

NPSG

MARCH
2008

VANCOUVER ISLAND 2080 ?

NATIVE PLANT STUDY GROUP

Climate Change: Our Native Flora And Ecosystems And What We Can Do

Unprecedented climatic and ecological transformations are underway in our province and around the globe. Northern BC has already seen a temperature rise of 2-2.5° that was not predicted to happen until the end of the 21st century by climate change models. Many icefields are breaking apart and predicated to disappear by 2080; what will supply our rivers with water when the glaciers run dry?

From evidence unearthed at Heal Lake, the Southern Vancouver Island landscape of 10,000 years ago contained many of the plant species we recognize today but it was dominated by grasses and a parkland like ecosystem; giant bison, mammoth and mastodon roamed the countryside until a warming trend and human activity lead to extinctions. We then entered an era of cooler and wetter conditions, that has produced the landscape we know today.

The oaks and associated ecosystems of Vancouver Island and the grasslands and deserts of the Okanagan contain the genes of species that will be needed to populate northern areas as our climate continues its warming trend and it is crucial that we preserve

the remaining natural areas for this genetic stock. Climate change can come quickly, deposits from the Hat Creek valley show a sudden irreversible change that occurred about 3,850 years ago, in only three to ten years.

It is predicated that 20-30% of species will become extinct with a 1.5-2.5°c rise in temperatures and that fish stocks will plummet; from 2010-2039 we will lose twenty percent of our fish and between 2070 and 2099, sixty percent will be lost. The Rockies will receive seventy percent less snow by 2080 as more precipitation falls in the form of rain rather than snow.

When you start talking about growing grapes in Fort St John and lemons in Victoria by 2080, you know the planet is about to undergo some frightening new shifts in climate. Growing grapes in the north doesn't sound all that bad a prospect until you look at the ramifications of such a sudden and dramatic shift in weather conditions. In the case of Fort St John, the increase in temperatures and decrease in precipitation would mean that many of the species

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that live there now won't be able to adapt to the warmer and drier climate. But the species in the Okanagan Valley that are adapted to these conditions do not have the ability to move north quickly. The plants which seem to be able to rapidly inhabit new areas are the invasive species that are already the scourge of the southern grasslands, like knapweed-which infests landscapes and reduces biodiversity.

What are the most important steps we can take to reduce the effects of climate change? Reducing carbon emissions and practicing good carbon stewardship are crucial.

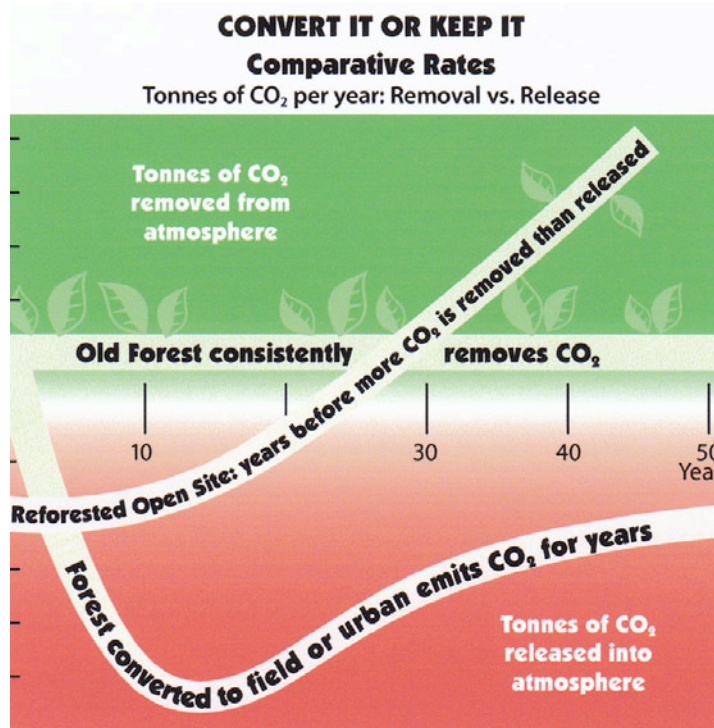
Richard Hebda explained that old forests consistently remove carbon from the atmosphere, reforested open sites need many years before they can sequester more carbon than is being removed, while forests converted to fields or urban development emit carbon for many years. It can take 250 years of carbon emissions before a field returns to the same carbon balance as before the trees were cut.

