

# the environment & THE SUBDIVISION PROCESS

JANUARY 2006

Susan Blundell of ENKON provided us with insight into the land development process; the role of ENKON in producing environmental inventories, assessments, mitigation recommendations, and best management practices; and the role of citizens and government. (ENKON provides environmental management consulting services to government and private sector clients, which includes many major land developers.)

Baseline inventories are often required for major developments and these incorporate terrestrial and aquatic surveys. Terrestrial surveys include vegetation mapping, rare plants, sensitive ecosystems, birds, reptiles, mammals, nesting areas for owls, wildlife and nest trees and recently, dragonflies and butterflies which include some species at risk. Aquatic surveys can address fish inventories, spawning and rearing habitat, riparian habitat, slope, substrate, gravels, vegetation, invertebrates, and baseline water quality. Susan considers field work on baseline inventories to be the most enjoyable aspect of her work.

Terrestrial ecosystem mapping (TEM) is a tool that is used for environmental assessments, however, it was developed for forestry use and many of southern Vancouver Islands ecosystems do not have standard classifications. Tracy Fleming, formerly of CRD Parks, classified some of these ecosystems.

The provincial Conservation Data Centre (CDC) has identified 7 sensitive ecosystems and 112 rare plant communities on southern Vancouver Island, 37 of which are in the Coastal Douglas-fir (CDF) biogeoclimatic zone (Victoria and environs). Douglas-fir-*Arbutus* is one of these rare communities, that seems somewhat common until you realize that it is only locally common and has a very small range, we are the global hotspot and, despite its rare status, it is being quickly being converted to unsustainable uses.

Many municipalities do not have standardized protocols for environmental assessment and rely on the judgment of consultants to provide guidance.

An Environmental assessment begins with looking at and delineating polygons on air photos. Identification of wetlands, riparian areas, sensitive ecosystems, old and new growth forests is followed by groundprofing in the field with 20 x 20 ft quadrats. These investigations are usually carried out in May/June, when there are the maximum number of species present, although some species and rare plants can be absent at that time. Adolf and Oluna Ceska are rare species experts that are often contracted to do this work. Susan said that she can assess

an area and find 100 species while the Ceskas will study the same area and find 300! There are 167 rare plants on s. Van Is and 122 of them occur within the CDF zone, usually within specialized areas. The CDC sensitive environment classification includes Terrestrial Herbaceous, Coastal Bluffs, Woodland, Older Forest, Riparian, Wetland and Sparsely Vegetated Communities. In the mid 1990's, mapping was completed at 1-15,000 for use in baseline work. Non-forested areas were only considered above .5 hectares and field work has shown that there are many more sensitive ecosystem remnants that have not been identified and designated.

The most common ecosystems identified through the assessment process are Terrestrial Herbaceous, Woodland, Riparian and Older Forest. Unfortunately these areas can be considered a priority to develop, especially to gain access to view lots.

Creek setbacks of 15 metres are often



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considered too generous and variances are often applied for and received. Wildlife and nest trees are also a hindrance to development, perceived as a safety liability and not for their ecological values.

The Wildlife Act, The Fisheries Act and Species at Risk Act (SARA) are used to effect compliance. Wildlife trees are protected until after birds have fledged or at all times in the case of bald eagles and great blue heron nests. Wildlife Canada conservation officers will respond to complaints and Susan exhorts us to be watchdogs. The Fisheries Act suggests a setback of 15 m from the top of a bank in low density development and 30 m in high density projects. They have guidelines on HADD (harmful alteration, destruction and disruption) assessments, but no hard specifics. New provincial riparian regulations should be in force by March 2006.

The Species At Risk Act (SARA) schedule 1 list contains federally identified endangered species but it is only enforceable on federal government lands. There is a section that allows the federal government to step into provincial jurisdiction if it considers the province remiss in protection of rare species, although it is rarely if ever used. Plant salvage from sites about to be modified is a condition written into Langford development permits, as well as some preservation/conservation covenants and requirements to landscape with native plants.

To require best management practices and best protection to environmental values, non-governmental organizations need to keep informed and lobby and supply relevant information at public hearings to guide municipal councils and staffs in the decision making process.

In conclusion, Susan singled out Metchosin as having an excellent planner and expressed the opinion that the Crawfords of Metchosin Properties (large property development), Cliff Curtis of Valley View (requested information on sensitive areas) and Highlands Estate (use of restrictive covenants) as being developers that merit praise.

The logo for the Native Plant Study Group (NP SG) consists of the letters 'NP' stacked above 'SG' in a bold, purple, sans-serif font.

