Alpine Plants
of the Olympic Mountains and Vancouver Island

NOVEMBER 2005

Renowned botanist Hans Roemer entertained and educated with his presentation on Olympic Mts. flora with references to Vancouver Island. *Why are there differences between the flora of the mountains of Vancouver Island and of the Olympics, when they are not separated by all that much distance?*

For one thing, glaciation was more extreme on Vancouver Island than the Olympics and the result is that very little soil remains here, which in turn means we have fewer species than our southern neighbour. This process has left Strathcona Park with a rounded, hard, acidic rock base that is a poor environment for most plants. Two Van Is. locations which have a drier climate and interesting flora are Douglas Peaks, south of Port Alberni and Limestone Mountain.

The Olympic Mountains are composed of sedimentary rocks and volcanics which have produced deeply weathered materials. They are extremely rich in species with many endemics (species occurring no where else). The mountains generally have gentle slopes and thick colluvial soils. While glaciers covered most of Vancouver Island, they generally flowed around the Eastern Olympics and ended at Tacoma. There was a smaller glaciation in the Olympics, which was not as intense as that which happened on Vancouver Island.

Plants are rare for various reasons, some because they are relics that survived glaciation and some because they have more recently diverged from their ancestors.

Roemers divided his presentation into four sections: plants endemic to the Olympic Mts, plants shared with, but rare to uncommon on Vancouver Island, plants which reach their northern limit in the Olympics but are absent from BC and plants of the Olympics, absent from Vancouver Island, but reaching into Interior BC.

Plant List – Olympic Mountains Flora

Plants endemic in the Olympics

Campanula piperi	Piper's bell flower (screes)
Viola flettii	Flett's violet
Erigeron flettii	Flett's fleabane
Erigeron peregrinus ssp. p. var. thompsonii	Thompson's fleabane
Senecio neowebsteri	Olympic Mountain butterweed (north side of screes)
Petrophytum hendersonii	Olympic Mountain rockmat (slopes of Mt Angeles)
Synthyris pinnatifida var. lanuginosa	Cut-leaf synthyris
Astragalus australis var. olympicus	Cotton's milk-vetch (scree)

Plants shared with, but rare to uncommon on Vancouver Island

Aster paucicapitatus — Olympic Mountain aster
(found near French Lake in Strathcona, view beginning to mid-August)

Castilleja parviflora var. olympica — Olympic Mountain paintbrush
(also found on Brooks Peninsula and Queen Charlotte Is peaks

Claytonia lanceolata var. pacifica — Pacific coast spring beauty
(compare: Claytonia lanceolata v.lanceolata)

Erythronium montanum — Avalanche lily (Juan de Fuca ridge)

Erythronium grandiflorum — Glacier lily (Mt Prevost)

Douglasia laevigata var. ciliolata — Douglasia
(Northern Strathcona Park, N.W end of Van Is and Peaks of Queen Charlotte Is)

Lomatium martindalei — Martindale's lomatium
(fine scree andstone fields of Mt Arrowsmith)

Allium crenulatum — Olympic Mountain onion
(in scree in Olympics and on shallow soils and moss on Van Is)

Lewisia columbiana — Columbia lewisia (Mt Arrowsmith, Pea Mt, Hayley Mt, also common in Olympics on southern rock outcrops)

Erysimum arenicola — Sand-dwelling wallflower
(on limestone grooves, often with Romanzoffia sitchensis)

ALPINE CONTINUED

Orthocarpus imbricatus	Imbricate owl-clover (Little Mt Hooper)
Hedysarum occidentale	Western sweet-vetch (mountain tops)
Potentilla fruticosa	Shrubby cinquefoil (only on limestone, rare on Van Is)
Rhododendron macrophyllum	California rhododendron (in sub-alpine with western hemlock, amabalis fir and sub-alpine fir, can grow wall to wall in clearcuts)

Plants which reach their northern limit in the Olympics, absent from BC

Trifolium longipes	Long-stalked clover
Senecio flettii	Flett's groundsel
Aster alpigenus	Alpine aster
Phlox hendersonii	Henderson's phlox
Collomia debilis	Alpine collomia
Gentiana calycosa	Explorer's gentian (from end of Aug to Sept)

Plants of the Olympics, absent from Vancouver Island, but reaching into Interior BC

