



LIGHTHOUSE PARK PRESERVATION SOCIETY NEWSLETTER

February, 2009

Vol. II, Issue I
lighthouseparkps@gmail.com.

"In every walk with nature one receives far more than he seeks" John Muir

President's Message

by Marja de Jong Westman

West Vancouverites are truly fortunate to have a wilderness spot to wander through like Lighthouse Park and for those of us living nearby, our backyards are often used as movement corridors for wildlife as they search for a route from seaside to mountainside. This fall and winter, I had bears in the backyard, coyotes in the woods, and as of this week a river otter has taken up residence in my daughter's abandoned playhouse. As charming as it is to be in the company of wildlife, these incidences serve as an acute reminder of the successful spread of humans and the reduced land and resources available for other native animals. These visitations also serve to solidify my commitment to the work of the Lighthouse Park Preservation Society.

Our major field projects continue to be the restoration of Beacon Trail, the removal of invasive ivy and broom, and a monthly bird census. A new addition to our field activities was the start up of a coastal bluff recovery and restoration effort at Juniper Point this fall. Juniper Point was so named because of its collection of common juniper, *Juniperus communis*. This plant, belonging to the Cypress family, seeks dry conditions whether they be those of a coastal bluff or the sub-alpine. Today, there are only five juniper plants known to be growing in the park. Park visitors also like the dry bluffs and threaten the plant's survival. The Society's decision to attend to the bluffs at Juniper Point was catalyzed by last year's "cleaning" of a bluff wall by climbers. Moss and lichens and their associated invertebrate animal occupants, along with licorice fern and some starts of salal, were scraped off exposing the bare granite underneath. It takes several hundred years to go from bare granite to a full community of moss and lichens. The scouring effect of the climbers and past glaciers is similar.

In an attempt to prevent further disturbance of native vegetation at Juniper Point, West Vancouver District has built a fenced boardwalk following the old trail from the forest over a worn area of the bluff and down to the key visitor "hot spot" of the main point. Visitors will continue to have free access to the main point, whose rocks are now very nearly devoid of vegetation. It is, however, a beautiful spot to sit for a while and watch life from the forests of UBC, across Georgia Strait over to Bowen Island and into the mouth of Howe Sound. Access to the smaller point is now restricted and we will be monitoring the return of vegetation and boosting it along by planting a few patches of plants native to coastal bluff ecosystems.

Field work is only one of the Society's activities. Board members are also occupied with heritage work in Caulfeild Park, researching options for knotweed removal, preparing and giving lectures and walks, putting the final touches to a beautiful educational display and will soon be presenting a report to the West Vancouver Council on the environmental stewardship plans for the Six-Park Network of parks which include Lighthouse Park and its smaller park neighbours.



Board walkway to Juniper Point Photo: Robin Somers-Yeates

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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.*

President - Marja de Jong Westman

Vice President - Alexandra Mancini

Secretary - Sylvia Mather

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Membership - Aline Brown

Directors

Elspeth Bradbury

David Cook

Ed Donaldson

Jeff Marliave

Keith Wade



**WEST VANCOUVER
COMMUNITY FOUNDATION**

by Keith Wade

When I was a student at U.B.C. in the early sixties, I remember asking one of my zoology professors whether he thought it likely that over time more species of birds and other animals would colonize B.C. His reply --- that he thought any such new colonization highly unlikely as “I would assume that all species which could live in B.C., are living here”, struck me at the time as being just a little too pat, a little too final, but I mused about it for a long time afterwards. Forty-eight years later, our understanding of the dynamics of plant and animal movements around the globe, and the hurdles they must overcome to do so, are much better understood, though many questions remain.

To put the question in a local context, consider the recent past history of our province. British Columbia, like the rest of Canada and other far northern regions, has spent the better part of the past 2.5 million years or so buried under vast continental ice sheets, a habitat inhospitable to most life forms. This long period of ice domination has been broken up by a series of relatively short (10,000 to 30,000 years) interglacial periods similar to the one in which we are now living. During these interglacials, terrestrial life re-colonizes B.C. and the rest of Canada from permanently ice free refugia to the south, and to a lesser extent to the northwest. Thus a picture has evolved of the Canadian biota periodically “escaping” to these ice free lands at the onset of each new glacial period, of many species going extinct in the process, and of the survivors making their way back to our latitudes tens of thousands of years later as the continental ice sheets eventually melt back, heralding a new interglacial period.

