The Importance of Biodiversity

By: Kristen Harrison

Biodiversity has many definitions, but essentially is a term used to encompass all variations of life forms within a given ecosystem. Biodiversity is also a tool by which the health of biological systems can be measured. Species loss is accelerating worldwide due to human actions (annual rate of extinction is 1,000 to 10,000 times faster than it has been over the past half-billion years), and serves as a warning that species and their habitat need protection. At our September meeting, Matt Austin from 'Biodiversity BC' reminded us that maintaining intact ecosystems and protecting species is critical for biodiversity.

British Columbia occupies 95 million hectares with incredible topographic and climatic diversity and thus, a varied range of ecosystems including forests, mountains, ocean, wetlands and rivers. Subsequently, British Columbia has a very rich flora including 2,790 native vascular plant species (nearly 27% are considered species at immediate risk), and approximately 1,000 species of bryophytes.

Landscape diversity translates into increased niche space which enables plant species to specialize in specific habitat types such as alpine areas, wetlands, dry land areas, and salt water ecosystems. Some species of vascular plants and moss are endemic to British Columbia (only found in the province) such as Queen Charlotte avens (*Geum schofieldii*), Newcombe's ragwort (*Senecio newcombei*) (status: blue listed), Vancouver Island Beggarticks (*Bidens amplissima*) (status: blue listed), Rusty cord-moss (*Entosthodon rubiginosus*) (status: endangered) and Margined Streamside Moss (*Scouleria marginata*) (status: endangered). The status of many of these species is no coincidence; endemic species are particularly sensitive to disturbance because of their limited geographical distribution.

Regrettably, the most highly diverse natural areas of the province overlap with areas that have been heavily populated and altered by humans. Ecosystems that are particularly vulnerable include riparian zones, wetlands and grasslands. Of special concern are the Garry oak (*Quercus garryana*) and associated ecosystems along the southeast coast of Vancouver Island and Gulf Islands which are one of the most endangered ecosystems in Canada (less than 5% of the habitat remains in a near-natural condition). These ecosystems have a distinctive flora and are characterized by Garry oak woodlands, maritime meadows, vernal wetlands, coastal bluffs and rock outcrops. Matt Fairbarns from Aruncus Consulting illustrates the gravity of the problem effectively:

The flora of Garry Oak and associated ecosystems includes a number of plants which are rare or absent from the rest of Canada. Over 70 rare plants have been reported from these ecosystems. Over half of these species have been evaluated by COSEWIC or have status reports nearing completion and these species tend to be ranked Endangered in Canada. This represents one of the greatest concentrations of species at risk in all of Canada. (www.biodiversity.bc.ca)



Ecosystems that have taken thousands of years to develop in B.C. have been profoundly changed by humans, especially in the southern part of the province. Essentially, it is important that we recognize the inherent value biodiversity has, with or without its usefulness to humans.

To learn more about the biodiversity report presented to the group in September by **Matt Austin** see **www.hectaresbc.org**.

Hectares BC is a pilot project to test the concept of a new tool for geospatial data analysis in the natural resource area. The provincial government has a wealth of geospatial data but limited staff and tools for its analysis. Hectares BC allows scientists, researchers, government and others to access and work with geographic information without the need for GIS skills to carry out planning, assessment, reporting and decision making functions.

Events & Outings Victoria Natural History Society

Go to www.vicnhs.bc.ca to become a member and support our local Natural History Society!

Contact Darren Copley | dccopley(at)telus.net | http://www.vicnhs.bc.ca/

Swan Lake Nature Sanctuary

Saturday, October 17

Fall Plant Sale
The Swan Lake Native
Plant
Sale is held at the Nature
Sanctuary from 9:00 a.m. to
3:00 p.m., and features a
diverse selection of native
plant species, with the fall
sale focusing more on
shrubs and evergreen ferns.

The plants are arranged in three zones, based on sun requirements: full sun, sun to partial shade, partial shade to shade. Within each zone, plants are arranged according to form: fern, ground cover, perennials, shrubs and trees. To view the plant lists for the sale go to http://www.swanlake.bc.ca/plantsale.htm

Sunday, October 25 Swan Lake Mushroom Show

Swan Lake Nature Sanctuary 10 a.m. - 4 p.m. Admittance by donation.

Native Plant Gardening Programs

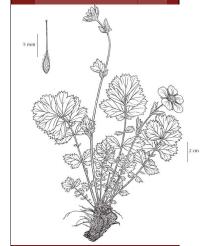
The Nature Sanctuary and CRD Water Department have teamed up to offer an introductory course on gardening with native plants. The programs run during the spring and fall. To view the current schedule go to http://www.swanlake.bc. ca/plantsale.htm

Contact Robyn Burton| T:250-479-0211| volunteer(at)swanlake.bc.ca

South Vancouver Island Mythological Society

Thursday, November 5
Medicinal Mushrooms
Presented by Richard
Winder, a SVIMS member,
who will take us to the
forefront of knowledge
about medicinal mushrooms
and their applications.
Pacific Forestry Centre
507 West Burnside Rd.
Victoria, BC
At 7pm.

