



LIGHTHOUSE PARK PRESERVATION SOCIETY

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LIGHTHOUSE PARK'S OLD GROWTH FOREST by David L. Cook



(left) LPPS volunteers working along bluffs in Lighthouse Park, Photo Credit David McQueen (insert) David Cook in Lighthouse Park, Photo Credit David Cook

Sixty-five hectares of forested land were set aside by the Dominion Government of Canada in 1881 to act as a dark backdrop for the Point Atkinson lighthouse which had been built in 1874.

Because this forested land, now Lighthouse Park, was never logged, the park preserves a rare fragment of ancient (old-growth) forest dominated by veteran Douglas-fir and western redcedar trees, many of which are over 500 years old. Those veteran trees that have not had their tops sheared off by wind can be seen today protruding above the forest canopy.

British Columbia is divided into 14 zones according to biology, geography and climate (biogeoclimatic zones) which are usually named after the dominant tree species within them. Lighthouse Park lies in the transition zone between two of these zones; the Coastal Douglas-fir Zone and the Coastal Western Hemlock Zone, a feature which accounts for its high biodiversity.

The present-day forest would have had its beginnings about 500 years ago, probably after a severe crown fire, judging by the age of the Douglas-fir which would have been the pioneer conifer tree. We know this because Douglas-fir seedlings require soil which has had its organic component removed by an intense fire and their need for an open area with plenty of light.

Of the conifers, western redcedar would have colonised the forest soon after, followed by western hemlock and grand fir, and the occasional western yew and

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Lighthouse Park Preservation Society is a membership based non-profit organization formed in 1998 to:

- *Protect the natural integrity of Lighthouse Park;*
- *Promote public awareness of its natural features;*
- *And support the development of biological zones near the park boundaries*

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 Jennifer McQueen



Sitka spruce, although there are no Sitka spruce trees currently in Lighthouse Park. As the larger of these tree species matured, their canopies restricted light to the forest floor so that young Douglas-fir saplings were unable to grow. When the present Douglas-fir veterans die off, probably in the next 100 to 200 years, and if there is no crown fire, the forest will become dominated by the other conifer species, although the western redcedar may not survive due to climate change as we may be seeing now.

Many of the veteran Douglas-fir are showing signs of age stress, by infection with the honey mushroom (*Armillariaostoyae*) expressed by pitch extrusions leaking down the trunk of the tree. This is an unsuccessful attempt by the tree to “pitch” out the offending fungus mycelia.

So, what are some of the characteristics of an old-growth forest? Simply put, an old-growth forest is the climax phase in the life-cycle or succession of a forest and is characterised primarily by four features: some large, old living trees known as veterans, interspersed with other trees of many generations (multi or uneven-aged); dead, standing trees known as snags or wildlife trees; fallen trees referred to as coarse woody debris (CWD); and a multi-layered, deep canopy. Following the so-called

climax phase of the forest, it will then progress by a process called “gap dynamics” rather than fire, which is new growth developing within gaps in the canopy formed by trees falling due to wind, disease or death and occasional small lightning fires. Gaps, once formed, do not remain static but become localized sites of regeneration and subsequent growth.

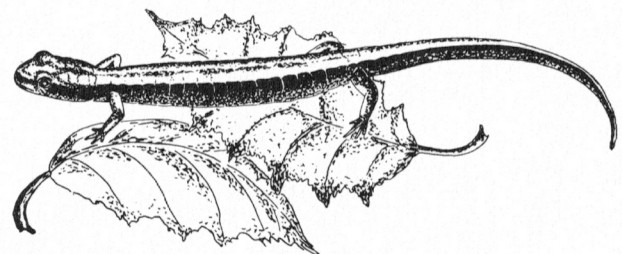
Much of the attraction of Lighthouse Park is its rounded moss and lichen-covered hillocks separated by deeply cut glens through which ephemeral streamlets run after periods of rain. This variable landscape has allowed for a diverse number of plant species quite apart from the fact that it is transitional between two biogeoclimatic zones. However, because the forest has lost its natural connection to the North Shore mountains and is one of the most heavily used parks on the North Shore, it is showing signs of degradation and a number of plant and animal species can no longer be found there. Many of the rocky bluffs, once covered in lichen and moss have been worn bare by feet and paws or replaced by exotic (non-native) grasses.

An excellent guidebook to the geology and natural history of Lighthouse Park is ‘Nature West Coast-as seen in Lighthouse Park’ compiled and illustrated by members of the Vancouver Natural History Society (1988).