A more recent interpretation of these epic events puts a rather different slant on it. If we subtract the total amount of time that B.C. has been largely ice free over this past 2.5 million year period, (which we know as the Pleistocene), we arrive at a very approximate figure of only 300,000 years or so, the interglacial periods tending to be much shorter than the intervening glacial periods. Considering this reality, is it not perhaps more accurate to view “our” native plants and animals more as temporary visitors from the more benign lands to the south, rather than as “refugees” returning home periodically to enjoy relatively short ice free holidays?

Either way we look at it, we are vicarious witnesses to the results of these periodic epic migrations, as whole floras and faunas, indeed whole ecosystems, move hundreds of kilometers north or south in response to massive climatic changes. How long does it take for returning species to re-colonize the land after the glaciers melt back? The pollen and other fossil records provide a great deal of information but do not really answer the specific question raised in my opening sentence --- can we expect that all species which can potentially

live here have reached here? After all it is more than 10,000 years since the current interglacial period began. But many species apparently expand their ranges quite slowly and some birds appear to be remarkably conservative ‘invaders’. Witness the absence of black-capped chickadees on Vancouver Island and the tendency of song sparrow populations on small islands remaining in place long enough for subtle specific variations to evolve. It is also important to appreciate that the mere arrival of a new species in a new area does not of itself signify much --- the new arrival must successfully compete with already established species for food and other resources, unless by great good fortune it can expropriate an “unused” resource, that is, move in and occupy a previously “empty” niche. As multiple species cannot for long occupy the same niche, the successful colonization of a new species may result, through competitive exclusion, in the subsequent disappearance of an already established species. Of course, changes in climate and other environmental parameters also play critical roles in these dynamics.

As it happens, the past 40 years or so have seen several new successful bird colonizations in our corner of B.C., so my initial question has in fact been answered. The barred owl, a reasonably close relative of the spotted owl, was first reported in B.C. back in the early 1940s, and had reached the lower mainland by the late 1960s. It’s point of entry into the province was the northeast, the culmination of an impressive range extension across the country via the southern fringes of the boreal forest, from its historical “home” in the forests of eastern North America. Now it is one of the commonest owls around here, but it’s success as an invader has come at a price. Larger and more of a generalist than the northern spotted owl, it appears to be out-competing it’s much rarer cousin, while at the same time the virtual disappearance of western screech owls in the lower mainland is thought to be due at least in part from predation by barred owls.



Anna's Hummingbird, *Calypte anna*

Photo: Keith Wade

by Keith Wade



Green Heron, *Butorides virescens*

Photo: Keith Wade

The green heron and Anna's hummingbird have both successfully colonized parts of southwest B.C. from more southerly regions in the past 40 years, although whether the latter, which is largely non-migratory, could have done so without reliable access to winter feeders is perhaps doubtful. I vividly recall the first reports of both species in West Vancouver in the early 1970s, and the excitement they generated. The success of the green heron may reflect the fact that there were no very small heron species here before its arrival, which suggests it may well be exploiting a previously "empty" or at least underutilized small heron niche.

A fourth successful colonizer from the south is the large and elegant Caspian tern, which started showing up in the lower

mainland in the 1970s, and was recorded breeding in the area of Robert's Bank in 1984. Now large flocks of 70-80 birds are frequently seen in the area, and we have even seen them flying over our garden in the Forest Hills area of North Vancouver. The breeding range has expanded northwards right into Alaska. This impressive northwards range extension along our coasts is likely part of a massive population increase in this species along the Pacific Coast from California in recent decades.

Whether these and other range extensions reflect recent natural or human influenced environmental change or much longer term events, they add a fascinating dimension to our local natural history.

MEMBERSHIP CATEGORIES & ANNUAL FEES

Individual \$15.00 yearly or 3 years at \$40.00

Senior (60+ yrs) \$10.00 yearly or 3 years \$25.00

Family \$25.00 yearly or 3 years at \$65.00



Please note: the expiry date of your membership in the Lighthouse Park Preservation Society is shown on the bottom right hand corner of your address label. If you wish to renew your membership, become a member, or make a donation please send a cheque to

LPPS, 5605 Keith Rd. W. Vancouver, B.C. V7W 2N4.

