

## Summer 2024 Internship Opportunity

Title

### **Sandown Coastal Douglas Fir Forest: Mapping and Restoration Plan Development**

Organization

Sandown Centre for Regenerative Agriculture

#### **Project Background & Overview**

Urban forests face significant challenges. Their position at the interface between industrial, residential, and natural areas presents major stewardship obstacles - many urban forests contend with invasive species, pollution, varied levels of degradation, and highly fragmented borders within scattered remnants of once contiguous forest. Urban forests also bear the legacies of colonization and drastic change on southern Vancouver Island where landscapes that were stewarded for millennia were altered and fragmented in a very short period of time.

Careful urban forest management presents major opportunities for improving a range of overlapping ecosystem services. Well stewarded forests can contribute to improved water cycling through increased rainfall interception, infiltration and water storage while also creating wildlife habitat and helping to filter air from the surrounding urban areas. This can play an increasingly important role as southern Vancouver Island is experiencing increasingly hot and dry summers with drought-like conditions lasting months in the region.

The Sandown Centre for Regenerative Agriculture offers a unique opportunity for tending an urban forest in a highly altered and fragmented landscape. The SCRA stewards 83-acres of publicly owned ALR farmland, wetland, and forest on traditional W̱SÍ, KEM territory in North Saanich, BC. The site was formerly a horse racing track and is now being restored into a multi-functional landscape which combines agriculture with stewardship and restoration of a variety of sensitive ecosystems including forests, wetlands, and a Garry oak meadow.

This research project will inform the long-term management of the forested section of the land. The SCRA is responsible for stewarding approximately 17 acres of varied second-growth coastal Douglas fir forest and a low-lying wetland complex of western red cedar-skunk cabbage swamp and natural springs. The forest has been heavily impacted by invasive species (such as English ivy) and decades of abandonment; the overarching aim of the SCRA is to restore this ecosystem in a way that ensures its health and vitality while addressing critical issues such as biodiversity loss, ecological degradation, and the impacts of colonization on the landscape.

The Sustainability Scholar will be responsible for mapping the forest into zones, to identify areas of high, medium and low priority for restoration, as well as key native species and a general sense of the forest ecology. They will then develop a list of short- and medium-term actions for the high priority areas and develop an actionable restoration plan for one high priority zone. Additional restoration plans for subsequent zones can also be developed, time permitting.

The student will work closely with the SCRA management team and will be supported in an outreach and consultation process with members of the W̱SÁNEĆ nation. Major inspiration can be drawn from the stewardship work of groups like PEPÁKEN HÁUTW and the W̱SÍ,ĶEM ivy project on the Jim family land.

## **Project Description**

This project will inform the long-term management of a second-growth coastal Douglas fir forest that has suffered from decades of neglect and the encroachment of invasive species. English ivy presents one of the gravest challenges to the health of the forest; it is widespread and well-established across much of the forest and will require a well-defined management plan and volunteer program to be dealt with effectively.

The Sustainability Scholar will be responsible for mapping the forest, creating management zones, and developing a list of short- and medium-term actions for the high priority areas. The forest is immensely diverse and some parts do not need much active work - the higher areas are dominated by Douglas fir while the low-lying areas are a western red-cedar and skunk cabbage swamp with a great diversity of plants like salmonberry, oceanspray, skunk cabbage, and horsetail scattered throughout. There are also many deciduous trees like cottonwood, red alder, and bigleaf maple throughout the forest.

All research will be supported by the SCRA's Stewardship Manager. Work will take place over 250 hours from May to August 2024 and will strive to include collaboration and consultation with local members of the W̱SÁNEĆ nation. It is incredibly important to the SCRA that our restoration process is informed by W̱SÁNEĆ (and W̱SÍ,ĶEM) practices, is culturally sensitive, ecologically sound, and achievable.