Geum schofieldii
The Illustrated Flora of
BC



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NPSBC Native Plant Society of British Columbia

Thursday, November 5
A Botanical Journey
through the Siskiyou
Mountains with Ron Long
and Virginia Skilton

The Siskiyou Mountains lie in a unique bioregion where plant species from the Cascade Range meet species from the California Floristic Province. This. combined with complex topography, geology and climate has produced a very distinct flora with many rare endemics, found nowhere else, such as Umpqua mariposa lily (*Calochortus* umpquaensis), Serpentine catchfly (Silene serpentinicola) and Silky balsamroot (Balsamorhiza sericea). Come find out more about what makes the Siskiyous a native plant lover's paradise.

Ron Long is an accomplished photographer and inveterate botanical traveller.

Virginia Skilton is past president of the NPSBC and spends as much of her free time traveling, botanizing and photographing native species.

Thursday, December 3
Conserving Native Flora
Amidst the Invasive Wave
with Joe Bennett

Unwelcome alien flora often make their way into natural areas and native flora often suffer for the intrusion. Joe Bennett a doctoral student at the University of BC and is looking at the biogeography of islands and non-island land patches, and the influence of surrounding landscapes on native versus invasive species. His study areas – grasslands on Vancouver Island and adjacent islands – contain many rare native species and are heavily invaded by competitive exotic plants.

Joe Bennett is a PhD. candidate at UBC's Department of Forest Sciences. He completed his master's degree in Biology at Queen's University and has worked as a parks biologist in Ontario, an environmental containment researcher in Ontario and Nunavut and a natural resource manager in Laos. Upon graduating from UBC Joe hopes to work at a university where he can pursue a research and teaching career that continues to focus on

conserving native flora.

Location and Time:

Van Dusen Botanical Garden, Cedar Room 5251 Oak St. at 37th Ave. Vancouver, BC At 7:00 p.m. Free admission and parking.

Contact Ron Long | T: 604-469-1651 | rlphot(at)shaw.ca or Contact Dawn Hanna | T: 604-831-5069 | dawnhanna(at)telus.net

Reoccurring Events Victoria Natural History Society

Go to www.vicnhs.bc.ca to become a member and support our local Natural History Society!

Botany Night

3rd Tuesday of each month, 7:30 pm

Contact Darren Copley| dccopley(at)telus.net | http://www.vicnhs.bc.ca/



Brian Klinkenberg



Check the VNHS website for more events at www.vicnhs.bc.ca.

For all VNHS events: no pets please. Bring a lunch and drinks for the allday outings. Wear appropriate attire and footwear.

Contact Agnes | T: 250-721-0634 | thelynns(at)shaw.ca

The Native Plant Study Group meets on the 3rd Thursday of the month from September through May at the

MacLaurin Building, UVic. Please join us. And, please visit our lovely website: www.npsg.ca. Designed and maintained by NPSG co-chair Valerie Elliott, co-owner of design company iD2 (id2.ca). Thanks Valerie and Stephan for the superb work and generous commitment.

For information regarding fees please contact Valerie Elliott | T: (250) 519-0404 | co-chair(at)npsg.ca

Volunteer Opportunities

The Anti-Ivy League of Cadboro Bay

Volunteer for great camaraderie, loads of fun and a feeling of satisfaction every Wed. and Sat. from 9:00a.m.-noon. Currently working in Konukson Park.

Contact Harry Drage | T: 250-477-9544 | hdrage(at)shaw.ca

Brodick/Bow Park

West of Univ. Heights shopping centre off of Cedar Hill Rd.

Invasive species removal and site restoration - every Monday 10:00a.m. –noon. Training, tools, and equipment provided.

Contact Judy Spearing | T: 250-472-0515 | jandd_spearing(at)shaw.ca

Mt. Douglas Park

Alien, invasive species removal and site restoration. Schedule and location may vary.

For full details go to www.mountdouglaspark.ca/ calendar.do

Contact Judy Spearing | T: 250-472-0515 | jandd_spearing(at)shaw.ca

Glendale Gardens Native Plant Demonstration Garden

Meet every Wednesday morning; snow, rain, or shine. Before coffee we work in the Western Woods restoration project and after coffee we work in the native garden. Volunteers welcome. Contact Jean Forrest | T: 658-5740 | jforrest(at)telus.net

Swan Lake Christmas Hill Nature Sanctuary

3873 Swan Lake Rd., Victoria Swan Lake has a wide range of volunteer opportunities involving plants; including: nature interpretation, gardening with native plants, and removal of invasive plants.