Antennaria lanata	Woolly pussy-toes
Penstemon procerus	Slender blue penstemon
Lewisia pygmaea	Dwarf lewisia
Veronica cusickii	Cusick's speedwell
Smelowskia calycina	Alpine smelowskia
Potentilla flabellifolia	Fan-leaved cinquefoil
Eriogonum ovalifolium var. nivale	Cushion buckwheat
Delphinium glareosum	Rockslide larkspur
Elmera racemosa	Elmera
Lupinus lyallii	Dwarf mountain lupine
Minuartia obtusiloba	Alpine sandwort
Agoseris glauca	Short-beaked agoseris
Artemisia campestris ssp borealis v. purshii	Pursh's northern wormwood
Erigeron speciosus	Showy fleabane
Xerophyllum tenax	Beargrass

Not in Olympics but found on Van. Is:

Loiseleuria procumbens	Alpine azalea (found in bogs and wetlands)

NEXT SPEAKER

Thurs. January 19th Derek Ditchburn and Wildflowers
Room D116 - MacLaurin Bldg. UVIC 7PM

NPSG

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 dependant on approval of the steering committee or, where indicated, by the at-large membership. Activities requiring funding must receive approval by the general membership.

UPCOMING EVENTS AND NEWS

UPCOMING OUTINGS, EVENTS AND COURSES

CRD Parks
November
Fri 18 People Plants Places 1 pm
Thetis Lake
Sat 19 Matheson Lake 10 am
Matheson Lake parking lot
Sun 20 Coles Bay Blitz 1 pm
Parking lot off Inverness off Ardmore

December
Sat 10 Craigflower Creek Trail10 am
Trailhead off Highland Rd off Watkiss Way

Sun 11 Roche Cove Ramble 11am
Parking lot off Gillespie Rd

Sun 18 Island View Beach 10 am off Homanthako Rd off Island View Rd


MUSHROOM


MUSHROOM

Victoria Natural History Society
November 18 - 20, 2005
Annual Fraser Valley Bald Eagle Festival
Celebrate the biodiversity of the Fraser Valley. The weekend focuses on the lifestyles of the Pacific Salmon and the natural habitat of the Bald Eagle, as Harrison Bay and Harrison Mills provide the third largest population of over-wintering birds in North America. **http://www.fraservalleybaldeaglefestival.ca/index.html** for more information.

Wednesday, November 23, 2005
Birds & Marine Animals of the Cold Continent - Antarctica & the Southern Ocean.
David Ashurst will be our guest speaker for this evening. David has worked as a scientist and lecturer on tour ships in Antarctica. Everyone welcome. 7:30 p.m., Fraser 159, UVic. Bring a friend and your coffee cup.

Sunday November 27, 2005
Adventure to the Big Trees
Visit the Red Creek Fir near Port Renfrew plus other big trees on the way. Bring lunch, snacks and drinks for the all day outing. Starts from Victoria at 9:00 am. You must pre-register for this trip due to transportation limitations. Guaranteed spot if you are willing to bring your 4-wheel-drive for carpooling. No pets please. Date may change due to weather conditions. Call Agnes at 721-0634 or email her (thelynns at shaw.ca)

Monday, 28 November 2005
Marine Life of the Pacific Northwest: A Photographic Encyclopedia of Invertebrates, Seaweeds and Selected Fishes
The authors, Andy Lamb and Bernard P. Hanby, will discuss the trials and triumphs of publishing an encyclopedia of this size. Room 157 - Fraser Building, University of Victoria.

December 2 and December 3
Musical HATs!
Two fun-filled evenings of fabulous music and food! Both nights will be held at the Prospect Lake Community Hall. For details and/or tickets, please call the HAT office at 995-2428.

Tuesday December 6
VNHS Natural History Presentation Members Night
Did you go on any trips this year? Or maybe you have taken many pictures and just want to share them. VNHS Members Night is the place for you! Tell us about your adventures and dazzle us with your pictures. We can accommodate digital pictures with our laptop computer and digital projector, and good old fashioned slides with our reliable slide projector. Anyone interested in doing a presentation can call Ed Pellizzon at 881-1476. We meet at 7:30 pm, room 159 at the Fraser building at Uvic.