## **Project Scope**

The Sustainability Scholar will be responsible for laying the groundwork for a comprehensive forest management plan for 17-acres of diverse second growth coastal Douglas fir forest. This work will include on-the-ground mapping, research, and the creation of deliverables to be shared with the organization. The work will help to determine the best ways to manage the forest as well as focusing on Indigenous consultation to ensure that all work is culturally sensitive and relevant to the interests of the local First Nations.

Scope of Work:

- Conduct an inventory mapping of the forest and delineate zones based on vegetation composition and site characteristics. The level of detail required will be determined based on the experience of the Scholar.
- Categorize zones into high, medium and low priority areas for focussed restoration.
- Research and set short- and medium-term actions for each high priority zone.
- Develop a detailed restoration plan for one high priority zone, , including suggestions for ivy removal and the selection of Indigenous species for replanting.
- Analyze historical data and consult with regional experts to determine optimal timelines for achieving restoration goals.
- Consult with local First Nations to ensure their cultural and practical considerations are integrated into the plan. This will be done in collaboration with SCRA's Stewardship Manager and Executive Director.

The exact requirements will be finalized with the Scholar at the beginning of the project.

## **Deliverables**

1. Map of the forest into zones, including high, medium and low priority areas for restoration. Mapping should include tree canopy, species of note, predominant native and invasive species, and any key identifying features, such as waterways. The student will work with the Stewardship Manager at the beginning of their placement to allow for student input, and further define the scope of the map.
2. List of short- and long-term actions associated with the restoration of each zone. This work will provide recommendations and the research will inform the development of a detailed restoration plan for one zone.
3. Detailed restoration plan for one high-priority zone, chosen by the student.

## **Time Commitment**

This project will take place between May 1 and August 15th. Field work will start immediately and progress will be monitored regularly by the SCRA Stewardship Manager. Consultations will also occur towards the beginning of the project. A draft map should be completed within the first month of the project, to inform restoration research, and the final month will mainly focus on finalizing the specific restoration plan.

## **Required/Preferred Skills and Background**

- Excellent research and writing skills
- Demonstrated interest in sustainability

- Experience conducting stakeholder engagement events, including facilitation skills, is an asset
- Familiarity with research methodologies and survey techniques
- Excellent public speaking and presentation skills
- Community engagement experience
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Strong technical and drafting skills
- GIS training or experience
- Design and layout skills

### **Additional Information**

We encourage Scholars who have a passion for sustainability, strong analytical abilities, and the motivation to drive positive change. The ideal candidate should be experienced with forest management, knowledgeable about regional vegetation and ecosystem characteristics, and skilled in GIS and inventory mapping. The Scholar should also be able to work independently and require minimal oversight (though there will be continual support and direction from the SCRA Stewardship Manager).

Our commitment to regenerative practices extends beyond the ecological realm and encompasses social and cultural dimensions. We gratefully accept applications from Indigenous people, and members of the BIPOC and/or 2SLGBTQ+ communities. Please feel free to self-identify in your application.

### **Additional project requirements**

The Scholar can use whichever computer or phone programs they feel most comfortable using (including free programs like Avenza and QGIS). The #72 bus route runs within a 15 minute walk of the forest although a personal vehicle would improve accessibility to the site.

The Scholar is responsible for their own meals and comfort and should arrive with appropriate clothing for a range of weather conditions. The SCRA will provide a thorough orientation of the site and safety protocols, and the Stewardship Manager will be available for any questions or clarifications.

### **UVic Sustainability Scholars Program**

All current UVic graduate students are invited to apply for an impactful sustainability research project. Sustainability Scholars Program internships are designed and mentored by partner organizations and paid at a rate of \$30.87 per hour (after deductions) for 250 hours from May 1 to Aug 15. Explore details on our [website](#) and review eligibility criteria before applying. Contact Laurel Currie, Program Manager, with any questions: [sustainability-scholars@uvic.ca](mailto:sustainability-scholars@uvic.ca).

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