

Eve Pole

I am a 4th year Environmental Science student with a minor in Biology currently working on my Honours thesis project. My project focuses on arsenic bioaccumulation at a legacy gold mine in southwestern Nova Scotia and seeks to assess whether arsenic accumulation at this site poses any environmental risk.



Working on an Honours thesis provides a great opportunity to do research, while expanding on my passion for the environment. I would like to pursue a career in environmental consulting and conservation, and I am excited about the experience I am gaining at an undergraduate level. The Environmental Science program at Acadia has been a perfect match for me. Working in the K.C. Irving Environmental Science Centre has provided life-long skills, connections with awesome staff and fellow students, and has allowed me to grow my love for science.

Bioaccumulation of arsenic in Alders on gold mine tailings in southwestern Nova Scotia

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Objectives:

- Determine if there is a correlation between arsenic contamination in soils and the *Alnus spp.* present in the tailings
- Quantify arsenic present in the environment in both soils and *Alnus spp.* tissue using ICP-MS and XRF.



Nova Scotia has many legacy gold mining sites that are understudied and we need to better understand the contaminants present that could pose a risk to the environment. Alder trees (*Alnus spp.*) grow in disturbed areas and literature shows they are phytostabilizers in contaminated sites. mines. Studying the alder trees (*Alnus spp.*) present at the legacy gold mine in Molega may contribute to understanding bioaccumulation of toxic metals and their potential to be transferred through the food web.



Alder trees samples (*Alnus spp.*) collected from Molega Gold Mine, NS and prepared for analysis



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