



LIGHTHOUSE PARK PRESERVATION SOCIETY

Fall, 2017

Issue #28
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Small things delight! And for me one of those is finding a new and active Bald Eagle's nest in Lighthouse Park. In early July, with great excitement my friend phoned me to say that on a walk in the eastern part of Lighthouse Park she had heard a young eagle near the Valley of the Giants trail. This was great news as the known nest on Juniper Loop trail in the western part of the park was inactive this year although it did fledge a young two years ago that needed to be rescued. But that's another story (see newsletter #24). So we set out the next day with binoculars in hand and our ears attuned to any eagle sounds. With luck we heard the young calling and then saw a mature eagle perched way up in the canopy calmly ignoring the call. I started looking at the base of the large Douglas-fir trees for eagle detritus, i.e. left over dinner, and quite quickly found a fish skeleton, bird bones, skulls, feathers and a coughed up pellet. Was this the eagle-nest tree? Approximately 100 metres down the trail and looking back up through a break in the forest's upper canopy we could see a bundle of sticks – we had found the nest! And all because the parent was ignoring the squawking fledgling, we think in order to encourage it to fly. Great parenting skills! This is the fourth known nest site in the park since the 1970's but only one pair of eagles nest at a time in the park.

I am looking for people who are interested in monitoring eagles' nests on the North Shore as a citizen science project. We want to keep all three municipalities aware of the nest locations so that we can help protect this species and the trees in which they live. Historically we have had a total of thirty nest sites across the North Shore with eight active this past season. I have recently taken over the coordination of volunteer monitors from biologist David Cook who, since the year 2000, has collected data on the nests and has published the results in Nature Vancouver's journal Discovery (2008 and 2015 issues). If you know of a Bald Eagle's nest that you regularly pass by or can see from your home and would like to join our monitoring team, please email me at...



The eagle nest on the Valley of the Giants trail is obscured by branches and very hard to see from ground level. Photo: Frank Townsley

mcjeffery@telus.net.
Sally McDermott

Inside this issue:

New Eagle Nest by Sally McDermott	1
Cauliflower Mushroom by David Cook	2-3
President's message	4
Volunteer events	5
Educational talks/walks	6

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.

President - Alexandra Mancini
 Vice President - Elaine Graham
 Treasurer - Nick Miller
 Directors
 Elliott Cowan
 Daphne Hales
 Sally McDermott
 Areta Sanders
 Marja de Jong Westman
 Membership - Lynn Nordman



THERE ARE KILLERS LURKING IN THE FOREST OF LIGHTHOUSE PARK

by David Cook

2

This will be the third and final account of three species of fungi causing root and butt rot of conifers in our park; most commonly old-growth Douglas-firs. This issue I will talk about the cauliflower mushroom, an exceptional fungus both in terms of its edibility and size. In appearance it has been described as a “bouquet of egg noodles” or a “sea sponge” look-alike. In cross section it reveals brain-like convolutions. Worldwide it has a number of species, all edible and equally capable of reaching spectacular size. In our area it is given the Latin name of either *Sparassis crispa* or *Sparassis radicata* depending on which taxonomist is describing it. Our western cauliflower fungus has a characteristic deep-rooted base or stalk, which the eastern cauliflower mushroom lacks. In our area it is parasitic on the roots of Douglas-fir and pine. In eastern North America the cauliflower mushroom is associated with deciduous trees such as oak rather than conifers (with the exception of pine). So we are clearly dealing with more than one species as far as North America is concerned but taxonomists disagree on which name to assign to each.

In our area the cauliflower mushroom can be found in the late fall or winter, fruiting on the same tree year after year, sometimes twice a year, as large cauliflower-like fruiting bodies (mushrooms) consisting of a compactly branched mass of leafy lobes arising from a perennial and tough rooting base or stalk. The stalk, however, is not usually evident as it can be deeply buried in the earth where it is connected to the root ball of the tree.

The mushrooms usually range from 9 to 14 kg with a record weight of 28.8 kg of one specimen found in south-east France, but are usually seen at the lower range of these weights and about the size of a human head. I have seen it growing in Lighthouse Park at the base of an old-growth Douglas-fir west of the Beacon Lane trail north of the Barred Owl path. The hidden mycelia of the cauliflower fungus cause a brown or yellow carbonizing root and butt rot of the heartwood of living trees and will eventually weaken the base of the tree so that it becomes vulnerable to windthrow.

