

HISTORICAL GARRY OAK ECOSYSTEMS OF VANCOUVER ISLAND

Vegetation ecologist with the BC Ministry of the Environment, Ted Lea, has been mapping the historic and present day occurrence of Garry oak ecosystems on Vancouver Island and environs. Reaching far back into history Ted informed us that Garry oaks were at the maximum extent from 4500-8000 years ago during the warm, dry, Hypsithermal period. The pollen diagram showing the relative abundance of various plant species during climate shifts over the last 11,000 years gave a fascinating glimpse into ecological changes.

Garry oak ecosystems support over 100 species at risk and also hold important cultural history for First Nations and post contact people. The mapping is a valuable tool in assessing potential areas for restoration, in understanding regional heritage and human impacts on ecosystems and in predicting potential vegetation that might result from climate change. Ted also appreciates the mapping as a great mystery solving exercise!

The current mapping deals only with areas of remnant Garry oak ecosystems and does not include oak trees surviving in heavily converted sites.

The mapping required documenting historical cultural evidence through various avenues including: archaeology; paleoecosystems; ethnobotany; written records; maps, photographs and land surveys. Also included is in the research is biological evidence gleaned through understanding forest stand history (observational field

evidence); dendrochronology (tree rings); palynology (pollen study); study of packrat middens; through techniques for discovering historic animal assemblages; through study of geomorphology; hydrology and soils and also from inferring vegetation history from phytoliths (silica bodies produced by plants).

Ted treated us to many old maps, quotes ("I have never seen wildflowers elsewhere grow with the beauty and luxuriance they possess here" Mayne 1862) and photographs which showed an ecosystem of surpassing beauty that was culturally modified through First Nations use of fire and agriculture. The slide showing the historical and remaining Garry oak ecosystems of the Victoria area was a sobering indictment of the thoughtless squandering of our natural heritage that has been even further reduced in the last decade.

Likewise, scenes, maps and quotes from further up island to Comox and throughout the Gulf Islands illustrate similar devastation of Garry oak ecosystems.

Overall, from 1800 to 2000 we have lost 90% of Garry oak ecosystems, the highest losses occur in the deep soil sites, with only 1.8% remaining somewhat intact, while the more difficult to develop shallow soils areas have lost 63% of their base.

Mapping has also occurred in the Okanagan area, particularly around Osoyoos, showing that the Antelope-brush community has decreased from 10,000

NATIVE PLANT STUDY GROUP

SEPTEMBER 2006

Distribution (hectares) of Garry Oak Ecosystems in Victoria and Surrounding Areas by Year

Year	1800	1997
Victoria	1460	21
Oak Bay	850	25
Saanich	3473	192
Central Saanich	740	7
Sidney	30	0
North Saanich	1040	1
Esquimalt	470	20
Colwood	320	16
Langford	370	105
View Royal	270	39
Metchosin	1180	49
Indian Reserves	240	37
Total	10,443 ha	512 ha

ha in 1860 to 4,000 in 2001 - a 60% decrease. While in the Vernon area the Western birch/Red-osier dogwood ecosystem has declined by 97% since 1800, the Black cottonwood/Red-osier dogwood floodplain by 68%, the Idaho fescue/Bluebunch wheatgrass by 93%, Cattail marshes by 55% and Aspen ecosystems by 48%.

As last words of wisdom, Ted informed us of some things we can do to safeguard these ecosystems into the future:

- protect the remnants;
- deal with invasive species;
- restore suitable areas;
- purchase land to conserve;
- practice stewardship on private lands;
- introduce species at risk where appropriate;
- prevent other ecosystems from becoming so threatened
- plan for climate change.

ECO-FRIENDLY CLEANING PRODUCTS!

Western Canada Wilderness Committee's Rainforest Store at 651 Johnson Street (388-9292)

The WCWC store wide offers a range of Soap Exchange products, all of which are biodegradable, water soluble, made in Canada, and 100% animal friendly. They've got Soap Exchange Ultra Powder for all of your environmentally conscious laundry needs and Nature Power, a highly concentrated citrus cleaner, that blasts through tough grease, stains and dirt, yet is soft enough for fabrics and even laundry. You can even bring in Soap Exchange

containers for reuse, decreasing your total household waste!

