

Our Backyard

A NEWSLETTER ON THE NATURAL ENVIRONMENT IN SAANICH



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In This Issue:

[Living in the Coastal Douglas-fir Zone](#) | [Pulling Together Volunteer Feature](#) | [Native Plant Recovery Process underway on Christmas Hill](#) | [Colquitz River Restoration Project by Copley East Park](#) | [After Blackberry Removal, Aim for Rapid Closed-Canopy Tree Cover](#) | [Events](#)



Living in the Coastal Douglas-fir Zone

By Thomas Munson, District of Saanich
Senior Environmental Planner

Imagine yourself seated on a forest floor, in filtered sunlight, shaded by the tall forms of Douglas-fir, Western Redcedar and Grand Fir trees. Also with you on the forest floor are clumps of Sword Fern, patches of Dull Oregon Grape, maybe some scattered Oceanspray, and wildflowers such as Vanilla Leaf, Foamflower and Western Trillium. In the distance a woodpecker carves away at a decaying Douglas-fir trunk. You fall asleep on a bed of Oregon Beaked Moss, thinking that this forest may have been here 'since time immemorial!

Then you wake up from your dream in a sunny meadow in springtime, a meadow full of waving stems of Idaho Fescue, and of blossoming wildflowers such as Great Camas, Western Buttercup, Yellow Montane Violet, and White Fawn Lily near the meadow's edge. You are under the arching branches of a large Garry Oak tree, and butterflies and small birds are flitting about the meadow. You wonder....where am I?

You could only be in one place in Canada – the Coastal Douglas-fir (CDF) ecosystem, found only on the dry eastern side of Vancouver Island and on the adjacent Gulf Islands. This ecosystem is the smallest recognized biogeoclimatic zone in the province of BC, encompassing only 0.3% of BC's land mass. And, only about 6% of

this zone is protected from development. Of all the zones in BC, the CDF has been most altered by human activities. Less than 1% of the CDF remains in old-growth forests and 49% of the land base has been permanently converted by human activities.

The Garry Oak ecosystem is a subset of the CDF zone and has been the ecosystem most altered and disturbed by human development. Because the Garry Oak ecosystem is found at low elevations along the Vancouver Island coastline, it attracted the first European settlers; the wide open meadows with scattered mature Garry Oak trees and a grassland, or park-like setting, were the sites of early habitation and land clearing. The local First Nations had used and shaped the parkland landscape through annual purposeful burns, which removed species in the meadows which competed with camas, a staple carbohydrate.

The CDF zone is home to the highest number of species and ecosystems at risk in BC, many of which are ranked globally as imperiled or critically imperiled. Much of the habitat still functional for these species has been fragmented but still provides a home for 200 plus species of wildlife and plants at risk. And much of the land with habitat for Garry Oak and Douglas-fir ecosystems – almost 80% - is found on private property, which restricts options for further protection.



The ecological uniqueness of the CDF zone can be attributed to its location on the dry rainshadow landscape of the east side of Vancouver Island, but only south of Campbell River. The climatic zone is distinct from the remainder of Vancouver Island in having a Mediterranean-like climate, with very dry summers and mild wet winters. Species unique to this zone are found nowhere else in Canada, but the zone continues down the U.S. coast through Washington, Oregon and into the northern parts of California.

Following the arrival of Europeans in the early 1800's, human impacts on the CDF zone intensified. The Indigenous Peoples were displaced from their ancestral lands and large scale agriculture arrived in the form of cattle and cropland planting and harvesting. At the same time, logging of the coniferous trees began in earnest, around 1850. The combination of timber harvest, agriculture, and urban development since the mid 1800's has changed the CDF landscape immeasurably. Less than 5% of the original Garry Oak ecosystem is left in scattered patches surrounded by human habitation and transportation systems. The list of species now designated as 'at risk' in the CDF zone increases annually.

You've woken up from your dream with this sobering information. The CDF zone is the most threatened in all of B.C. Threats to its survival continue: increasing human habitation, a changing climate, development pressures, international attraction as a place to live, influx of invasive species, and prohibitions on the use of prescribed fire, which is crucial to the survival of some Garry Oak species.