March 3 to 5, 2006
Vancouver Island Rock & Alpine Garden Society (VIRAGS) Rounding the Rim
Plants from the Pacific Rim
The Mary Winspear Centre
Registrar: Claire Hughes 388-6595

The Land Conservancy (TLC) workshops coming up:
Phone 479-8053 (TLC in Victoria)
or contact Jay (816-1816)
(jay@conservancy.bc.ca)

NATIVE PLANT STUDY GROUP

Nov. 19/05 Identifying Native plants in the winter (for non scientists)

Jan. 28/06 Tapping the Western Maple (for sap)

March 18/06 Identifying Native plants in the spring

Introduction to Spring Birds (DBA)
Cedar Basketry (DBA)
Honeysuckle basketry (DBA)

GORP 2005 FALL VOLUNTEER SCHEDULE OF ACTIVITIES

Saturday, November 26 10-12
Chatterton Hill blackberry, mulching trail

S**aturday, December 10** 10-12
Mahon Brook sheet mulching

The Land Conservancy (TLC) has a list of volunteer opportunities from painting to gardening that can be found on their website:

LATE BLOOMER

Gumweed (Grindelia integrifolia) found bravely blooming on November 12.

BOOK REVIEW

How to Be a Bad Birdwatcher
by Simon Barnes

Everywhere in this book that the word bird is used, substitute the word plant and change the title to How to Be a Bad Naturalist or Botanist. With a little word substitution this book can help you begin a love of natural history in all its forms.

Simon Barnes, a UK sportswriter, writes lyrically about the joys of observation and mentoring. He entreats you to develop a habit of looking; raise your head or lower your eyes and you can start on an entire lifetime of delightful exploration. From natures cathedrals to an urban oasis, there are joys to be found if only we care to see them. Mentor, tutor, teacher, it is a blessing to find one and an equal pleasure to be one. Barnes recounts his good fortune in meeting a more experienced guide who lead him into the mysteries of bird identification and bird calls, subjects that can be daunting for a beginner. In time, he returned the favour, by sharing these same experiences with his father, creating bonds between generations. An passionate, funny and delightful glimpse into the life of a birding (plant) enthusiast.

VOLUNTEER OPPORTUNITIES

**Garden Tour Volunteers are needed if NPSG members would like to sponsor a garden tour. Contact Angela Deering at ngeladeering@shaw.ca or 595-5820

MUSHROOMS ON WATER LINE

GUMWEED - SPOTTED NOV. 12

UVic Herbarium Needs Volunteer Help - The University of Victoria Herbarium houses a collection of 50 000 dried vascular native plant specimens used for both education and research. Along with many other natural history collections around the world, we are in the process of transcribing information about each of our specimens to an electronic database that will be accessible via the world-wide-web. We are hoping to find a couple of computer-savvy plant-lovers willing to help with data entry. If you are interested, please contact Erica Wheeler at 721-7097 or by email ericaw@uvic.ca.

www.conservancy.bc.ca or Contact Sheila at 250-479-8053 or admin@conservancy.bc.ca.

Volunteer at Swan Lake Christmas Hill Nature Sanctuary
Become a volunteer at Swan Lake Christmas Hill Nature Sanctuary and expand your knowledge of the natural history of this area. Volunteer opportunities include Nature House Receptionist and Assistant Naturalist A commitment of 2 to 3 hours once a week is all that is required. Training is provided. For further details contact Joan at 479-0211 or email volunteer@swanlake.bc.ca

NATIVE PLANT STUDY GROUP

NOVEMBER 2005

GREEN ROOF

Anitra Winje

The District of Metchosin added green space to its municipality when a living roof was installed on its new pavilion on October 15th. Under the direction of local landscaping and green roofing company, Paradise Cityscapes, a volunteer work crew brought the 12' x 16' space alive with a variety of native plants.

"Green roofs are not just about grass and goats," said Adam Weir of Paradise Cityscapes. "The Metchosin green roof demonstrates a system that is lightweight, low-maintenance, and suited for this climate and most structures." In addition to being esthetically pleasing, the roof will serve a practical function. The organic layer, comprised of black pumice, organic compost and native vegetation, will help prevent rainwater run-off. Green roofs boast additional environmental and economic benefits. By insulating the structures on which they're installed, they moderate heating and cooling costs and provide soundproofing. They prolong the life of buildings by sheltering them from wind, rain, and UV radiation. They reduce pollution by absorbing gases and trapping dust. They also attract birds, butterflies and curious onlookers.
"Green roofs create undisturbed habitat for threatened plant species," adds Weir, noting that about 20 plant species were used on the Metchosin green roof.