Remember all proceeds from the Rainforest store go directly to their wilderness savings campaigns.

Garry Oak Restoration Project (GORP)

2006 Fall Schedule

Volunteers Appreciated!

All Dates are on a Saturday from 9:30-11:30 am except where noted.

Sept 23: Mt Douglas Summit
• Removes broom

Sept 30: Playfair Park
• Remove invasives

Oct 14: Mt Tolmie Park
• Remove invasive & garden escapees

Oct 21: Feltham Park:
• Remove ivy and daphne

Oct 28: Little Mt Douglas
• Remove broom

Nov 4: Chatterton Hill Park
• Remove invasives & mulch

Nov 18: Mahon Brook
• Sheet mulch

Nov 19 (SUNDAY): Feltham Park
• Remove ivy, blackberries and ivy

Nov 25: Camas Park:
• Remove invasives, mulch

Dec 2: Wetherby Park:
• Remove invasives, mulch

To volunteer contact Nathalie Dechaine at dechainn@saanich.ca or 475-5475

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SPEAKER SCHEDULE

The NPSG meets the 3rd Thursday Sept-May (excluding Dec) at 7:00 pm in Room D116, MacLaurin Bldg., UVic.

October 19

Terry McIntosh

Living with Mosses; Stories from the World of Bryology.

A photographic study of interesting mosses and mossy habitats around British Columbia.

November 16

Andy MacKinnon

Join renowned local author of Plants of Coastal British Columbia and global authority on Coastal Douglas-fir forests (CDF). Andy will speak on the international importance of our coastal Douglas-fir forests and Garry oak ecosystems, the rarest forests of Canada and the best remaining examples of CDF in the world.

EVENTS AND OUTINGS

Every Saturday 1:30 pm: Tour of Merve Wilkinson's Wildwood Forest, Ladysmith. Jay, 250-245-5540
<http://www.ecoforestry.ca/WildwoodMap.htm>

Every Saturday (except long weekends), 9am-Noon: Beacon Hill Park Ivy Pull, southeast woods near Cook and Dallas. Bring gardening gloves. No dogs. Volunteers welcomed. Call Cornelia, 920-3556 or kacy@islandnet.com.



FIREWEED (EPILOBIUM ANGUSTIFOLIUM)



THIMBLEBERRY (RUBUS PARVIFLORUS)

September, Thur 14 - Sat 23 Ten Days of Action for Ancient Forests. Join concerned citizens across Vancouver Island, and abroad for a concerted campaign to protect the remaining ancient forests and forestry jobs on Vancouver Island. Petition-drive, demonstrations, events in communities and campuses across the Island.

Fri 15-Sun 17 TLC Wildwood Conservatory Repair and Gardening Holiday, near Ladysmith. \$100 Wildwood is widely recognized as a model for ecoforestry. holidays@conservancy.bc.ca or call 250-383-4627.

Sat 16/Sun 17 Victoria's monthly butterfly count. Call James Miskelly to volunteer. 477-0490

Sunday October 1 - Mosses and Lichens in Thetis Lake Park Let's join Gerry Ansell as he shows us the many different mosses and lichens that make this Park so very special. Meet at the main parking lot at 10:00 am. Parking is free in October. No pets please. Contact Agnes at thelynns@shaw.ca or 721-0634 for more information.

RNS SPEAKER SERIES

Two free lectures sponsored by the Restoration of Natural Systems Program
Admission is free, but call 250-472-4747 to register so that we can guarantee you a seat

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Facing the Challenge of the Alarming Loss of Nature on Southern Vancouver Island

Many cities appreciate how nature improves quality of life and provides services that translate into real dollar savings, or, if they are lost, sometimes huge added costs for municipal governments and taxpayers. There is great interest in enhancing greenspace and ecosystem function. Cities such as Chicago and Vancouver are developing biodiversity conservation strategies. Conserving greenspace is an important part of any such strategy and many cities wish they could go back in time and conserve their natural areas, accommodating population growth in smarter ways than urban sprawl and destroying natural areas.