What can you do to halt the decline of this unique ecosystem inhabited by species found nowhere else in Canada?

First, learn about the natural world around you, which means getting outside and exploring this landscape. Discuss the importance of protecting the few remaining and semi-intact areas of native CDF habitat with friends, family, and neighbours. Support programs that create incentives for private landowners to protect and restore CDF landscapes on their properties. Become a volunteer and help to remove invasive species and to restore CDF habitat and species. Plant native species on your own property and encourage your neighbours to do the same.

As the old Chinese proverb goes: *"When is the best time to plant a tree? 25 years ago. When is the second best time to plant a tree? Today."* These actions combined will help to protect and preserve what remains of a truly unique ecosystem in the province and country. After you have completed some or all of these actions, you should reward yourself by going back to that old-growth forest, or to that Garry Oak meadow, to lie down and dream again.

PULLING **TOGETHER** Volunteer Feature

By Geof Squarok and Jenny Eastman, Saanich
Parks *Pulling Together* Volunteer Coordinator

Volunteer Profile : Geof Squarok ***Pulling Together* Volunteer Program Lead Steward**

Geof is a long time gardener at the Capital City Allotment Gardens and Lead Steward with the Pulling Together Volunteer Program. The gardens are unique in that they are situated on the upper reach of Swan Creek which is also a flood plain.

In 2014, while the president of the Allotment Gardens, Geof began working closely with Saanich Parks staff and Peninsula Streams Watershed Society to begin a major creek salmon habitat restoration program. The

project involved dredging the waterway the length of the garden to deepen the channel, remove invasive species as well as debris which restricted water flow. This was followed by mass planting of native species such as Red-osier Dogwood, Hardhack and Willow. Geof has worked hard at facilitating numerous work parties before and after the dredging to control the Yellow Flag Iris and Reed Canarygrass and to spread mulch around native plantings.



Growing up on a farm in Alberta, Geof grew up close to the land with much time to grow food and explore nature - something he values about his role at the gardens. With his past experiences as a cook, to operating his own renovation business, Geof has developed many practical skills which have proved useful both in growing food, volunteering and learning about salmon habitat restoration. Geof notes that, *“Acting as the Lead Steward of the Creek for the past four years has been rewarding and challenging experience.”*

One of Geof’s goals is to establish a set of guidelines for gardening within a riparian zone that both respects the gardeners ability to grow food, while continuing to maintain and support the natural ecosystem along the creek. A passionate photographer, Geof has documented the many changes along the creek and gardens. He has watched how the native plantings have flourished, recorded the annual flooding and documented the many work parties supported by Saanich Parks, Friends of Swan Creek, and loyal supporters within the allotment gardens.



Native Plant Recovery Process Underway

By Kathleen E. Burton, Executive Director
Swan Lake Christmas Hill Nature Sanctuary



Lumber pile to carry to the top of Christmas Hill



UVIC students carrying lumber up Christmas Hill



Finished fence with Restoration Area sign

Swan Lake Christmas Hill Nature Sanctuary is a wild oasis in the heart of the urban landscape and includes two distinct ecosystems: the beautiful marshland of Swan Lake and the rocky, oak-forested highlands of Christmas Hill. Both are home to an incredible array of native plants and wild animals. The Sanctuary is a living classroom fostering an understanding and appreciation of nature through direct experiences and stewardship.

Native plant stewardship and recovery at the Sanctuary is the process by which the decline of native plants is arrested or reversed, and threats are removed or reduced to improve the likelihood of the plants persistence in the wild. Ecological restoration activities such as this have been occurring at the Sanctuary for more than 25 years. Christmas Hill has recently had more restoration work take place, marking portions of the Hill off limits to the general public effective immediately to protect the native plants.

The balance between ecological concerns and societal demands is delicate, especially for an area with such prominent features, both geographically and socially. Left unprotected from foot traffic, plants like Kinnikinnick (*Arctostaphylos uva-ursi*) will likely never recover. This small, trailing, evergreen shrub with dark green leaves should be flourishing here. With bright red berries that look like miniature apples, this plant needs time to recover from the pressures of trampling. Sanctuary visitors think the view is stunning now, but imagine how beautiful it will be once the plants that once flourished there have had time to recuperate.

