

Metro Vancouver
SUSTAINABLE REGION SCHOLARS
UBC Sustainability Scholars Program
Summer 2018

Title of Research Project:

Forest fungal pathogen management – best practices for Regional Parks

1. How will this project make a contribution to regional sustainability?

Forest health is an important component of some of the large natural areas we rely on to provide the ecological goods and services we require to make our region liveable. We are fortunate to have a vibrant and robust Regional Parks System that conserves forested landscapes that contribute to our needs. Forests are subject naturally occurring pathogens that can negatively affect ecosystem health particularly if their virulence is increased through the effects of climate change. This project will provide insight into how best to manage a specific forest pathogen that appears to be increasing in intensity within our parks and likely other forested areas within the region. The identification of effective strategies and tactics for the management of brittle cinder fungus in our Regional Parks could mitigate the spread of the pathogen and further loss of deciduous trees within parks. Identified practices can contribute to maintaining healthier forests and could be applied throughout the region on lands outside of Regional Parks.

2. The purpose of the project is:

The objectives of this project are to:

- Gain better understanding of the extent and virulence of brittle cinder fungus (*Kretzschmaria deusta*) in the region
- Characterize the rate of spread of the disease within and between trees
- Determine if climate change may be a contributing factor to its virulence
- Identify strategies and tactics for the management of the disease within Regional Parks

3. Outline the scope of project and how the scholar's work will be used by Metro Vancouver:

The scope of the project should include:

1. Some field surveys to determine the extent of the disease in parks
2. Compilation of data and distribution analysis
3. Literature review on biology of the disease
4. Analysis of the potential for climate change to affect disease virulence and spread
5. Review of management practices for the control of the disease
6. Providing an opinion on hazard tree management practices as they relate to the presence of the disease
7. The development of a best management practice document for use in Regional Parks

Metro Vancouver will use this information to develop a plan to manage the presence and effect of the disease within Regional Park Lands.

4. Project Deliverables:

- A report containing the material listed above.
- If field work is included, a geo-referenced database of disease occurrence within the survey areas visited. Data should include an ArcGIS shapefile projected in NAD 83 zone 10.
- Final report or executive summary for the UBC Sustainability Scholars Program online project library.

[Submit applications here](#)

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5. Time Commitment

- This project will take **250** hours to complete.
- This project must be completed between **30 April 2018** and **10 August 2018**
- The scholar is expected to complete approximate 15 to 20 hours of work per week.
- The successful candidate will work directly with the project lead to determine the project timeline based on the Scholar's schedule and commitments.
- Scholar to be available, either in person or by telephone as agreed, for project start-up meeting, periodic status updates and draft and final report presentations.

6. Describe the required/preferred skill set and knowledge base for a Scholar

- Demonstrated understanding of forest management and forest pathology with some experience in tree assessment.
- Specific training in forest fungal pathogen management would be beneficial.
- A background in integrated pest management would be an asset but not required.
- Working knowledge of how to use GPS to develop a spatial database would help in database development.
- Excellent research and writing skills.
- Strong analytical skills
- Ability to work independently
- Demonstrated time management skills
- Deadline oriented
- Experience in using ESRI Arc GIS software for database development would be beneficial.

[Submit applications here](#)