Victoria still has many of its natural areas and is also home to the Garry oak ecosystem, the most endangered forest ecosystem in Canada.

Speakers: Vicky Husband, Sierra Club of Canada, BC Chapter's conservation chair; Bill Turner, executive director and president, The Land Conservancy

Course Code: ASER900 2006F1 C01

Date: Friday, September 29: 7 to 9 pm

Rare and Endangered Species in and Around Cities on Vancouver Island: Challenges and Opportunities

The sharp-tailed snake and the endangered deltoid balsamroot share our cities but are unknown to most people. The Garry oak ecosystem and great blue heron appear to be common in Victoria but are listed respectively as an endangered ecosystem in Canada and as a species of special concern. In many instances we are unaware that the rare and endangered species are in this rapidly developing area and we inadvertently destroy them and their habitat. However, with better information, planning and stewardship there are many opportunities to save these species and restore their habitat.

Speaker: Trudy Chatwin, rare and endangered species biologist, BC Ministry of the Environment

Course Code: ASER900 2006F C01

Date: Monday, October 16: 7 to 9 pm

BOOK REVIEW

Wildflowers of the Pacific Northwest by Mark Turner & Phyllis Gustafson, 2006. Timber Press

I bought this field guide with great enthusiasm after reading some glowing reviews.

Being an American publication it is understandably centered on the US portion of the Pacific Northwest, which means that some of our rarer plants, being more common in the US, are included with photos and descriptions. The plants are sorted by flower colour, so if you really don't know what you are looking at, it can be easier to find. However, I found it very annoying to have some of the species in one section and then have to hunt around through other colours for information on the rest of the species. The Canadian portion of the maps are not to be relied on at all. Absent too are trees, mosses, lichens, liverworts, ferns, grasses and their allies.

One thing I really missed was the more comprehensive descriptions by Pojar and MacKinnon, especially the cultural insights.

I'll won't be giving up my good old, battered Plants of Coastal British Columbia (and others in the series) anytime soon.

I believe that you can never have too many reference books, so it has a place on my shelves and will no doubt be useful on any trips to Washington, Oregon and northern California. I doubt it will find its way into my daypack while exploring BC and particularly Vancouver Island.

If you would like to receive this newsletter electronically (in colour!), please contact moralea@telus.net



TIGER LILY (LILIAM COLUMBIANA)

NATIVE PLANT STUDY GROUP

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THIRTY EASY NATIVE GARDEN PLANTS

Easy to grow, Easy to maintain, Easy on the Environment

Garry oak *Quercus garryana*
Deciduous, late to leaf out, late to drop leaves, full sun, good drainage, drought tolerant once established, young acorns have sweet scent, only host plant of Propertius duskywing, a blue-listed butterfly.

Shore pine *Pinus contorta* var. *contorta*
Full sun, tolerant of most growing conditions from droughty soils to bogs but check gene source for adapted plants. Not a first choice for deer. Host of the white pine and western pine elfin butterflies.

Rocky Mt juniper *Juniperus scopulorum*
Full sun, drought tolerant when established, bluish green foliage, not a first choice for deer.

Mountain-ash *Sorbus sitchensis*
Deciduous, to 4 m tall, full sun to part-shade, white flowers in clusters, red berries in fall, favoured by birds, needs adequate moisture.

Scouler's willow *Salix scouleriana*
Deciduous, small tree, somewhat drought tolerant, fast growing. Host plant for Western tiger swallowtail, mourning cloak and Lorquin's admiral butterflies.

Elderberry *Sambucus racemosa*
Deciduous, small tree, part shade, needs moist conditions, lovely panicle of creamy white flowers that feed various insects and hummingbirds, followed by bright red berries that are loved by many birds, makes an excellent jelly but must be cooked.

Evergreen huckleberry *Vaccinium ovatum*
Evergreen, full sun with adequate moisture, part-shade to shady-somewhat drought tolerant once established, delicious blue or black fruit, susceptible to blueberry rust. Not a first choice for deer.