Living carbon is contained in our trees; it sustains us and the ecosystems around us, it acts as future insurance and it scrubs CO₂ from the atmosphere. Dead carbon is the stored organic matter in soils, it sustains living carbon and is an energy source. Ancient carbons are fossil fuels, which provide an energy source and are the predominant cause of climate change. Our goal should be to raise the amount of living and dead carbon and reduce the use of ancient carbon. SAVING FORESTS PREVENTS CARBON EMISSIONS! and MAKE SOIL NOT WAR! are two slogans that Richard suggested. Take them to heart, cham

pion their intent, and help leave a healthy planet for our children and grandchildren.

Richard has just co-authored a report with Sara Wilson titled Mitigation and Adapting to Climate Change through the Conservation of Nature which can be viewed at: www.landtrustalliance.bc.ca

Dr. Richard Hebda is Curator of Botany and Earth History Royal BC Museum, Adjunct Associate Professor, Biology, Schools of Earth and Ocean Sciences and Environmental Studies, UVic; author of 90+ scientific papers; 200+ popular articles mainly on bulbs and Native Plants, climate change; (co) author of three books, (co)editor of three books; numerous TV, radio and newspaper interviews. Advising many public organizations Curator of Dragon Bones exhibit on Chinese dinosaurs (2003) and Climate Change exhibit, supervisor of 10 M.Sc. and Ph. D. students.



For UVic events: New parking policy--pay parking is in effect 24 hours a day. You must purchase a \$2 parking permit for the evening.

The Native Plant Study Group meets on the third Thursday of the month from Sept through May except Dec at 7 pm at the MacLaurin Building, UVic. Please join us. Membership fees are \$15.00 annually or a \$2.00 charge for drop-in. Check Room Schedule for new meeting locations.

Thanks to our co-chair, Valerie Elliott and iD2 for their development of our very beautiful website at www.npsg.ca and our new brochures. www.iD2.ca

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MEETING SCHEDULE

April 17.....Rm D116

Todd Manning *Wildlife and Trees in British Columbia*
The slow demise of a tree opens up myriad opportunities to increase and sustain biodiversity in our forests. Todd is a Habitat Forester, Wildlife Ecologist and Arborist as well as co-author of *Wildlife and Trees in BC*.

May 15.....Rm D116

Fran Benton *No Love for Langford*
How living in Langford changed Lindsay from a mild mannered botanist into a Garry oak meadow activist. Fran Benton teaches at Malaspina University College in the visual arts, her work as a field biologist and park naturalist has become an important source for her work and interest in ecologically sustainable development.

VNHS Botany Nights are held at Swan Lake Nature House, 7:30 pm, everyone welcome, no charge

Tues, April 15 Treasures of the Cloud Forest: Botanical Explorations in Vietnam's Huang Lien Mountains
Brian White has conducted five research expeditions on Mount Fan Si Phan in Huang Lien National Park, he will introduce the ecosystems, unique plant species, and current threats to this mountain wonderland.

EVENTS AND OUTINGS

For information on many environmental activities in our area check the Green Diary from the EcoNews website at <http://www.earthfuture.com/greendiary/>

Check the CRD parks website for detailed information on their many programs; wear appropriate clothing for the weather and sturdy footwear for all outings:
www.crd.bc.ca/parks

For all VNHS activities, please contact Agnes at 721-0634 or email her (thelynns@shaw.ca) if you need more information. No pets please. Bring a lunch and plenty to drink for the all day outings. Check the VNHS website for more details: www.vicnhs.bc.ca

Fri Mar 21 VNHS Satin Flowers at Mount Wells
This trip is planned to see the best display of satinflowers (*Olsynium douglasii*) in the whole area. Meet at the parking lot on the right at 10:00 a.m.