## **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.

## SCHEDULE OF SPEAKERS

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**February 16th**

**Emily Gonzales**

"Where have all the flowers gone in Garry oak ecosystems?"

7:00 pm Room D116 MacLaurin Building, UVic.

# UPCOMING EVENTS AND NEWS

## EVENTS AND OUTINGS

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### **Seedy Saturday - Victoria's 13th Annual Seed and Garden Show**

Saturday, February 18th, 10am - 4pm.  
Victoria Conference Centre, 720 Douglas St. Admission is \$5, under 12 are free.

### **CRD PARKS**

**January 22nd** Sunday at 1 pm at Devonian Park.

Identify local trees and more!

**February 5th** Sunday at 1 pm at Devonian Park. Guided walk

**February 25th** Saturday at 10 am at Mt Wells. View early spring flowers

**March 5th** Sunday at 1 pm at Mill Hill Park. Plant identification

**March 19th** Sun at 1 pm Lone Tree Hill. Hike to view wildflowers and scenic views

**March 25th** Saturday at 1 pm at Devonian. Of Horsetails and Skunk Cabbage

### **VICTORIA NATURAL HISTORY SOCIETY**

**Tuesday February 21st Botany Night**  
Swan Lake Nature House, 7:30 pm

From Kew Gardens, London to the Kunsthistorisches Museum, Vienna: A Botanical Travelogue by Join Wynne Miles for a slide show of botanical highlights of her trip to the XVII International Botanical Congress held this summer in Vienna, Austria, including a five day field trip to see bogs and bog restoration sites in the Central Alps, and a side trip to Kew Gardens, London to see (amongst many other favourites) the giant water lilies.

## TLC CONSERVATION HOLIDAYS

### **TLC Conservation Holiday 1: Wattle Fence Construction**

Vancouver Island: Cowichan River  
Friday Feb 17- Wednesday Feb 22

Our first Conservation Holiday of the year offers you the opportunity to create a positive change to the landscape and learn a valuable new skill. Help us create a living retaining walls to prevent erosion and foster native species regeneration. This winter conservation holiday will be perfectly accented by the



SATIN FLOWER

warm wood stove at our cozy Cowichan Cabin; a dwelling you'll be reluctant to leave by holidays end.

Cost: Members: \$180.00 + GST  
Non-Members: \$200.00 + GST

### **TLC Conservation Holiday 2:**

Traditional Ecological Knowledge  
South Winchelsea Island  
Friday, April 07 - Sunday, April 09

A strong focus on Traditional First Nations Ecological Knowledge will interweave and permeate this very special conservation holiday. We will gain insight from knowledgeable resource persons about indigenous

land management, techniques such as traditional camas harvesting, intentional burning, and pit cooking, as well as other uses of plants in the Garry oak ecosystem.

Cost: Members: \$90.00 + GST

Non-Members: \$100.00 + GST

For more information about any conservation holidays, please contact  
Phone: 250-383-4627

Or: 1-888-738-0533

Email: [holidays@conservancy.bc.ca](mailto:holidays@conservancy.bc.ca)

### **TLC 2006 Nature Lecture Series 'The Future of Conservation in the Face of Climate Change'**

January 25, 2006 Time: 7:30 pm

Abkhazi Garden, 1964 Fairfield Road

Join guest lecturer Richard Hebda for thoughtful ramblings and insights from the fossil record. "Our landscape will be transformed within this century. How can we conserve our natural heritage in the face of this challenge?"

Admission: \$10 with proceeds to TLC

To register: Please call 598-8096

### **VIRAGS Vancouver Island Rock & Alpine Garden Society**

#### **Rounding the Rim – Plants from the Pacific Rim**

31st Western Winter Study Weekend  
March 3 to 5, 2006

Excellent speakers include Andy MacKinnon, Paige Woodward and Hans Roemer, among others and one workshop that sounds fascinating is "Learn how to make lightweight, portable troughs that look like their heavier counterparts".

