woodland caribou herds, and any long-term solution will have to tilt the balance back in favour of caribou. There may be creative ways of designing a forestry cutblock that accomplish this.

Objectives

This project aims to provide information on forest management that could limit habitat for deer, moose, and elk, and in turn promote caribou recovery. Specifically, the our goals are to i) determine harvesting regimes and silviculture prescriptions preferred by deer, moose, and elk within caribou ranges, and ii) identify priority areas for restoration.

Methods

We are using a combination of remote cameras and GPS collars deployed on deer to understand deer, moose, and elk habitat use within the ranges of the Narraway, Redrock Prairie Creek, A La Peche, and Little Smoky caribou herds in west-central Alberta. For cameras, we stratified cutblocks by age and ecosite; deploying 66 cameras in cutblocks 2018 and 54 cameras in cutblocks in 2019. We also established vegetation plots at camera locations. For GPS collar data we focused on deer, using baited clover traps to capture 12 white-tailed deer in the Little Smoky and A La Peche caribou ranges in the winter of 2018/19.

Camera data

As of August 31, 2019, we have collected cutblock photo data for approximately 23,000 camera days across the 120 cameras deployed during 2018 and 2019. Photo classification is in progress, and we have completed classification of summer and fall photos for 13 cameras. At these 13 cameras, we detected whitetail deer at 9 sites, mule deer at 7, moose at 8, and elk at 4. We also detected a wide range of additional species including grizzly bears, black bears, wolves, coyotes, lynx, fox, hares, squirrels, hawks, owls, and a bat. We also completed vegetation data collection at 66 of the cameras deployed to date.
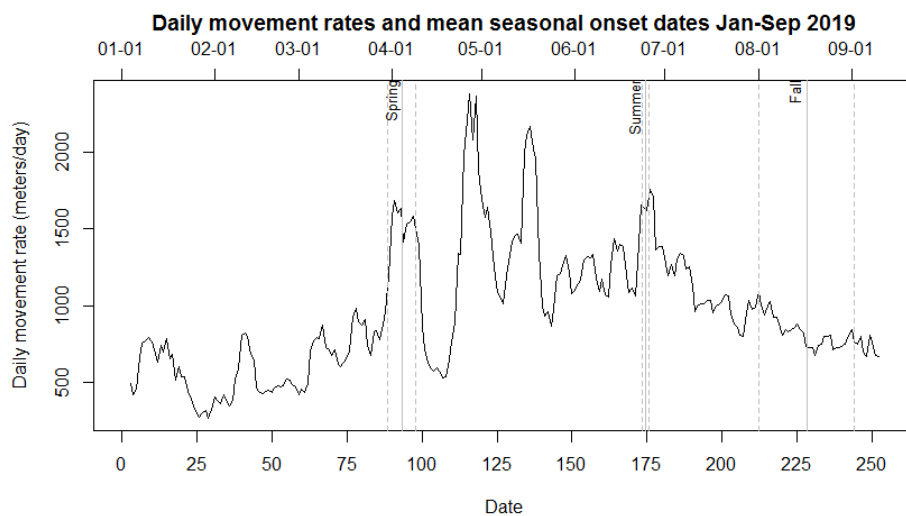
Capture and GPS Collar Data

Between January and March 2019 we captured 12 white-tailed deer (6 male, 6 female) and collared 9 (we did not collar the 3 young bucks captured). In February 2019, two does were predated – one by a wolf, and one by cougars. In March 2019, one doe was predated by wolves. Based on GPS location data collected between January and September 2019 we identified three distinct seasons based on deer movement rates: winter (Jan 1–April 3), spring (April 4–June 23), summer (June 24 onwards). These seasons are preliminary and may change with additional years of data collection.

Ongoing Work and Year 2

- Deploy remaining 14 collars in the Redrock-Prairie Creek and Narraway caribou ranges winter 2019/20
- Complete vegetation sampling for 31 remaining camera sites during May and June of 2019.
- Complete 2nd year of data collection at cameras and classify all photos
- Analyse data to understand deer, moose, and elk response to forest harvesting

Daily movement rates and mean seasonal onset dates Jan-Sep 2019

Acknowledgement

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