Sun Mar 23 VNHS Satin Flowers and Birds at Juan de Fuca
Another chance to see satinflowers as well as other

early spring flowers. Plus it is an excellent place to check out the birds. Meet at Juan de Fuca Rec Centre, 1767 Old Island Highway, at 10. We will start from the end of the parking lot nearest to town.

Sun Mar 30 11-2:30 Mt Wells and satinflowers again, this time with CRD Parks

Sun Apr 6 VNHS Celebrate the Wildflowers at Oak Haven/Gore Parks Meet at 10 at the entrance to Oak Haven Park. Call Rick at 652-3326 for more info

Sat Apr 12 VNHS Meander Around UVic Finnerty Gardens Meet outside the UVic Interfaith Chapel at 1:30 p.m. To find the Chapel, go around the Ring Road and look for Parking Lot 6.

Sun Apr 13 VNHS Wild about Wildflowers at Mill Hill Join us for guided flower walks, activities, displays and more from 10:00 am till 3:00 pm. Joy Finlay and Agnes Lynn of VNHS will lead walks to the top at 10:30 am and 1:00 pm to make this a combined CRD and VNHS event. Meet at the Mill Hill Regional Park information kiosk on Atkins Ave.

Fri Apr 18 VNHS Visit to Honeymoon Bay Wildflower Reserve. You must register for this event as the number of visitors is limited. VNHS members get preference. Meet at Helmcken Park and Ride at 9:00 a.m. to car-pool. Contact Agnes at thelynns@shaw.ca

Sat & Sun Apr 19 & 20 10-3 Swan Lake Native Plant Sale and Presentations. Admission is \$3 per day or \$5/weekend pass. View the website at: www.swanlake.bc.ca/plantsale.htm for more info

Sat Apr 19 VNHS Enjoy All that Jocelyn Hill Has to Offer Join Rick Schortinghuis to view the wildflowers and the birds as well. On Millstream Rd. just past the sign. Park on the right-hand side of the road. Meet there at 9:00 a.m. Call Rick at 652-3326 for more info

Sun Apr 20 VNHS Enjoy the Wonders of Thetis Lake Park with botanist Hans Roemer. Meet at the main parking lot at 9:30 a.m.

Sat Apr 26 Photography of Native Plants
Burl Jantzen is an experienced photographer and a veteran science educator. This intensive workshop will appeal to anyone who wants to improve their plant photography, including both beginning and experienced photographers. The focus will be on native plants, from mosses to maples, with an emphasis on practical strategies for creating "images with impact." See: www.swanlake.bc.ca/adults.htm

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for details and pre-register at 479-0211. Cost is \$44 (Friends of the Sanctuary \$40) 9:00 a.m. to 12:30 p.m.

Sun Apr 27 VNHS Mount Tzouhalem Ecological Reserve. It has been said that this ecological reserve in the Duncan area is one of the most well preserved examples of a Garry oak ecosystem. You must register for this event as the number of visitors is limited. VNHS members get preference Contact Agnes at thelynns at shaw.ca to register or if you need more info.

Sun May 4 In the Spirit of Trees

An exploration of the synergy of interested community groups (on both sides) that ranges from artists, nurseries, botanists, loggers, developers, First Nations, non-profit groups etc, the list goes on. We would like to invite the Native Plant Study Group to join us with a booth (focus on trees of course) or to attend the event. Contact: kimberleymacmillan@shaw.ca