THE SALAMANDERS OF LIGHTHOUSE PARK

by Keith Wade

As a child growing up in Vancouver one of my favourite excursions was our family’s frequent visits to Stanley Park, and my favourite place there was Beaver Lake and the deep forests surrounding it, which seemed at the time both wild and fascinating. On one such visit about seventy years ago my dad told us a little about salamanders, small mysterious creatures that lived secretive lives deep in the forest, and were hardly ever seen. He had never actually seen one himself, but his description ignited a life-long interest for me, and I resolved at the time to someday find an actual real life salamander. That wish was realized about three or four years later when I found two Rough-skinned Newts (then called Pacific Coast Newts) close to Beaver Lake and where my dad had given his little salamander introduction. Still, newts, although they are salamanders, spend a good deal of time in lakes and ponds, where they are much more visible and more



K. W.

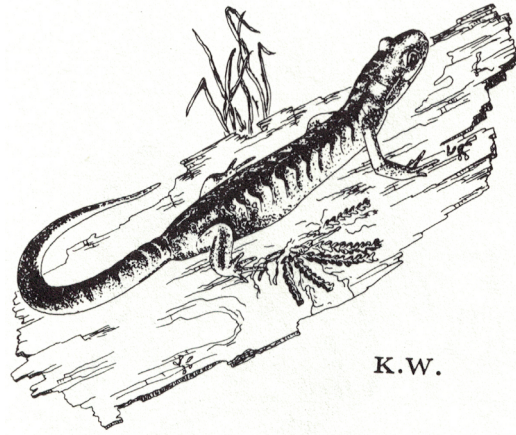
Western Red-Backed Salamander Image Credit Keith Wade frequently seen than are their forest dwelling relatives. It would be several more years before I succeeded in finding any of these.

Salamanders are amphibians, one of the five classes of vertebrates, and are characterized by among other things, smooth moist glandular skins, long tails, and are ‘cold blooded’, meaning they cannot regulate their internal body temperatures as birds and mammals can.

The amphibians themselves comprise three orders, the salamanders, frogs, and caecilians, legless rather wormlike animals of tropical regions. Of these the order Apoda, the frogs and toads, are by far the most familiar amphibians to most people, as on the whole they are far more visible, more vocal, and whether as juvenile tadpoles or distinctly frog-shaped adults, unlikely to be mistaken for anything else. By contrast, the order Caudata, the salamanders, are far less obvious, and as they stay hidden under forest debris most of the time and do not vocalize, are relatively seldom seen. Finally, although they have soft scaleless skins, they are more or less lizard shaped and might be confused as such by some.

The salamanders comprise ten families and total about 740 species. Three of these families are found in British Columbia, the newts, the 'mole' salamanders, and the largest family, the lungless salamanders. Of these, only the plethodonts or lungless salamanders occur in Lighthouse Park. This reflects the lack of ponds or lakes in the park, which are needed habitats for the aquatic larval forms (the tadpole equivalents), of the other two families, the newts and 'mole' salamanders. These both have elongated larval forms with feather external gills projecting from the sides of their necks, but aside from these gills more or less resemble the adult animal shape, unlike the tadpoles of frogs and toads. Most lungless salamanders, however, including the three species found in British Columbia, have no larval stage at all, but hatch as fully-formed miniature adults. As their skins must be kept moist these animals spend most of their time out of sight beneath forest floor debris or under the loose bark of rotting logs. They may be seen occasionally on the surface of the forest floor on mild wet nights, and may at times be surprisingly numerous.

We have two species in Lighthouse Park, the Western Red-backed Salamander (*Plethodon vehiculum*) and the Ensatina or Red Salamander (*Ensatina eschscholtzii*). The Western Red-backed Salamander is a very slender creature with short legs, and is about 10 cm in total length. It is dark brown to black in colour, with a broad reddish orange dorsal band running its entire length. Although this band is usually red or orange, it is yellow in some areas, such as around Cultus Lake. Unlike most salamanders, which tend to be slow moving, this species is very active and darts around rapidly when disturbed. The second species is now



Ensatina Salamander Image Credit Keith Wade

usually simply called by its generic name, Ensatina, rather than its old but misleading common name of Red Salamander. It is about the same length as the Red-backed Salamander but much stockier, and has a noticeable constriction at the base of the tail. In our region this species is usually pink or reddish brown, but further south is much more varied, with various bright combinations of red, yellow, black, and orange. These may represent different species of Ensatina, with perhaps various hybrids among them, or as some experts contend, just one tremendously variable species. Unlike the Western Red-backed Salamander, this species is slow moving and does not jump about when disturbed.

