Title: Analyzing ranges and forays of Bighorn Sheep (*Ovis canadensis*) rams in Thompson Region, BC

Authors: Edyta Marcisz, Environmental Science Program, Thompson Rivers University, David Hill, Dept. Geography and Environmental Studies, Thompson Rivers University, Karl Larsen, Dept. Natural Resource Sciences, Thompson Rivers University

Abstract:

Understanding the importance of connectivity is a key consideration in the management of wildlife populations. Mapping wildlife movements is thus an important step in understanding the need for potential habitat corridors, inbreeding depression, transmission of disease, or general understanding of their landscape use.

This research is part of the Thompson Region Bighorn Sheep Collaring Project lead by the BC Ministry of Forest, Lands and Natural Resource Operations and Rural Development (FLNRORD). It is utilizing a large data set of spatial and temporal movements of bighorn sheep collected through GPS collars on 40 rams within 4 herds, from 2015 to 2018. The project aims to examine their land use, define home ranges, and locations of potential contact with domestic animals.

In addition, our project is exploring patterns in foray movements (occasional long-distance explorations) by individual rams. These movements often are ignored in home range analysis, but are significantly important in understanding connectivity between bighorn herds and/or potential interactions with domestic animals, such as sheep or goats.

The project will provide valuable information on the spatial distribution of bighorn herds in south-central BC, as well much-needed data on how the forays of individual rams should be factored into management decisions.

(198 words)