The rainfall of Lighthouse Park varies from about 1270 mm a year at its southern tip to about 1470 mm at its northern border. This steep rainfall gradient over such a short distance is typical of the north shore of Burrard Inlet and is a result of the abrupt changes in topography. The steep and rugged topography of the park also causes rapid run-off which is favourable for the Douglas-fir, arbutus, and a number of other species typically found in the Coastal Douglas-fir Biogeoclimatic zone of the Province, e.g. the Gulf Islands and south-east Vancouver Island. The rapid runoff compensates for the high rainfall in Lighthouse Park, which is why these particular plants can thrive here in the much wetter Coastal Western Hemlock Zone, in which Lighthouse Park is located.

In the north-west corner of Lighthouse Park abutting its boundary are a few hectares of swamp, a fragment of a swamp that once extended into neighbouring residential areas. A system of ditches now directs storm-water into what remains of this wetland and it functions as the only **open** basin of stored water in the park. It supplies water to the only semi-permanent stream in the park.

The other source of water for the park is the **closed** system of water stored in the fractures and subsurface irregularities of the granitic bedrock. This bedrock aquifer supplies inflow for some ephemeral creeks, but dries out in the summer and is only replenished (recharged) well after the onset of the autumn rains. This is because the forest canopy and dry soils soak up the initial heavy rains. With the exception of the creek that drains the swamp, usually only by November is there enough water to maintain flow in the other creeks of the park.

The Lighthouse Park wetland is described as a swamp. Simply, a swamp is a flooded forest with some shrubs in standing water during growing season. Swamps have better drainage than a bog and are replenished by nutrient-rich water from upland areas. The plant species represented in Lighthouse Park swamp are trees of western red-cedar, western hemlock, red alder and bigleaf maple with shrubs of salmonberry and red elderberry, all growing on hummocks or tussocks in the swamp. Skunk cabbage grows on the more saturated soil.

While there were no biophysical studies carried out prior to partial infilling of the swamp, one can speculate with reasonable certainty that the biodiversity and ecological function of the park has undergone significant changes for the worse as a result. The fact that frogs can no longer be heard in the swamp area may be one indication of this.



Skunk Cabbage, *Lysichiton americanum* Photo: Elaine Graham

Recent housing development right up to the park and wetland boundary left the trees bordering the swamp on its north side vulnerable to blow-down by strong winds such as were experienced during the storm of December 2006. These trees had not had time to wind firm i.e. their roots had insufficient time to strengthen themselves against wind exposure. The result after the storm was a tangled mass of upturned trees with exposed root masses and churned up soil. However what at first may be perceived as unsightly devastation is providing new habitat for many plant and animal species. Uprturned root balls of trees are becoming nurseries for young ferns and mosses and winter wrens will make nests in the exposed roots. Fallen tree trunks will become nurse logs for saplings and shrubs. Openings in the tree canopy due to fallen trees will allow entry of light for new under-storey growth. Already we can see evidence of this. Shrubs such as red elderberry, as well as some tree saplings formerly held back, are now growing rapidly, a phenomenon known as **release**.

The hydrology of a forest is its lifeblood and influences its ecological function to a major degree. Before the encroachment of housing development, the Lighthouse Park swamp would have acted as a larger reservoir than it does today, releasing water into the park over a longer period of the year. Plants would have benefited from a longer growing season. Animals, from micro-organisms in the soil, to the insects and vertebrates that make the forest their home, would have likewise benefited.

TRAIL RESTORATION

This spring we shall continue our restoration work along Beacon Trail. Please join us to add more plants and to spread bark mulch.

Saturday, April 18th, 9:00 a.m.

Please bring gardening gloves, a shovel and a wheelbarrow if possible. In the fall of 2008, we put in 750 native plants, 500 of which were home grown and included several species that we have propagated for the first time. If you would like to know more about our propagation group please call Elspeth at 604-926-9390.

INVASIVE SPECIES REMOVAL

This year we will be removing ivy and broom along the east side of Lighthouse Park.

IVY PULLS

Saturday, February 7th, March 7th

9:00 a.m. - Noon

BROOM PULLS

Saturday, May 2nd, and May 30th

9:00 a.m. - Noon

Wear old clothes and work gloves. Meet at the upper kiosk in the parking lot.