The cauliflower mushroom is high on my list of edible mushrooms. The texture is crunchy and firm, though brittle to the touch and must be handled carefully. The flavor is mild with notes of fennel and almond and has a fragrant odor of musk. Because of its complex branching it tends to collect dirt and debris, so care should be taken when cleaning. Select fresh ivory white to pale cream specimens that do not show discoloured branch edges. Other signs of an aging mushroom are droopy browning branches; these should be avoided. The older, more mature specimens can become quite tough and bitter tasting. Cut into florettes, then wash thoroughly to remove the dirt and debris. Gently sauté or parboil followed by baking or stewing or dredge in tempura batter or breading and fry. Pair with rice, asparagus, eggplant and fresh sorrel. The mushrooms are also great in soups or consommés. To store, keep mushrooms refrigerated in a container between damp paper towels. For best quality and texture use within one week. Of course it is illegal to harvest any materials, living or dead, from any park.

Cauliflower mushrooms have no poisonous look-alikes. The leafy mushroom also contains beta-glucans which have been shown to slow tumor growth. In Japan, cauliflower mushrooms are known as hanabiratake and are cultivated for both edible and medicinal purposes. They are reported to have anti-tumor activity against sarcomas and to reduce the mortality of anthrax infection in mice. In the early 1920's sparassol, an anti-fungal and anti-bacterial compound was isolated. Since then, more potent



Cauliflower mushroom, *Sparassis crispa*

photo: David Cook

anti-fungal and anti-bacterial compounds have been isolated from this fungus and have been shown to control virulent fungal tree pathogens.

Three species of fungi are known to infect the roots and butts of mainly old-growth Douglas-firs in Lighthouse Park. All three are both parasitic and saprophytic on the trees; that is to say they derive their nutrients both from the tree while it is still alive and again after it has died. It can be argued that they are not true parasites as true parasites do not kill their host. However they do weaken their host which can lead to death by other causes. Like many successful organisms the three fungal species described in this series of articles have more than one option for survival; in these cases all three are both decomposers of dead wood and parasites of living trees. There are likely other species of fungi infecting the roots and butts of conifers in Lighthouse Park such as annosus root rot (*Heterobasidion annosum*) but I have not yet seen them.

Not all fungi are killers. There are other fungus species in the forest of Lighthouse Park which have different ecological roles. There are those connected to the roots systems of green plants which assist the plants in supplying them with water and trace elements in exchange for sugars manufactured by the plants using photosynthesis. These are known as mycorrhizal fungi. They are familiar to us as the more conventional stalked mushrooms growing on the forest floor.

Then there are fungi known as decomposers that perform the important role of converting dead woody tissue to humus, an important component of soil. The common bracket fungus (*Fomitopsis pinicola*) known as the red belt and seen on dead conifers is one of those.

PRESIDENT'S MESSAGE

by Alexandra Mancini

4

What an amazing summer this year! To celebrate Point Atkinson's connection with Canada's Confederation and its status as a National Historic Site, we held a series of 10 guided tours of the light station from May through September, culminating with an Open House on the light station grounds on September 17th. This program of Canada 150-linked events was funded by a generous \$6000 grant from the West Vancouver Community Foundation and the Community Foundations of Canada. The individual tours were very popular and the Open House was a huge success, despite the blustery rainy day. Many thanks to Elaine Graham for her tireless work in planning and leading these events and to all the volunteers who helped throughout the summer. Through this program, about 500 people now have an increased awareness of Point Atkinson's history and challenges ahead.



Left to right: Alexandra Mancini, West Vancouver Historical Society president Rod Day, Elaine Graham & Mayor Michael Smith cut the Canada 150 birthday cake at the Open House on September 17.

photo: Alan Bardsley

Phew! Now with that behind us, we are focusing on our usual programs. In our speakers' series, we are offering three guided walks/talks this fall as well as our monthly bird counts (see pages 5-6). Our biggest ongoing program remains the volunteer events for invasive plant removal and site restoration in the Six-Park Network parks. We begin with a weed pull in Caulfeild Park, then in North Piccadilly Park, and end in Lighthouse Park (see page 5). In parallel, we have four events with students from Mulgrave and Collingwood Schools, continuing the restoration along Juniper Loop trail in Lighthouse Park. Watch for continued improvements along that trail, with many new native plants and split rail fencing in a few places. These improvements are funded by a \$10,000 grant from the former BC Liberal government and a Community Grant of \$1,000 from the District of West Vancouver.