Oregon Grape-tall *Mahonia aquafolium*
Evergreen, full sun, drought tolerant when established, yellow flowers, resembles holly leaves, edible blue fruit for jellies or wine. Not a first choice for deer.

Oregon Grape-low *Mahonia nervosa*
Evergreen, part shade, drought tolerant when established, yellow flowers, edible fruit for jellies and wine. Not a first choice for deer.

Salal *Gaultheria shallon*
Evergreen, sprawling, shrubby groundcover, part-shade to shade, some moisture needed, edible, delicious, dark purple berries, somewhat slow growing. Good for steep slopes. Not a first choice for deer.

Manzanita *Arctostaphylos columbiana* & *A. x media*
Evergreen, full sun, needs excellent drainage, somewhat slow growing, has beautiful peeling reddish bark, bonsai-like shape, white to pink flowers early in spring, supplies food for hummingbirds. Not a first choice for deer.

Flowering currant *Ribes sanguineum*
Deciduous, part shade-full sun with adequate moisture, beautiful early red, pink or white (hummingbirds prefer red) flowers, somewhat drought tolerant, fast growing.

Mock orange *Philadelphus lewisii*
Deciduous, full sun, appreciates good drainage, somewhat drought tolerant but needs some supplemental watering to look good, wonderfully scented white flowers.

Sword fern *Polystichum munitum*
Evergreen, part-shade to shade, needs some moisture but somewhat drought tolerant, large and lush looking. Good filler. Not a first choice for deer.

Kinnikinnick *Arctostaphylos uva-ursi*
Evergreen groundcover, full sun to part shade, drought tolerant when established, fast growing, beautiful red berries. Great trailing over stone walls. Not a first choice for deer.

Wild strawberry *Potentilla (Fragaria) chiloensis*
(leathery leaf), *vesca* (longer tooth-blue-green leaf on top), *virginiana* (shorter tooth)



ELDERBERRY (SAMBUCUS RACEMOSA)

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Deciduous, fast growing groundcover, white flowers and some plants fruit well. Parent of commercial strawberries. Host plants for two-banded checkered skipper butterfly. *P. chilensis*, full sun, *P. vesca* and *virginiana*-part-shade.

Stonecrops *Sedum spathulifolium*, *S. oreganum*, *S. divergens*
Evergreen groundcover succulents, prefer drought conditions, full sun, yellow flowers, *Sedum spathulifolium* & *divergens* bloom May, *S. oreganum* blooms end of July. *Sedum spathulifolium* host plant for blue-listed Moss's elfin butterfly.

Alumroot *Heuchera micrantha*
Evergreen, herbaceous perennial, white sprays of flowers, blooms June-early July. Not a first choice for deer.

Pearly everlasting *Anaphalis margaritacea*
Deciduous, herbaceous perennial, to 1 m tall, spreading-needs lots of room, silver-gray foliage, white "everlasting" type flowers, blooms mid-July-mid-August. Favourite for pollinators, native bees, butterflies (esp. skippers), beetles. Not a first choice for deer.

Columbine *Aquileja formosa*
Deciduous, herbaceous perennial, part-shade, orange flowers, blooms May-June, food for hummingbirds.

Aster *Aster subspicatus*, *A. foliaceus*, *A. chilensis*
Deciduous, herbaceous perennials, spreading-need lots of room, purple flowers, blooms August-September, favoured by pollinators, butterflies, native bees.

Nodding onion *Allium cernuum*
Semi-evergreen bulbs, full sun, somewhat drought tolerant, pinkish-purple flowers, blooms July, self seeds freely, edible (like green onions).

Sea Blush *Plectris congesta*
Annual, full sun, drought tolerant, but grows taller and lush with supplemental watering, short, bright pink flowers, blooms March-June, self seeds freely.

Farewell-to-spring *Clarkia amoena*
Annual, full sun, drought tolerant, but grows taller and lush with supplemental watering, sprawling habit, pink flowers bloom June-till mid-July, self seeds freely.



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.

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

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