"Christmas Hill is one of the best examples of Garry Oak and associated ecosystems in the region and it is important the preservation of the Hill be safeguarded." Remarked Jay Rastogi, Site Manager, *"The fencing project completed this weekend was a collaborative project between Swan Lake staff, University of Victoria Environmental studies students, and Pacific Christian School students. It was a true labour of love with each of the cedar split rails being shouldered up the hill by the student volunteers."*

On Christmas Hill

“The decision to fence off one of the viewing areas was not made lightly by the Ecosystem and Facilities Committee.” remarked Kathleen Burton, Executive Director, *“In the end, we are a conservation organization and this recovery strategy meets the Society’s commitment to recover species at risk. Christmas Hill includes diverse assemblages of some of the region’s rarest plant communities and is home to approximately 250 plant species and seven plants deemed ‘at risk’.”*

Many visitors to the Hill come for the view, and as such the fence was built so as not to disappoint and obstruct it. With the fencing installed, the view remains breathtaking, all that has changed is the footprint in which the public can physically place their feet. The physical structure of the fence focuses on the conservation of the natural features of the Hill. It allows for the proper management of species at risk, to accompany the removal of invasive exotic species, and the establishment of ecological restoration plans for key habitat zones like this. It allows the Sanctuary to maintain the Hill as an open and accessible place for people to visit and use in respectful ways.

Christmas Hill is almost completely surrounded by residential housing and although there is currently very little public parking for the Hill, greater numbers of people continue to visit the Hill due to continued residential densification in the area. Moreover, the likelihood that people will use or treat the Hill in inappropriate ways, from off-trail use to vandalism, will continue to grow and remains a principal threat to the ongoing ecological health of the Hill.

Managed by a non-profit society, this urban refuge provides an exceptional opportunity to bring people and nature together. For more information, including how to donate, please visit our website at swanlake.bc.ca



Damage to Kinnikinnick done by people walking in the area



Colquitz River Restoration Project by Copley East Park

By Peninsula Streams Society Staff

Peninsula Streams Society and the District of Saanich (Natural Areas and Creeks and Waterways sections) partnered recently to restore a 120 metre section of Colquitz River adjacent to Copley East Park in Saanich. The restored site provides spawning and rearing habitat for Coho Salmon and Cutthroat Trout, as well as other fish and wildlife.

When Peninsula Streams' staff first visited the project site back in 2011, we were struck by a couple observations. For one, the creek bed was almost completely devoid of key structural features including spawning gravel, rock riffles, large rock, woody debris and rearing pools all of which are vital components of salmon habitat. Secondly, the soil in the riparian area along this section of creek was extremely compacted, likely from decades of foot traffic and other recreation activities - essentially, this area had been "loved to death."

The instream work took place in August, and included the construction of one Newbury weir with spawning gravel additions and two long boulder cluster runs with spawning gravel additions. As well, pools, large rock and woody debris were added to create habitat for fish, and to repair bank erosion. Beside the creek, the compacted soil was tilled by excavator, after which mulch and woody debris were added. Extensive streamside planting is scheduled for Fall 2019, with a community planting event to be held on Saturday November 16th (contact Peninsula Streams for details). Split-rail fences have been installed to protect the restored areas, with a viewing area so park visitors can view the restored creek. This will be a key location to view salmon spawning in the Fall. Interpretive signage will be designed and installed as part of the continuing restoration.

The second phase of the project will be undertaken in 2020 and will involve similar restoration activities on 100 metres of creek directly downstream of the 2019 works.



Peninsula Streams was pleased to continue their working relationship with the District of Saanich Natural Areas and Creeks and Waterways sections on this project, and were impressed with the level of cooperation and professionalism shown by staff. We look forward to working together on next year's project!

This project was also supported by Pacific Salmon Foundation, the Freshwater Fisheries Society of BC, the Ministry of Transportation and Infrastructure, BC Gaming, the Victoria Fish and Game Protective Association, the Haig-Brown Fly Fishing Association and the Portage Inlet Cutthroat Initiative.