Contact Robyn Burton | T: 250-479-0211 | volunteer(at)swanlake.bc.ca

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The Native Plant Study Group is a sub-group of the registered non-profit Native Plant Society of British Columbia and is guided by a volunteer steering committee which members are encouraged to volunteer for.

The NPSG gratefully acknowledges the support of the RNS program at UVic in securing the use of the rooms and facilities.

UVic parking policy: pay parking is in affect 24 hrs/day. You must purchase a \$2 parking permit for the evening. Save yourself the trouble and ride your bike or take the bus! (http://.bctransit.com/regions/vic/)

Our November Speaker is...

Brenda Costanzo

Brenda has over 30 years of experience in native plant gardening. She is the co-author of the revised and second editions of April Pettinger's book "Native Plants in the Coastal Garden", published by Whitecap Books in 2002. She holds a M.Sc. from the University of Victoria and has worked at the Royal BC Museum and at the University of Victoria Herbaria.

At the Royal BC Museum she was an herbarium and a native plant garden technician, and it was there that her interest in gardening with native plants begun. Brenda was also the Assistant Curator of the Herbarium at the University of Victoria for 12 years. During that time she also taught many undergraduate laboratory botany classes.

In the spring and summer of 1985 Brenda designed and installed the first phase of the native plant garden at the Swan Lake Christmas Hill Nature Sanctuary. She then went on to volunteer in the garden for the following six years.

Over the last 25 years Brenda has instructed community education classes and given numerous talks and workshops about native plant gardening, native plant propagation and wildflower identification.

Brenda is currently the Senior Vegetation Specialist with the Ministry of Environment in the Wildlife Science Section of the Ecosystems Branch, and is a Professional Agrologist.

Local Native Plant Gardens

Glendale Gardens Native Plant Demonstration Garden

505 Quayle Rd, Saanich The garden features rocky outcrops, Garry oak and spring flowering bulbs such as camas, shooting stars and fawn lilies. There are presently 75 species of native plants in the garden, and new species are being added continually.

Contact | T: 250- 479-6162

Gonzales Bay Native Plant Garden

1843 Crescent Rd., Victoria

A residential seaside native plant garden with Garry oaks, western crabapple, redosier dogwood, woolly sunflower, mock-orange, native grasses and bulbs, and much more. There is a small Garry oak restoration area to the east of the property. The restoration area is accessible from the



sidewalk along Crescent Rd.

Contact Pat Boyle T: 250-370-1812

Kings Rd. Native Plant Garden

Kings Rd. at Roseberry Ave., Victoria This site is a residential native plant garden in the Oaklands neighbourhood. The Garry oak habitat was restored over a period of four years by volunteers who met once a week.

Contact info(at)goert.ca

Oak Bay Native Plant Garden

Beach Dr. at Margaret St., Victoria

This landmark was donated By Mrs. Ada Beaven in

1939 to develop a native plant garden. The site is of great ecological value as a green space and nature reserve. It is a preserve for plants indigenous to southern Vancouver Island, many of which are endangered by development. The garden has more than 120 plant species from all over the island, as well as a restored Garry oak meadow.

Contact Carol Davies| T: 250-475-4412| ecdavies(at)uvic.ca OR Contact Parks and Rec., Oak Bay| T: 250-592-7275

Saanich Community Church Native Plant Garden

4566 West Saanich Rd, Saanich The garden is developing under mature oak and fir trees and aims to reintroduce species that may have previously grown on this site.

Contact Burl Jantzen| T: 250-475-0406| info(at)saanichcommunity.c a www.saanichcommunity.ca

Royal BC Museum

675 Belleville St., Victoria One of the oldest native plant gardens in western Canada (begun in 1967) and features some 300 native species.

Contact Ken Marr| T: 250-356-8176| kmarr(at)royalbcmuseum.bc

NATIVE PLANT STUDY GROUP (NPSG)

(Sub-group of the Native Plant Society of British Columbia)

The NPSG 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. 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.

Co-Chair: Valerie Elliott| co-chair@npsg.ca | 250-519-0404

Co-Chair: Nathalie Dechaine co-chair@npsg.ca

Speakers: Kristen Harrison
Treasurer: Joan Varley
Newsletter: Ilana Kronick
Kristen Harrison
Hilary Stead

Plant Rescue:Todd DohertyField Trips:Jean Forrest

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 **Archivist:** Brenda Pilon

Native Plant Study Group members are members of the Native Plant Society of BC.