

Together for Wildlife

Together for Wildlife HCTF Conservation Fellowship Recipient 2023



Julia Bizon

Julia Bizon is an MSc student at the University of Northern British Columbia in Prince George working under the supervision of Dr. Samuel Bartels. T4W funds will be used to support research for her thesis “Ecosystem Memory and Ecological Restoration of Wildlife Forage and Understory Diversity in a Young Pine Monoculture Plantation in Central-Interior BC”. Julia’s research focuses on the response of forest understory vegetation to a suite of restoration treatments involving stand-thinning and artificial canopy gaps.

Widespread across northern British Columbia is a long legacy of post-disturbance salvage logging, often in response to stand-replacing fire or pine beetle outbreaks. This resulted in the dominance of young, even-aged, single-species conifer-dominated (mostly pine) forests. Monocultures such as these negatively impact floristic diversity, ecosystem services, and forest health. Further, these forests are often characterized by simplified forest structure and homogeneous conditions, which allow less light transmission and throughfall to the understory, limiting development of vascular understory plants. A diverse understory is better able to provide nesting and forage for birds and small mammals, and provide food for many ungulate species, such as moose, caribou, and elk.

Tree thinning and canopy gaps are potential restoration treatments that can be performed in conifer-dominated monocultures to open the canopy, increasing resource availability in the understory to stimulate growth. Tree gaps promote small-scale heterogeneity by allowing for small areas that receive different levels of water and light, encouraging the growth of understory species that require different growing conditions. Thinning can enhance the functional diversity of the understory, with the potential for a long-lasting positive impact on understory growth due to enhanced resource levels.

It is difficult to predict the success of the restoration efforts at the Bobtail Enhancement Area without further information. It is possible that the tree thinning and gap treatments performed are sufficient to allow target species to regenerate in the coming years. However, it is also possible that understory growth is limited by non-resource-related forest floor conditions, and/or the regenerative material available in the soil, and will never reach a stage that can support moose populations. It is important to understand aspects of the site beyond resource limitations that may impact understory regeneration; this will allow us to predict the future potential for successful restoration of the Bobtail Enhancement Area.

In the future, Julia hopes to use her passion for forest regeneration and wildlife conservation to bring about change in the ways highly disturbed habitats are managed and restored.



HABITAT CONSERVATION
TRUST FOUNDATION



BRITISH
COLUMBIA