The restored section is easily viewed from the Colquitz River Trail, just north of Copley Park, accessible from Eastridge Crescent. Please contact PeninsulaStreams@gmail.com if you are interested in future volunteer opportunities on Colquitz River mainstem, or would like to know more about this project. For more information, like us on Facebook at <https://www.facebook.com/Peninsula.Streams.Society/> and visit <http://peninsulastreams.ca/watersheds/colquitz-watershed>

After Blackberry Removal, Aim for Rapid Closed-Canopy Tree Cover



By Everett Peterson, Lead Steward,
Goward Woodland

Ecological restoration specialists like Dave Polster recommend a re-establishment of tree canopy to inhibit regrowth of blackberry thickets. Are there ways to hasten the creation of a closed tree canopy? This example from Goward woodland at 2495 Arbutus Road suggests that if tree planting is combined with naturally-regenerating native trees, then the tree spacing necessary for future closed canopy can be hastened.

Figure 1 shows a sample rectangle in July 2019, an area that was dominated by dense blackberry until 2014.

1. Is a mature cottonwood tree whose roots produce new suckers each year (see #4 and #6).

The other nine small trees are:

2. Nursery-produced alder, 1.5 meters tall when planted in April 2017 and 5 meters tall in summer 2019.
3. An alder, self-germinated in early 2018, is 1.5 meters tall in 2019;
4. In the background, directly above arms of the bench, is the elliptical crown of a cottonwood that emerged as a root sucker in March 2017, and after three growing seasons is 6 meters tall;
5. Right of the bench is a nursery-produced cedar planted in 2014, now over 2 meters tall;
6. A 2018 cottonwood sucker, over 1 meter tall in 2019.
7. A cedar planted in 2014 now equals the height of its 1.5-metre protective wire ring;

8. In the background is an alder stem 5 metres tall – the dark space behind this stem is the void created when blackberry was removed beneath a salmonberry canopy.
9. Hidden behind the foliage of #10 is a 2-metre alder planted in 2015;
10. This cedar was 50 cm tall when planted in 2012 and is over 5 metres in summer 2019.

The 9 young trees (#2 to #10) in Figure 1 occur in a rectangle 6 metres wide (from #1 to #10) and 28 meters long (from vantage point to #8). This 168 square metre area also contains 6 small cottonwoods and alders too small to be visible in Figure 1. Is this density of 15 new trees sufficient to create a future closed canopy? They would need an average future crown area of about 11 square metres each to achieve a closed canopy in this sample rectangle.

Lateral branches develop quickly on young alder and cottonwoods in moist sites. After only three growing seasons, alder #2 has side branches that already extend outwards as much as 1.4 metres. A 1.4-metre radius geometrically translates to a circle area of about 6 square metres. By the fourth growing season these alder branches can extend to a 2-metre radius, which translates to a 12 square-metre circular area for a young alder tree. This example demonstrates that under favourable growing conditions, in as little as five years it is possible to achieve the spacing needed for a future closed canopy, especially when rapid-growth natural regeneration is available to complement planted seedlings.



Figure 1:
Locations of 9 natural and
planted young trees as of 2019



SAANICH RECREATION TRAILS & TREKS

<http://www.saanich.ca/EN/main/parks-recreation-culture/active-living-guide.html> 250-475-5408

Weekend Walks (FREE drop-in)

Sundays | 1 p.m. to 3 p.m.

Discover the beauty of Saanich parks in your backyard. These FREE guided hikes are open to adults of all ages. No registration required. Please wear sturdy and supportive footwear. Carry drinking water. Walks go rain or shine.

- Nov 17** Shelbourne Valley Circle. Meet by footbridge in main parking lot of Cedar Hill Recreation Centre.
- Dec 8** Mystic Vale to Queenswood Drive. Meet at Henderson Recreation Centre, main door (2291 Cedar Hill X Road).
- Jan 26** Cadboro Bay to 10-Mile Point. Meet at the Cadboro Bay Gyro Park parking lot, at the end of Sinclair Rd.

Gentle Walk & Talk (FREE drop-in)

Thursdays | 9:30 a.m. to 11 a.m.