Finally, and although not found in Lighthouse Park, there is another salamander in the general area that is found in and around subalpine lakes including Yew Lake in Cypress Bowl and Mystery Lake on Mount Seymour. This is the Northwestern Salamander, which is a much bigger and more obvious creature than the two Lighthouse Park species. Like other members of the 'mole' salamander family, this species has an aquatic larval stage. These can easily be seen in the lakes just mentioned, where they often rest in shallow water near the lake edges, where their large feathery external gills are very obvious. The adults are much less commonly seen, but are large and robust, 20cm or more in length, and a uniform grey to chocolate brown in colour.

Although salamanders might seem to play a rather minor role in our wilderness ecology today, they have in fact an impressively long lineage, going back 164 million years to the Jurassic Period. This means they shared the world with the dinosaurs for more than one hundred million years before the latter died out, an impressive feat to ponder when we contemplate these fascinating little creatures.

VOLUNTEER OPPORTUNITIES

For all volunteer events please wear old clothes, sturdy shoes and work gloves. Volunteers who are 12 years and under must be accompanied by an adult. The events may be cancelled subject to government COVID-19 restrictions. Please check our website www.lpps.ca.

SATURDAY, SEPTEMBER 11, 9:00 am-Noon **LAUREL ROOT EXTRACTION, NORTH PICCADILLY PARK**

Meet at the intersection of Clovelly Walk and North Piccadilly Road.

SATURDAY, SEPTEMBER 25, 9:00 am-Noon **IVY PULL, LIGHTHOUSE PARK**

Meet at the corner of The Dale and Water Lane. The Target areas are largely off-trail and require some scrambling, hence the activity is not suited for children under 12.

SATURDAY, OCTOBER 2, 9:00 am-Noon **WEED PULL, CAULFEILD PARK**

Meet at the anchor on Pilot House Road.

SATURDAY, OCTOBER 16, 9:00 am-Noon **ROAMING WEED PULL, LIGHTHOUSE PARK**

Meet at the upper kiosk in the parking lot.

SATURDAY, OCTOBER 30, 9:00 am-Noon **BLACKBERRY REMOVAL, LIGHTHOUSE PARK**

Meet at the upper kiosk in the parking lot. This is strenuous and scratchy work, suited to older teenagers and adults. Please dress appropriately!

SATURDAY, NOVEMBER 13, 9:00 am-Noon **PLANTING, NORTH PICCADILLY PARK**

Meet at the intersection of Clovelly Walk and North Piccadilly Road.

SATURDAY, NOVEMBER 27, 9:00 am-Noon **RESTORATION PLANTING, THE DALE PARK**

Meet at the corner of Water Lane and The Dale.

MONTHLY BIRD COUNTS

Everyone welcome. Meet at the upper kiosk of the parking lot in Lighthouse Park on the first Sunday of the month at 8:30 a.m.

Sept. 5, Oct. 3, Nov. 7, Dec. 5

Call Suann at 604-926-9094 for more information.

EDUCATIONAL TALK



Mushrooms of BC with ANDY MacKINNON

SATURDAY, NOVEMBER 27, 2:00-3:30 pm

A Zoom presentation via the West Vancouver Memorial Library

BC has more species of mushrooms than any other province or territory - more than 3000 species! These fungi include decomposers, parasites and symbionts that play important ecological roles in all BC species and ecosystems. Some are deliciously edible, some deadly poisonous, and others 'magic' (hallucinogenic). And BC's mushrooms are also used as important natural medicines and as dyestuffs. This talk will explore the diversity of species of mushrooms in BC, and describe their ecological roles and their use by humans as food, medicine, dyes, and more. It will also introduce the new Royal BC Museum Handbook "Mushrooms of BC", scheduled for publication September 3 2021.

To register go to: <https://westvanlibrary.ca/event/mushrooms-of-bc-virtual/>

LIGHTHOUSE PARK PRESERVATION SOCIETY NEWS

PRESIDENT'S MESSAGE

by Alexandra Mancini

The past year has been a year like no other for the Lighthouse Park Preservation Society and indeed for all of earth's inhabitants as we struggle to control the COVID-19 pandemic. So much changed for us during that time. Initially, all of our activities that involved group gatherings were stopped – work parties and guided walks in the parks, guest speakers at the library, special projects with high school students, and our Annual General Meeting. We adapted as best we could, by switching our Board meetings to a virtual format (a new skill for several of us), holding some educational talks using a virtual format with the West Vancouver Memorial Library's support (a huge success), and writing grant applications for projects that will upgrade the visitor experience in Lighthouse Park. Our birders carried on with their monthly counts in Lighthouse Park, while being vigilant about social distancing.

Eventually some of our regular activities were allowed to restart, carefully following the provincial health officer orders for social distancing and preventing community spread of the virus. Most importantly we were able to resume our volunteer work parties in the parks. We managed to complete 6 volunteer events in the fall of 2020 and another 6 in the winter/spring of 2021. Not bad for a year with a global pandemic! Frankly it was a relief to get outside and in the fresh air.