[www.islandnet.com/~voltaire](http://www.islandnet.com/~voltaire)

Registrar - Claire Hughes 388-6595

Email Enquiries - John Veillette

[ua024@victoria.tc](mailto:ua024@victoria.tc)

# NATIVE PLANT STUDY GROUP

## VOLUNTEER OPPORTUNITIES

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Habitat Acquisition Trust invites you to: Rescue Garry oak meadows with HAT's week whack crew! Choose your weapon on Sunday, January 22nd, and release our native plant community from exotic invaders in the Matson Conservation Area. Free Lunch for all weeders! To register, call Todd or Kathryn at 995 2428 or email [hatmail@hat.bc.ca](mailto:hatmail@hat.bc.ca)



SAXIFRAGA RUFIDULA

## EARLY BLOOMERS

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Rusty-haired saxifrage (*Saxifraga rufidula*) Found on rocky outcrops, often on steepish slopes with some winter seepage in our area, rusty-haired saxifrage is one of our earliest blooming native plants. It is a delight to find the glossy dark leaves with their



OREGON GRAPE

## NEW FIELD GUIDES

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There is a new set of field guides just out. Derrick Ditchburn, this month's NPSG speaker, was involved with these. There are three books in the set. They include Northwest Coastal Wildflowers, Northwest Mountain Wildflowers and Northwest Dryland Wildflowers. All three are by Visalli, Lockwood and Ditchburn. A number of the photos in the Coastal book are Derrick's. They are published by Hancock House Publishers. They should be available in bookstores soon (\$11.95) or ask for them to be ordered. It has all the flowers in colour order which is popular as it helps in identifying a new flower. The Coastal book is the most appropriate for our area but many flowers in the others are also found in the area.

underside showing a reddish hairiness, nestled closely into a rock face. The flattish cluster of small white flowers with pink stamens can often seem to overwhelm the diminutive plant. According to Tilford, all members of the Saxifrage family are edible, although it is hard to imagine harvesting such a minute plant without destroying it

## FAVOURITE PLANTS

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### Oregon-grape

We have two species of Oregon-grape in the south island, *Mahonia aquifolium* (tall Oregon-grape), which grows in sunny, very dry, often rocky sites and *Mahonia nervosa* (low Oregon-grape) which is adapted to dry, forested areas. Both have glossy, holly-like, evergreen leaves; erect clusters of small bright yellow, honey-scented flowers and tart and tasty blue berries with a soft bloom.

Pojar and MacKinnon offer the following recipe for "excellent"

### Oregon-grape jelly:

2 cups Oregon-grape juice  
2 cups salal juice  
5 cups sugar  
one box pectin crystals.

A yellow basket dye was made from the bright yellow shredded bark and roots and the bark and berries were used to treat liver, gall-bladder and eye problems and it has properties that apparently aid in the treatment of psoriasis.

Tall Oregon-grape is a favoured garden plant that grows 5-10 ft tall, withstands drought and can be used as an accent plant or a hedge. It can become leggy but responds well to pruning.

Low Oregon-grape makes a lovely natural groundcover (10-20 in) especially when planted sword fern and salal. Both plants are loved by wildlife, for their nectar and berries. Germination can be uneven but best results occur when planted in the fall and left out over the winter to stratify. Semi-hardwood cuttings should be taken from September through March. *Information from Plants of Coastal BC by Pojar and MacKinnon and Edible and Medicinal Plants of the West by Gregory L Tilford*

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## EXCERPT FROM: *First With a Flower* - early blooming flowers Article by Peter J. Marchand

The earliest--and arguably the most resourceful--of the spring flowers is the skunk cabbage, ubiquitous in the wet places of North America and Eurasia. Its flowering stalk emerges from the soil (and snow) before its leaves do--and often while air temperatures are still below freezing. So high is the cellular respiration of the skunk cabbage at this time of year that the plant (except for one western North American species) generates heat--one of the few in the world to do so. When the air temperature is below freezing, the plant may be as much as 30 [degrees] warmer than its surroundings, and the flower stalk is able to melt its way through frozen ground and ice.

But aren't these early bloomers too precocious for insect pollinators? In fact, a number of insects are available to do the job, although some of the plants have the capacity to self-pollinate as well. It's not uncommon, for example, to find flies and solitary bees foraging as the snow recedes. And when a flower is the only show in town, there's a strong likelihood of its attracting attention and being cross-pollinated, even with few insect species around. As for the skunk cabbage, it leaves less to chance, having evolved an additional lure: a malodorous scent whose dispersal seems to be facilitated by the heat-producing flower. This dung or carrion mimicry attracts flesh flies, rove beetles, and even mosquitoes, all of which have been observed with pollen on them. (Some biologists believe that the heat produced by skunk cabbage flowers may also attract pollinators by providing a warm basking site during cool weather.)

Still, one other question begs for an answer: Why all this effort to be first with a flower? Reduced competition for pollinators may be one advantage of early flowering, but for many of these spring ephemerals, time is the most pressing issue. Most occupy habitats where the growing season is greatly compressed, either because of the short interval between the final spring and the first autumn frosts or because the closure of the overhead tree canopy in early spring smothers them in deep shade. In the race to reproduce, these plants can't wait for the snow to melt.