Enjoy beautiful scenery, a friendly chat, and gentle exercise as we walk through our parks & trails. Suitable for all walking abilities, but wear suitable footwear. Dogs not permitted.

- Nov 14** UVic Alumni Chip Trail. Meet at Henderson Recreation Centre, main door (2291 Cedar Hill X Road).
- Nov 21** Bow Park. Meet at Gordon Head Recreation Centre lobby, 4100 Lambrick Way.
- Nov 28** Cedar Hill to Peacock Hill. Meet at Cedar Hill Recreation Centre main doors.
- Jan 2** Bowker Creek. Meet at Cedar Hill Recreation Centre.
- Jan 9** Blenkinsop Valley. Meet at Lochside Elementary, corner of Royal Oak and Lochside on Trail.
- Jan 16** Cedar Hill to Playfair Park. Meet at Cedar Hill Recreation Centre main doors.
- Jan 23** Gorge Waterway. Meet at Gorge Water Waterway Park near canoe club off Tillicum Road.
- Jan 30** Interurban Rail Trail. Meet at Red Barn Market, 5550 West Saanich Road parking lot.

CRD PARKS & ENVIRONMENTAL SERVICES

Our naturalists lead guided walks, hikes, canoeing, and events for all ages. Most are free, all are fun! The Parks brochure can be found here: www.crd.bc.ca/parks-events 250-478-3344

Going Squirrely! (Guided Walk: all ages)

Saturday, November 23 | 1 p.m. to 2:30 p.m.

Francis/King Regional Park Nature Centre

What does it take to survive as a squirrel? With a CRD Regional Parks naturalist, discover what keeps these furry creatures busy at this time of year.

SWAN LAKE NATURE SANCTUARY

www.swanlake.bc.ca 250-479-0211

Guided Bird Walks (drop-in)

Every Sunday | 9 a.m. to 10:30 a.m.

Bring your binoculars and walking shoes and dress for the weather. Meet in the large parking lot for this informal walk around the lake area. Donations are appreciated.

Bats: Facts or Fiction (drop-in)

Sunday, November 24 | 12 p.m. to 3 p.m.

Fearsome flyers or pest control experts? Join us for some hands-on discovery, games and crafts featuring the only true flying mammal on earth. All ages welcome. Admission by donation/\$5 per person suggested.

OUTERBRIDGE PARK BIRD WALK

Sunday December 8 | 9 a.m.

Rocky Point Bird Observatory hosts bird walks at Outerbridge Park in Saanich on the 2nd Sunday of each month. The walks begin at 9 a.m. at the parking area off Royal Oak Drive. For dates and details, see <http://rpbo.org>

VICTORIA NATURAL HISTORY SOCIETY

Visit www.naturevictoria.ca for more programs.

Saturday Morning Birding (most Saturdays)

Check the Calendar to find out the week's location and time (http://www.vicnhs.bc.ca/?page_id=1518). All experience levels welcome. Non-members can participate up to three times.

Christmas Bird Count (drop-in event)

Saturday, December 14 | all day

Greater Victoria Area

The Victoria Christmas Bird Count is here again. Everyone is welcome! Novices will team up with more experienced counters. For more information, please visit: christmasbirdcount.ca

Natural History Night (every 2nd Tuesday)

Photos of BC's Coastal Wilderness | Tuesday, Dec 10, 7:30 p.m.

UVic Fraser Building, Room 159

Botany Night (every 3rd Tuesday)

What are the mycoheterotrophs | Tuesday, Nov 19, 7:30 p.m.

Botany Night Year-end Party | Tuesday, Dec 17, 7:30 p.m.

Swan Lake Nature Centre

Marine Night (last Monday of the month)

Recent Warm Anomalies in the Ocean | Mon, Nov 25, 7:30 p.m.