The plants were all donated by Moralea Milne and included many species that occur on moss balds on Camas Hill in Metchosin. Moralea said she chose native plants that have adapted to shallow soils and sun baked conditions, most of which have never been used on a living roof before. "Most roofs use just a few species like sedums, strawberry and nodding onion. We'll continue to experiment with new species as they become available, I'll add some grassland saxifrage (Saxifraga integrifolia), small-flowered woodland star (Lithophragma parviflorum) and death camas (Zygadenus venenosus)"

Although green roofs are not common in North America, Weir hopes to change that. He hopes the Metchosin roof will be a learning tool for kids and an example of what is possible on a typical home.

For more information on this project and other green roofs, visit **www.greenroofs.com.**

Species Planted

Carex inops	Long-stoloned sedge
Festuca roemeri	Roemer's fescue
Stipa lemmonii	Lemmon's needlegrass
Danthonia californica	California oatgrass
Luzula multiflora	Many-flowered wood-rush
Lonicera hispidula	Hairy honeysuckle
Sedum spathulifolium	Stonecrop
Sedum oregonum	Oregon stonecrop
Allium cernuum	Nodding onion
Clarkia amoena	Farewell-to-spring
Plectritis congesta	Sea blush
Potentilla virginiana	Wild strawberry
Olsynium douglasii	Satinflower
Grindelia integrifolia	Gumweed
Camassia quamash	Common camas
Sisyrinchium angustifolium	Blue-eyed grass
Saxifraga rufidula	Rusty-haired saxifrage
Mimulus sp.	Monkeyflower
Selaginella wallacei	Wallace's selaginella
Polytrichum sp.	Haircap moss

NATIVE PLANT STUDY GROUP

NOVEMBER 2005

PLANTS AND PHILOSOPHY

The new format of our meetings has included a thought provoking question that is thrown out to the floor for discussion. There are no right answers to these questions but they can lead you down some interesting paths.

If invasive species provide habitat is that enough reason to leave them be?"

At the September meeting the question was something like " if invasive species (say Himalayan blackberry) provide food and habitat is that enough reason to leave them be?". There was almost unanimous consent that invasive species are never appropriate in the landscape. Even butterfly bush (Buddleia sp), which attracts and feeds so many butterflies should not be encouraged as it spreads easily into the natural landscape. However, speaking as devils advocate, it is hard to resist growing some of these species, for their delicious fruits or nectar rich flowers or because they seem to be occupying a niche from which native plants seem absent. In the case of butterfly bush, I have seen rare skippers feeding on the nectar of these flowers at a time our moss bald landscape is virtually devoid of appropriate food. Mid-summer is a barren season for nectar seeking insects, perhaps the foods that fed these creatures at one time have been sacrificed for development pressures, certainly wetlands are almost vanished. Are we helping some species survive as we crowd out others? There was talk of cutting back the buddleias after flowering to prevent them from disseminating seed, but what happens when you are no longer the person in charge, you've grown too old or sold your property? Can you reasonably expect that someone else, probably less committed, to continue this practice? It is more likely that the plants will be left to seed and propagate into the wild. And what of the already struggling skipper, should it be left to its fate?

Is it appropriate to use "cultivars" of native plants?

RUSSULA

During our October meeting we grappled with the question of using "cultivars" of native plants in gardens. A cultivar is a horticultural plant that has been developed by breeding and is not found in the wild. A further extension of this question might be using plants that are genetically distinct from local stock, due to differences in biogeoclimatic range. Is it appropriate to use "native seeming" plants that might disrupt the genetic make-up of local plants adapted to our local environment? Could using these "almost" native plants eventually cause a shift in the ecology of an area by having plants that flower earlier or later than the norm, interfering with the lives of pollinators and other interrelated species?
I remember reading an article long ago about some extirpated mammal species from Eurasia that were reintroduced to an area from stock that survived quite a distance away. The reintroduced mammals were adapted to a different climate and gave birth to their young too early for the conditions of their new home. In this case, no genes were being added to weaken a gene pool, but it shows the adaptations and differences even within a species.

Another problem with using these "almost-native" flora is that they are generally bred vegetatively, meaning most of the plants are clones. It would seem that wholesale planting of a single genotype could reduce biodiversity and increase the risk of widespread disease outbreak.

On the other hand, there is no reliable source of local native plants for people who even take notice of these things. If large amounts of plants are needed for landscaping projects, is it better to plant non-native species that will not interact with local gene pools or is it more appropriate to plant "almost-natives" that will help supply much needed food and habitat to other native species? Will the influx of non-local genes increase the diversity of the gene pool or reduce its integrity?

PIPER'S BELLFLOWER by Ed Tisch

The entire sky
leans in all directions
trying to match your blue.