VOLUNTEER OPPORTUNITIES

- The Anti-Ivy League of Cadboro Bay is fighting an ongoing battle. Is your warrior spirit ready to tackle the soul-sucking expanse of this pernicious weed? Contact Agnes at 721-0634 or thelynns@shaw.ca for more info.
- Hospital Rock: Contact Agnes as above.
- Volunteer at Swan Lake Christmas Hill Nature Sanctuary For further details contact Joan at 479-0211 or email volunteer@swanlake.bc.ca.
- Beacon Hill Park Ivy Pull, Saturdays (except long weekends), 9 am-Noon southeast woods near Cook and Dallas. Bring gardening gloves. No dogs. Volunteers welcomed. Call Cornelia, 920-3556 or kacy@islandnet.com
- Every Saturday at 1:30 pm: Tour of Merve Wilkinson's Wildwood Forest, Ladysmith. Jay, 250-245-5540 www.ecoforestry.ca/WildwoodMap.htm
- Oak Bay Native Plant Garden, meet every Fri. morning from 9-11, weather permitting. Corner of Beach Drive and Margate Avenue. New members welcome. Guided walks in March and April.
- Brighton Avenue Walkway Restoration. Removal of invasives and re-planting of native species in a Garry oak rocky outcrop situation. Work each Sun. 9:30 - 11:30. Meet at Hampshire and Brighton, 2 blocks south of Oak Bay Ave.

GARDEN TOURS

The NPSG is once again offering members only garden visits. Eight study group members have volunteered to open their gardens on two Sunday afternoons in April. Moving as a group we will see a variety of gardens, in different stages of development: new gardens, gardens in tran-

sition to native plantings, established gardens with a mix of natives and exotics. Come and see seaside gardens, a patio garden, a garden that is taking over a Victoria boulevard, a garden that calls Topaz Park its backyard.

On **Sunday, April 13** at 1:00 p.m. we will meet at 3009 Colquitz, the garden of Brenda Pilon. From there we will move on to Betty Sherwood's garden at 325 Plaskett Place. Then it's on to 2524 Asquith, Natalie Dechaine's patio, and end up at 1843 Crescent Road, the garden of Pat Boyle.

On **Sunday, April 20**, at 1:00 p.m. we will start at 1320 Rudlin, Paul Spriggs' garden, featuring lots of alpine plants (and lots of rock), then move on to Todd Doherty's garden at 961 Pembroke. From there we'll go to Judy Nault's garden at 274 Belmont and finish up at 1272 Topaz, where Ken Wong will give us a tour of Topaz Park after we visit his garden.

Please remember that we are visiting each garden in sequence, to give those whose gardens are on view a chance to see the other gardens.

If you have questions call or email Jean Forrest at 658-5740 or jforrest at telus.net



FIELD TRIPS

There are two NPSG field trips planned for this spring. On Saturday, April 26th, Lynn Irons will lead a tour of John Dean Park. Lynn, a longtime NPSG member and former owner of a native plant nursery, is the native plant expert at Russell Nursery in North Saanich. She knows where all the plant treasures in this park.

On Sunday, May 25th, we will make a trip to an area west of Shawnigan lake where there is a natural grove of our native *Rhododendron macrophyllum*. More information on these trips next month.

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NEW SPECIES OF JUNIPER!

There are very few native junipers around the Georgia Basin, on some hilltops you can find *Juniperus communis* or common juniper. There are two at the top of Camas Hill, one is on an open site near the summit and another is languishing in the shade of some conifers on the west side of the hill. The one in full sun is about five metres across, with a hollow centre and rooted branches forming a circle. There has been some discussion that this is possibly a different species than the normal common juniper, with research ongoing.

The species that has been regarded as *Juniperus scopularum*, Rocky Mountain Juniper, can be found scattered over a few localities in the Georgia Basin and Puget Sound areas. At least three of these trees are located at Albert Head in Metchosin and I have seen a few on Galiano Island, along Bodega Ridge. Samples from trees on Lesquiti Island, at Yellowpoint Lodge, Cowichan Bay and Brentwood Bay, as well as on a few of the San Juan Islands have been studied by Robert P. Adams of Baylor University, Texas. He has found that these trees are a new species, appropriately named *Juniperus maritima*, Seaside Juniper.