UVic Fraser Building, Room 159

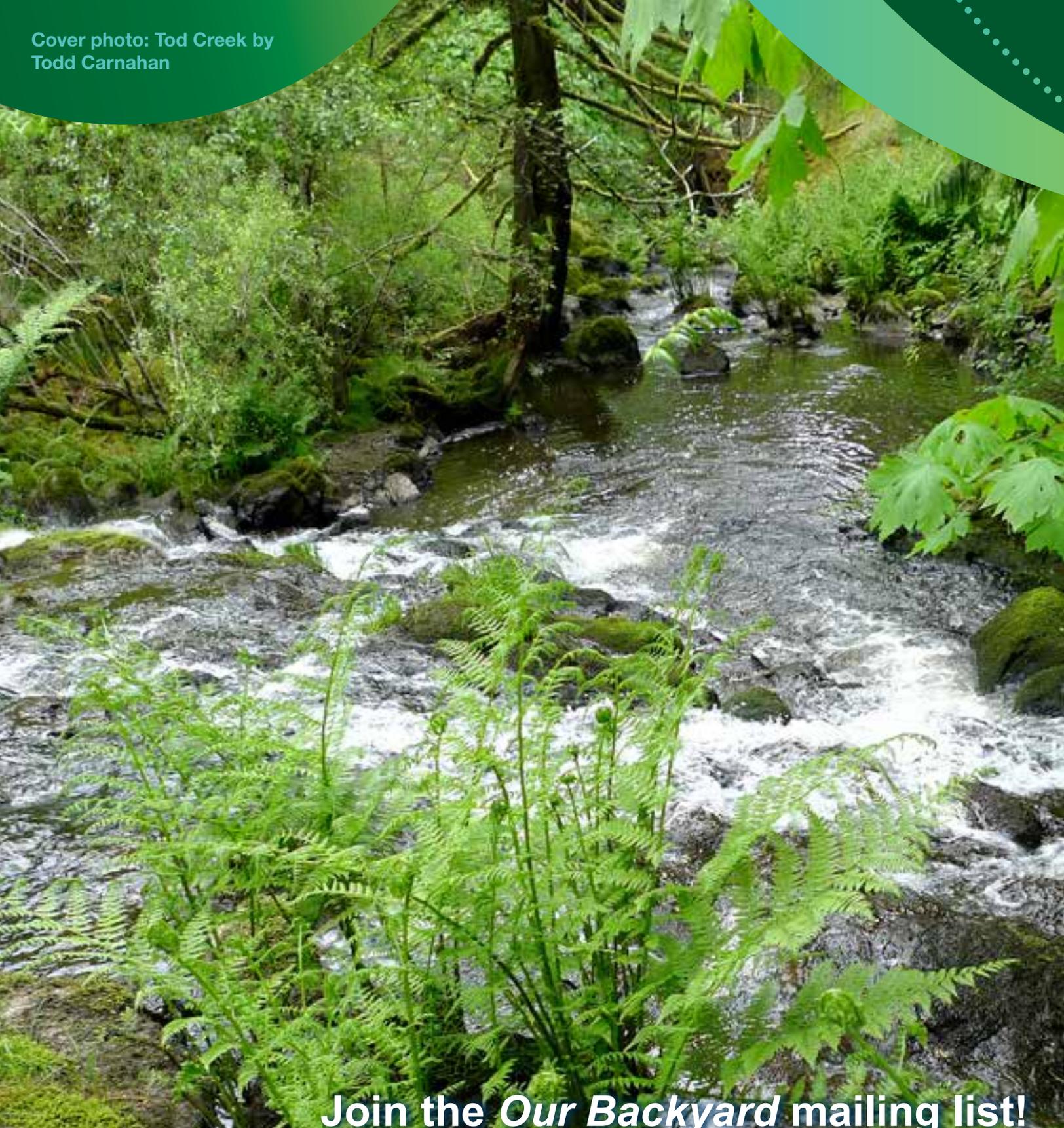
Birder's Night (every 4th Wednesday)

Land-based Seabird Observations | Wed, Nov 27, 7:30 p.m.

UVic Fraser Building, Room 159



Cover photo: Tod Creek by
Todd Carnahan

A photograph of a small, clear stream flowing through a dense forest. The water is white with foam as it flows over rocks. The surrounding vegetation is lush and green, with many ferns in the foreground and moss-covered rocks. The scene is bright and natural.

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