

Volunteers in Parks

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Mill Hill Regional Park
Wildfire Impacts

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Using Photo-Point Monitoring to Study Wildfire Impacts at Mill Hill Regional Park

By Cole Lysgaard, MSc Student in Environmental Studies, University of Victoria

Mill Hill Regional Park, located on the traditional territory of the Lekwungen speaking peoples as represented today by Songhees and Esquimalt Nations, is largely comprised of picturesque Garry oak woodland. These ecosystems, which host stunning spring wildflowers and exceptional biodiversity, are legacies of longstanding cultivation and stewardship by Lekwungen peoples. Traditionally, these ecosystems would be managed using a variety of methods, and foremost among them was repeated low-intensity burning.

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Site 26 photographed mid-April. This site was heavily impacted by the fire, leaving soil bare.



Site 26 photographed in mid-May. Camas and sweet vernal grass are now in bloom.



Site 26 photographed in mid-June. Much of the bare soil has been revegetated, yet some remains near the end of the growing season.

Centuries of these practices resulted in many local plant species that are adapted to and dependent on periodic fire.

Garry oak ecosystems face many environmental threats today, and one of the greatest is the invasion of introduced plants. This is true at Mill Hill, where species such as Scotch broom and sweet vernal grass thrive, sometimes at the expense of native plants. Addressing this issue is difficult: invasive species often return after removal, or in some cases are replaced by a different invasive species. The challenges of invasive species control at Mill Hill took on new complexity in 2020 with the occurrence of a summer wildfire that scorched 4.6 hectares of the park's Garry oak community. The fire gives rise to uncertainty concerning how native and invasive plants will respond and rebound in affected areas. On the one hand, native species adapted to a history of low-intensity fire may be put at an advantage over invasive species. On the other hand, invasive species may gain the upper hand due to their affinity for disturbance and ability to quickly spread and establish dominance. Our work at Mill Hill uses photo-point monitoring to observe how plants respond to the burn. Ultimately, our goal is to explore whether fire provides more of an advantage to native or invasive species.

Our photo-point monitoring project captures vegetation responses by taking repeated photographs at 16 sites in and adjacent to the burned zone at Mill Hill. We have been photographing these sites every two weeks, starting in April 2021, and will continue doing so until mid-summer and potentially into future years. Our methods ensure precisely replicable camera placement, so that every repeated picture at a given site captures exactly the same field of view as all previous pictures (see images). This allows us to compare vegetation at various time points throughout the summer in order to look at changes in species composition and abundance. In addition, high resolution images make it possible to identify individual species and flowering times. By comparing vegetation growth between burned and unburned sites, we hope to determine whether burned areas are being rapidly overtaken by invasive species or rather providing native species with a chance to thrive. Hotter and drier summers brought on by climate change will increase the frequency and severity of wildfires. Due to this, it is important that we understand how fire impacts vegetation and invasion rates. Being able to accurately predict how wildfires will influence vegetation will provide land managers with a head start in combating invasion and supporting native plants.

Photo credit: Cole Lysgaard

Volunteer Profile

Amber Brown, has been a Park Steward since March 2019, first at Coles Bay Regional Park and most recently at Elk/Beaver Lake Regional Park.

Tell us a bit about yourself?

In a nutshell, I am a nature nut. I adopted that phrase when I was working as a naturalist at Goldstream Provincial Park. The more I learned the more fascinated I became. It drove me to pursue a Bachelor of Science from the University of Victoria. Nowadays I am still fascinated by every facet of the natural world. I am an avid gardener, seed saver, and a homegrown ethnobotanist. With the utmost gratitude, I honor the unceded traditional territory of the Lekwungen peoples, the Songhees, Esquimalt and WSÁNEC, Coast Salish peoples upon which I play, work and call home.

What is your favourite volunteer memory or experience?

My favourite memory or experience happens every time I visit the park. It is a unique experience in itself. Although, it was wonderful to see how many people came to the park during the lockdown seeking calm and serenity among the chaos. It is a happy place, everyone has a smile on their face, friends are laughing, and birds are singing, why would you want to be anywhere else?

What do you most enjoy about volunteering with Regional Parks?

Every time I visit the park I have a new experience in sharing the beauty of our nature parks with local and outside visitors. I am always on the watch for new growth, what is in bloom, potential nesting/hatchling sites for native turtles, sounds and songs of birds and so on. I could go on, which is why I very much enjoy and am grateful for my volunteering experience with CRD Regional Parks. It is great to be able to give back by volunteering in the community.



Staff Profile

Andrew Freer, Park Ranger since 2018

What is your position and when did you start working at Regional Parks?

I am a Park Ranger and I joined Regional Parks in 2018. Before this I spent 5 years working for CRD Bylaw and Animal Care Services as an Animal Control Officer, Kennel Master, and enforcing bylaws at the Hartland Landfill among other duties.

What do you enjoy about working at Regional Parks?

I really enjoy being a part of such a skilled and diverse group that all contribute to our world class parks system. Growing up on the Saanich Peninsula I've always had a great appreciation for the local parks and the recreational opportunities they offer to the community. Now as I'm getting older I appreciate the parks more for the wildlife, native plant life, and history. Being a Park Ranger has been a tremendous opportunity to ensure other members of the community young and old appreciate and respect the parks for all that they offer so that the parks may continue to thrive and generations can enjoy them for years to come. Being a small part of the team that contributes to this overall goal gives me all the job fulfillment I need.

Tell us a bit about yourself

As I mentioned I was born and raised on the Saanich Peninsula and I was very stubborn in creating a life for myself, my partner Jess, and our dog PJ in that same area I grew up. We were eventually lucky enough to purchase a home in North Saanich and cement my Saanich Peninsula roots. I enjoy going on adventures with my dog PJ and doing some very amateur birding in the parks as a hobby (just don't ask me about water fowl.) If I'm not out and about, I enjoy going to my local CrossFit gym, hiding in my videogame room until too late at night, or reading Stephen King novels.



Volunteer & Park Updates

The section of the E&N Rail Trail between the railway crossing on Atkins Avenue and Savory School in Langford is substantively complete and now open for public use. The E&N Rail Trail – Humpback Connector is being constructed largely within the E&N rail corridor, in phases over a number of years, and will be approximately 17 kilometres in length when complete. This newest section creates a continuous 13 kms of trail between Jacklin Road in Langford and Esquimalt Road in Victoria. The CRD received a \$1 million dollar grant, through the BC Active Transportation program (formerly BikeBC) towards its completion.

Sooke Hills Wilderness Regional Park has gotten a few trail upgrades this summer. Regional Parks staff just completed the Sheppard Creek boardwalk and bridge project. With multiple summits, long distance trails, and connectivity to other parks, countless adventures can start from this location.



Welcome to our new volunteers!

Carley Anderson – Park Steward Coles Bay
Larry Flading – Park Steward East Sooke
Lynelle Ridewood – Park Steward Sooke Potholes
Liam Stocker – Park Steward Island View Beach
Douglas Van Ek – Park Steward Sooke Potholes/
Galloping Goose
Joanna Verano – Park Steward Lone Tree Hill
Shandy White – Park Steward Thetis Lake

The Capital Regional District (CRD) is accepting expressions of interest for volunteers to serve a three year term on the Elk/Beaver Lake Recreational Use Advisory Committee (EBLRUAC). The EBLRUAC will collaboratively provide advice and guidance on appropriate water-based recreational uses of Elk/Beaver Lake. For more information, please contact us. To apply: email your submission with a short bio stating your interest and relevant experience to: crdparks@crd.bc.ca

All photos in this newsletter are supplied from the CRD Image Bank unless otherwise noted.