For more information, call Alexandra at 604-922-1485

MONTHLY BIRD COUNTS

Meet at the upper kiosk in the parking lot on the

first Sunday of every month at 7:30 a.m.

Feb. 1st, March 1st, April 5th, May 3rd, June 7th, July 5th, Aug. 2nd.

Contact Marja @604-921-3382 or mdjw@telus.net if you would like to participate.

WANT TO RECYCLE MORE?

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and many other products not taken by the North Shore Blue Box Program.

You can now take all these materials that cannot be put into Blue Boxes to a Community Recycling Depot on the

3rd Saturday every month 10:00 a.m. - 12:00 noon.

**Presentation House Theatre,
333 Chesterfield Ave.,
North Vancouver, B.C.**

*There is a nominal charge for this service. **contact the sponsor:**
www.pacificmobiledepots.com.*

*Greater Vancouver contact person is Mark Thomson @ (604) 568-7027,
or call Kim Vogt @ (604) 922-1359*

ANNUAL GENERAL MEETING

Saturday, June 20th, 2009

2:00 p.m.

Phyl Munday Hut, Lighthouse Park

Followed by guest speaker

ANDREW TRITES, Ph.D.

UBC Zoology Dept.

"Stellar Sea Lions & Northern Fur Seal Research"

This newsletter is printed on 100% recycled paper and is published twice a year.

Members are encouraged to submit articles, photos, or suggestions to

lighthouseparkps@gmail.com.

EDUCATIONAL TALKS & WALKS



Great Gray Owl, *Strix nebulosa*, photographed by Adam Gibbs in Lighthouse Park on January 19th - a very rare sighting!

“OWL PROWL”

Dick Cannings, M.Sc.

Friday, March 27th 7:30-9:00 p.m.

Sk'iwitsut Hut, Lighthouse Park

Born and raised in the Okanagan, Dick grew up in a family keenly interested in natural history. His studies and research on the natural ecology of B.C., focused on the breeding biology of birds, particularly small owls. As a naturalist, past curator of UBC's Cowan Vertebrate Museum, teacher of field ecology, and tour guide to New World tropics, Dick has become an authority on B.C.'s birdlife. He contributes to Bird Studies Canada, COSEWIC, radio items for CBC, and along with his brothers, Sydney & Robert, has written several award winning books on natural history.



Marbled Murrelet, *Brachyramphus marmoratus* Photo: Monica Mather

“MARBELED MURRELETS -

Seabirds of the Forest”

Monica Mather, R.P. Bio.

Saturday, April 25th 2:00-4:00 p.m.

Sk'iwitsut Hut, Lighthouse Park

As a Wildlife Habitat Area (WHA) Biologist with the Ministry of Environment, Monica is responsible for locating and establishing protected habitat for Species-at-Risk on Vancouver Island and the South Central Coast of B.C. Steelhead trout, cormorants, herons, and caribid beetles are just some of the subjects of her research. As a member of the Marbled Murrelet Recovery Team, Monica helps locate and quantify the distribution and abundance of nesting habitat for this “forest seabird” throughout their range in Coastal B.C.

CAULFEILD PARK GUIDED WALKS

In partnership with the West Vancouver Museum, the Society is presenting a series of three guided walks in Caulfeild Park, for which you can register online: webreg.westvancouver.ca, or by phone: 604-925-7270.

Saturday, May 9th, 10:00-11:30 a.m. Geology

Some of the oldest rocks in the Vancouver area originated about 400 million years ago. Join guide, David Cook, to learn more about the fascinating geological features of the Caulfeild area. 630170

Saturday, May 14th, 10:00-11:30 a.m. Natural History

Guide, Keith Wade, will identify some of the beautiful native plants that grow in Caulfeild Park. Learn how the park's sunny coastal habitat relates to other forest ecosystems and how it is affected by the spread of non-native plants. 630171

Saturday, June 13th, 10:00-11:30 a.m. Cultural History

Learn about the history of Caulfeild Park with guide, Elspeth Bradbury. You will find remnants of the old pilot house, hear about the steamships that visited the wharf and about Francis Caulfeild's dream to build an ideal village. 630172