The specimens at Albert Head show a huge variation in shape, one is about ten metres tall with needles only on the uppermost tip (old, vertical sibling trunks have died and fallen away) and another is about five to six metres across and only three to four metres in height and very robust.

Some plants from the study were cored and by counting the rings, it was determined that a number of trees are more than 400 years of age, predating European settlement and putting paid to the explanation that they were brought by old world colonists.

The distinguishing characteristics are somewhat sublime to an amateur plant lover:

Juniperus maritima is similar to *J. scopularum* but differs in that the seed cones mature in 1 year (14-16 months), seeds are usually exserted from the cone, and the scale leaf tips are obtuse. It differs from *J. virginiana* in having larger seed cones (6-8 mm) that are often reniform, seeds usually exserted from the cone, scale leaves overlap less than 1/5 the length, and branchlets

are smooth and reddish-brown. Analyses of the genetic makeup and the very different habitat (growing at ocean or lakeside side on granite or sand) further confirms that these plants have evolved since at least the Pleistocene era into a new species.

From *JUNIPERUS MARITIMA*, THE SEASIDE JUNIPER, A NEW SPECIES FROM PUGET SOUND AND GEORGIA STRAIT, NORTH AMERICA

Note: a free reprint of the original paper is available at www.phytologia.org

SEASIDE JUNIPER (*JUNIPERUS MARITIMA*)

AT ALBERT HEAD, METCHOSIN



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The Ten Green Commandments

Thou shalt respect the environment above private property rights.

Thou shalt not develop on rare and threatened ecosystems.

Thou shalt not cause environmental degradation.

Remember the Earth and preserve her for your children.

Honour the Earth and celebrate her infinite biodiversity.

Thou shalt not introduce invasive species.

Thou shalt promote environmental stewardship and restoration.

Thou shalt observe the precautionary principal.

Thou shalt labour to ensure a healthy planet for all lifeforms.

Thou shalt covenant green spaces.

CLAYTONIA AND MONTIA

Not an easy subject to get to know. I have just received a monograph on these delightful plants, courtesy of Adolf Ceska, and I'm hoping I can tease some easy to recognise differences between the species. Stay tuned for next month's issue.

CLAYTONIA SIBIRICA



NATIVE PLANT STUDY GROUP (Sub-group of the Victoria Horticultural Society)

The NATIVE PLANT STUDY GROUP is a non-political group dedicated to learning about B.C. native plants, as wild populations and in garden settings, and to supporting conservation of native plants and their habitats. The group is guided by a volunteer steering committee. Members are encouraged to volunteer for this committee. Participation in outside events, by the group, or by individual members using the NPSG name, is dependent on approval of the steering committee or, where indicated, by the at-large membership. Activities requiring funding must receive approval by the general membership.

Chair:..... Valerie Elliott
Co-chair: Nathalie Dechaine
Speakers:... Moralea Milne
Treasurer: Catherine Fryer
Newsletter: Moralea Milne
Plant Rescue: Todd Doherty
Field Trips: Jean Forres & Pat Johnston
Membership: Agnes Lynn
Publicity: Valerie Elliott
Room Set-up: Pat & Wayne Robertson
Plant Raffle: . Heather Pass
List-serve: Linda Beare & John Olafson
Refreshments: Pat McMahon
VHS Liaison: Heather Pass

Native Plant Study Group members are required to become members of the Victoria Horticultural Society. Fees are \$25.00/yr and help pay for insurance to cover field trips. Send \$ to Box 5081 Stn. B, Victoria, V8R 6N3

The NPSG Newsletter is written and produced by Moralea Milne

LINKS:

Victoria Natural History Society: www.vicnhs.bc.ca
Native Plant Society of BC: www.npsbc.org
South Van Island Mycological Society: www.svims.ca
Swan Lake Nature House: www.swanlake.bc.ca
Garry Oak Ecosystem Recovery Team: www.goert.ca