You may recall that we applied for an Access4All grant from the Rick Hansen Foundation to upgrade about half of the Juniper Loop trail into an accessible trail, suitable for visitors using wheelchairs or walkers. Unfortunately, we did not succeed in getting a grant this year. Nevertheless, this remains a project of interest for us and we will continue looking for other grant opportunities.

Another big year ahead in 2018 when we celebrate our 20th anniversary! Our collective love of Lighthouse Park has kept the Society's work humming along for two decades. I say it is time to P-A-R-T-Y! What shall we do to mark this important milestone? Please send us your ideas through lighthouseparkps@gmail.com.

I want to thank our Board members who do so much for our organization. We are delighted that Sally McDermott joined our Board at the June Annual General Meeting. Sally has been an active member for many years and has agreed to become the neighbourhood liaison and project leader for North Piccadilly Park, taking this role from Richard Beard who diligently watched over that park for so many years. Thank you Richard and Sally!

For all volunteer events please wear old clothes, sturdy shoes and work gloves. 12 years or under with an adult.

SATURDAY, OCTOBER 14, 9:00 am-Noon

WEED PULL, CAULFEILD PARK

Meet at the anchor on Pilot House Road
Suitable for 14 years and up

SATURDAY, NOVEMBER 4, 9:00 am-Noon

**WEED PULL, NORTH
PICCADILLY PARK**

Meet at the corner of North Piccadilly &
Clovelly Walk.

SATURDAY, NOVEMBER 18, 9:00 am-Noon

IVY PULL, LIGHTHOUSE PARK

Meet at the upper kiosk in the parking lot

MONTHLY BIRD COUNTS

Everyone welcome

Meet at the upper kiosk of the parking lot in Light-
house Park on the first Sunday of the month at

8:30 a.m. Oct. 1, Nov. 5, Dec. 3. and Jan. 7, 2018

Call Suann at 604-926-9094 for more information

ANNUAL CHRISTMAS BIRD COUNT

...count circle includes parts of West Vancouver &
Bowen, Gambier and Keats islands

MONDAY, JANUARY 1, 2018

Novice and experienced birders welcome

For West Vancouver, contact Marja at [604-921-3382](tel:604-921-3382) or mdjw@telus.net

For Bowen Island, Richard Wing - rwing@telus.net



MUSHROOM WALK

with

Dr. Kent Brothers

SATURDAY, NOVEMBER 4, 2017

2:00 - 4:00 pm

LIGHTHOUSE PARK

Join Kent Brothers again this fall for a guided forest walk to learn about the valuable roles that fungi play in the environment. A member and past president of the Vancouver Mycological Society, Kent has also served on the advisory board of EFlora BC in respect of fungi, and is a member of the Pacific Northwest Key Council that develops identification guides for fungi in the Pacific Northwest. He participated in and prepared the final report for a 5-year inventory of fungi in Manning Park (640 species -- <http://www.vanmyco.com/Documents/ManningFungiTaxonomic.html>) and has for several years been working on a comprehensive list of the several thousand fungi reported to occur in the province of BC.

(<http://brothers.ca/Kent/BiotaLists/BCFungi.htm>)

Meet at the upper kiosk in the parking lot



**GEOLOGY, BIOLOGY & HISTORY
of CAULFEILD PARK**

a walk with

DAVID COOK, P. Eng.

**SUNDAY, OCTOBER 22, 2017
10:00 am - Noon**

Caulfeild Park in West Vancouver has geological, biological and historical features that have earned it designation by the District as a Heritage Park. Walk with David, Geologist and Biologist, to learn about the unique features of this park and why it should be further designated as a Geo-heritage Site.

By registration only with a limit of 20 participants and wait list. May be re-scheduled due to unfavourable weather. Please email cookeco2@yahoo.com to register and receive details as to the meeting location.



**NEW PLANT DISCOVERIES FROM
NORTHERN BC ALPINE**

a talk with

KEN MARR, Ph.D.

**SATURDAY, OCTOBER 28, 2017
2:00 - 4:00 pm**

**WEST VANCOUVER MEMORIAL
LIBRARY, WELSH HALL**

Join Ken Marr, plant biologist and Curator of Botany at the Royal BC Museum for his illustrated talk about the flora of northern BC including images of the landscapes, rare plants, common plants, a pseudo-flower, a puzzling gap in the distribution of several species and what we are learning from DNA markers about the migration of several species. Lots of images of flowers!