

## **Does seed source matter in grassland restoration?**

Sabina Donnelly

Supervisor: Dr. Lauchlan Fraser

Committee members: Dr. Wendy Gardner, Dr. Ron Smith and Dr. Jonathan Van Hamme

Bunchgrass biogeoclimatic zones are a valuable ecosystem in British Columbia and are difficult to restore after a major disturbance, especially in light of climate change. We collected seeds of *Pseudoroegneria spicata* (Bluebunch Wheatgrass) and *Festuca idahoensis* (Idaho Fescue) from ten populations in a north to south range extending from central British Columbia to northern California. We examined the morphological response of these populations to transplantation to a common garden in Kamloops British Columbia. During the growing season we measured morphological traits and calculated specific leaf area (SLA.) These were compared among populations to determine if significant variation in resource-use strategy existed. Results indicated that there were underlying differences in the growth and reproductive strategies of some populations of Bluebunch Wheatgrass and Idaho Fescue. However, the surrounding climate of the original locally-adapted population does not appear to influence these strategies.