Unfortunately, we had to exclude students from our events last year because of the higher risk of transmission of the virus from them to our adult volunteers, many of whom are elderly and at greater risk for serious consequence with the virus. But this fall we will welcome students to join in our work parties once again. The high vaccination rate in our community makes this possible and we will continue with our precautions to prevent spread.

So far, we have an ambitious program with 7 volunteer work parties in the Six-Park Network parks this fall (see Volunteer Opportunities). Of course, we will continue to watch the provincial guidelines carefully to make changes as needed. Our



Happy volunteers at Caulfeild Park, February 2021
Photo Credit David McQueen

bird counts will continue, on the first Sunday of each month and we are hosting a virtual presentation (via Zoom) on the Mushrooms of BC with the Library in November. Working with the West Vancouver Parks Department, a new display of a yellow cedar tree 'cookie' in a protective shelter will be added on Beacon Trail. Maybe by May/June 2022, we can host a celebration for that installation and the improvement of a portion of Juniper Loop Trail.

Staying close to nature has been so helpful for many of us who need a reprieve from these stressful times. A short walk in Lighthouse Park can do so much to calm our anxieties and restore a little bit of "normal" to our lives. It feels like stepping off the spinning carousel of life, just for a short while. Even more than before, in these challenging times I see the importance of our work as volunteers helping to protect the natural wealth of these six West Vancouver parks. What we give of ourselves and our time to benefit the Parks, is returned to us all many fold.

THE "DESTINATION"

By Daphne Hales

You may have noticed that during the time of COVID, two wheelchair-accessible parking spaces were paved at the lower entrance to Juniper Loop and the trail gravelled for about 350m to help those with wheelchairs and walkers get into the forest. The municipality applied for and received a grant from the Rick Hansen Foundation to do this work, but now it needs to be completed.

The LPPS envisages a table with benches in a clearing off to the south at the end of the gravelled trail with lovely views into the forest. We also envisage the accessible trail continuing a further 30m (until it gets too steep) with a small clearing on the north with a bench for those who could do with a 'sit down' and again a lovely view.

Only a few ferns and salmonberries need to be moved to give a real feel of having arrived at a worthwhile destination. Parks approved of our idea, so we have applied for a grant from the Canada Healthy Communities Initiative to add to the funds LPPS can put towards it. Don't hold your breath – we may not get the grant! If we don't, we'll be looking for more grant ideas, so if you know of any, do let us know!

SHEENA VENNESLAND

By Elaine Graham

Our Society was sorry to learn that Sheena Vennesland, one of its earliest supporters, and membership secretary from 2004-2008, passed away in February.

An ardent activist, Sheena was unafraid of confronting those in command. In late 2008, for instance, after she had written to the federal Department of Fisheries & Oceans reprimanding them for their neglect of the Point Atkinson Fog Alarm Building, funds were suddenly found, and the entire shell of the building was reconstructed the following spring.

On her daily walks around Ambleside pond, Sheena enjoyed watching a colony of great blue herons along with three pairs of nesting green herons, rare seasonal residents. Aware that the pond was one of just two wild bird sanctuaries on the North Shore,



Sheena Vennesland, Photo Credit Nils Vennesland

she was concerned about the poor condition of the waters of the creek and pond, and a decline in the variety of bird species nesting activity. In her diary she wrote "I set myself up as a self-appointed advocate to try to ensure the brutal recreational pressure on Ambleside Park did not ruin the environment for a wild bird refuge". Over the next eight years she did just that, reporting her observations to West Van Parks. At management's suggestion, she contacted a UBC professor who found a team of graduate students interested in studying the creek and pond for masters' theses under his supervision. The result was major recommendations for improvement of the horticultural care of the plant life around the pond; the water quality flowing from the creeks into the pond and for the repair of the tidal flow control valve and filtering of the runoff from the "western catchment" (part of Sentinel Hill and Ambleside).

Throughout these years, Sheena's daily visits to the park led to the formation of 'Friends of Ambleside Pond Bird Refuge'; her publication of an educational brochure on the history of the sanctuary; creation of interpretive panels for the park kiosk; organization with Parks for volunteer sessions to remove invasive plant species and for the replanting of bird friendly plants around the pond.

Passionate, and with a deep sense of responsibility for the natural environment, Sheena's fearless voice brought awareness of the importance of Ambleside pond to the people of West Vancouver. Friends who spent time with Sheena at board meetings, or who enjoyed her company on social outings miss her ready smile, hearty chuckle and hardy Scottish spirit.