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## DISCUSSION QUESTION

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Should you add fertilizer to native plants?

Seems like the answer was a qualified, yes, maybe, sometimes, no.

Native plants are adapted to their environments, they succeed because they have evolved to survive and even flourish in certain conditions. Stonecrop (*Sedum spathulifolium*) and manzanita (*Arctostaphylos columbiana*) prefer nitrogen poor soils while vanillaleaf (*Achlys triphylla*) and Hooker's fairybells (*Disporum hookeri*) occur in nitrogen rich soils. Plants can often survive but not thrive in different soil conditions, although some plants are able to tolerate a wide range of conditions and others are quite fussy as to their environment. Plants accustomed to low nitrogen levels might become very soft and produce lush vegetation in rich soil conditions, falling easy prey to insect and disease predation and be easily out-competed for space by better adapted plants. Plants that prefer a rich soil will not thrive in poor soil conditions and become stunted and perform weakly. It is always a best management practice to try to mimic the natural growing conditions of a plant. However, if you are container gardening, then you will have to amend the soil in your pots, adding the amount of fertilizer (and trace elements) that would best suit your particular plant's needs. So, the answer is sometimes yes, sometimes no, depends on the plants and the soil!

THE NPSG MEETS THE 3RD THURSDAY SEPT-MAY (EXCLUDING DEC)

AT 7:00 PM IN ROOM D116, MACLAURIN BLDG., UVIC.

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SATIN FLOWER

## SCHEDULE OF SPEAKERS

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### February 16th Emily Gonzales

"Where have all the flowers gone in Garry oak ecosystems? Join ecological detective Emily Gonzales as she investigates the role of herbivory and competition from non-native grasses on the composition of the plant communities of the Gulf Islands.

**Biography:** Emily Gonzales is originally from California but was "introduced" to Garry oak ecosystems in Victoria, where she spent most of her childhood. She has a B.Sc. in animal ethology from SFU, a M.Sc. in Zoology from the University of Guelph, and has seen the light and is now fascinated by plant ecology and restoration. She is currently a Ph.D. student at UBC studying the relative influence of herbivory by ungulates and exotic grass competition in the Southern Gulf Islands.

### March 16th Rick Searle

Some thoughts and ideas on land stewardship, environmental ethics and education as they pertain to the preservation of native plants in and around Greater Victoria/Southern Vancouver Islands/Gulf Islands.

**Biography:** Rick co-hosted Enviro-Mental, a weekly ½ hour environmental program. He has contributed stories to the evening news and has co-produced a ½ hour documentary on land stewardship. He has contributed to the production of 3 other documentaries, as well, and produced and hosted 2 environmental radio shows. Rick is a freelance writer and

his articles have appeared in magazines in Canada, US, UK, and Europe. Rick has written "Phantom Parks-A Struggle to Save Canadian National Parks" 2000 copies of which were sold out. He loves to kayak, hike, and back-pack in parks and the wilderness.

### April 20th Stu Crawford

A story of lichens and people, and Secwepemc lessons on how to eat black tree lichen

**Biography:** Stu is an ethnobotany student currently working with a Secwepemc community by Salmon Arm. He has been working on an ongoing, community-directed research project to monitor the effects of different logging practices on traditional-use plants in Secwepemc territory. He is currently finishing up his MSc. thesis on the human uses of lichens, particularly the Secwepemc use of black tree lichen (*Bryoria fremontii*) for food.

### May 18th Ted Lea

Historical Garry Oak ecosystem mapping for southern Vancouver Island

**Biography:** Ted Lea is a Vegetation Ecologist with the Ecosystems Branch of the BC Ministry of Environment. He has been involved with ecosystem mapping throughout the province for over 25 years, and has recently mapped historical (pre-settlement) ecosystems for Garry oak ecosystems and the Okanagan Valley. His present position is dealing with recovery planning for plant species at risk in the province.

## FROM FLORA POETICA NIGHT

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More haiku's from Ed Tisch

**Sword-fern** [*Polystichum munitum*]  
Many plants are common.  
Some remain wonderful  
Despite all of this.

**Flett's Violet** [*Viola flettii*]  
Rooted deeply in scree,  
The tiny bit that shows  
Seems extra precious.

**Salmonberry** [*Rubus spectabilis*]  
Hanging in midair ...  
The closest you'll ever come  
To skeins of fish eggs.

**Salal** [*Gaultheria shallon*]  
Although it's muddy,  
This trail could lead to Heaven  
Between your broad leaves.