



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

JANUARY/ FEBRUARY 1999, Vol 6, No 1



IN A NUTSHELL: NOTES FROM THE PRESIDENT



In the December *Garry Oak Leaflet* I mentioned our concern regarding the effects of grey squirrels on the Garry oak ecosystem (in particular our native red squirrel).

At the end of December I received an email from **Cordula Bruemmer**, the PhD student in England who wants to study the grey squirrel here. She writes: "Although we are still no further getting the funding for our grey squirrel study, we haven't given up hope yet, especially since I heard that the greys have been spreading further North and the Nanaimo Fish and Wildlife people are getting more concerned now.

"I'm coming over again in February to the Biology and Management of Species and Habitats at Risk conference in Kamloops ... We will be giving a paper on grey squirrel introductions and possible lessons B.C. can learn from the U.K. experience.

"We are currently writing the paper and I was wondering if you have got

any further information which should be included. Have you, for instance, seen any increase in numbers of greys in Garry oak woods or have you started to see any greys in areas where they haven't been reported before. How concerned/informed do you think the public is? Is any control undertaken yet?

"We had a bit of a blow in one of our remaining strongholds of red squirrels in Britain this year, as we had an outbreak of a disease which is fatal to red squirrels but doesn't seem to harm greys. In fact, the greys are likely to be carriers. It's frightening to see how fast the shift of red to grey can happen!"



I emailed Cordula that I couldn't answer her questions. If any GOMPS members can, please email her at 113105.1533@compuserve.com or write her at Thornbarrow Hill, Witherslack, Grange-over-Sands, Cumbria LA11 6RR UK.

We just recently received a forwarded email from another student of grey squirrels as follows: "I'm a graduate student (who grew up in Victoria!) studying the introduced eastern grey squirrel in BC. I need to collect historical and current distribution data and was wondering if your Naturalist club could assist by placing a small notice in your newsletters and distributing a survey sheet.

"The naturalist groups in Vancouver have been most helpful in this regard and I'd like to expand my research area. If you are able to assist, I have sent the survey form as an MSWord attachment. Or, I can send them in the mail. You can also complete the survey online at www.biol.sfu.ca/squirrel/



Garry Oak meadow restoration

This precious ecosystem needs immediate attention if it is to survive the pressures of development. Help us bring back the carpet of wildflowers, mosses and ferns which beautify the ground beneath our majestic garry oak trees.

\$ 75

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survey.html

If you are interested in further details of the project, please visit mywebsite. I hope to hear from you soon."

Emily Gonzales, "the squirrel girl", email: egonzale@uoguelph.ca
Department of Zoology, University of Guelph, Guelph, Ontario N1G 2W1.
Phone: 519-824-4120 ext. 6307 or 8381, Fax: 519-767-1656



GOMPS Director Paul Gareau, coordinator for our **Garry oak inventory project**, is looking for more folks to count Garry oaks, this time in Oak Bay. Work is finishing up on the Saanich portion of the inventory. He's also still looking for someone to input the data onto a computer. Call 592-9089 to volunteer for either activity.



Friends of Summit Park member Marianne Bennetts was quite annoyed by a booklet called "Gifts for Life" someone told her about, put out by the **Victoria Parks and Recreation Foundation**. I went to City Hall to get my own copy and found that the foundation is soliciting funds for Garry oak meadow restoration. (See reproduction from "Gifts for Life" on page 1 of this *Leaflet*). Several phone calls and a letter to **Chairman David McLean** have not resulted in any of my questions being answered. I wanted to know:

- What is the connection of the Foundation to the City of Victoria?
- Who sits on the Foundation Board? Are directors elected or appointed?
- How was the dollar figure arrived at for Garry oak meadow restoration? How will monies directed towards this project be spent? On workers wages?
- When was the booklet published?
- How will it be distributed (someone told me it will be sent to Victoria resi-

dents with their next tax bill)?

What bothers me about this booklet is the fact that yet another government body (arm's length here) is going after the same after-tax dollars that non-profits are looking for, using the same techniques, such as "adopt a marmot."



The Garry Oak Meadow Preservation Society now has its own email address. If you want to correspond with us, do so at garryoak@netscape.net. You can still also correspond to us individually. We are working on getting our own web page finally.



Also in the works is a new brochure. Although most of the information on our old one is still pertinent, we want to add some more material and also produce it in full colour. We received \$2,000 from Canada Trust's **Friends of the Environment Foundation** towards the production costs.



GOMPS Director Sharron Waite confirms that the **Rogers Farm** subdivision proposal is once again going through the bureaucratic maze at Saanich. This time, it appears that the Fatt family has acceded to Saanich's wishes and relocated the contentious trail. In the current application, the 2-1/2 m wide trail will follow the eastern edge of Rogers School/western edge of the Nature Sanctuary and cut between two lots into the subdivision.



Central Saanich invited GOMPS to set up its display at their municipal hall for the last two weeks of January. On **January 30**, the management plan for the Garry oak meadow park (which we are familiar with as the **FAMA** park, though that won't be its name) will be presented to the public at an informa-

tion day. **Sharron Waite** will be in attendance that day as our representative. If you're interested, drop by the Central Saanich Cultural Centre, 1209 Clarke Road, between 10 a.m. and 3:00 p.m.



Envelope stuffer wanted. Up to now your hard-working director Tom Gillespie has been mailing out your GOMPS newsletter. Most of the time he also takes care of dropping it off at the photocopier and occasionally folding it, but he is too busy with other activities to continue doing so. So GOMPS members, if one of you can spare a couple of hours every other month, we want to hear from you.



To help celebrate Valentine's Day, **Mount Tolmie Conservancy Association** will host a free public walk in Mount Tolmie Park. Meet at the summit viewpoint on **Sunday, February 14** at 1:00 p.m. For more information, call 595-7270 or visit www.geocities.com/RainForest.1234.



The Land Conservancy of B.C. is doing very well with its fund-raising for **South Winchelsea Island**. Several large contributions from anonymous donors and \$50,000 from the **Habitat Conservation Trust Fund** have pushed the money needed past the halfway mark.

TLC is now considering its next new acquisition target in the **Ballenas Archipelago Protected Area**: **West Ballenas Island**. Purchase of this island might direct recreationalists away from **South Winchelsea**, which has more sensitive habitat.

The cottage on **South Winchelsea Island** is available for rental weekly (7 nights) or weekends (3) for a maximum of 6 people. Rent is on a sliding scale, depending on the season. The cabin has wood stove heating, a propane range and solar-powered lights. For information, call 361-7693.



Gypsy moth information from the BC Ministry of Forests - Part 1



The Ministry of Forests has established quite an extensive web site on Gypsy Moth on the internet. Some topics include biology, impact on the Garry oak ecosystem, status of regulated areas, fact sheets on Btk, public involvement and shortly, management options. Some of this material is presented here.

Gypsy moth (*Lymantria dispar*) has been found in British Columbia since 1978 but has so far not been permanently established due to the aggressive monitoring and eradication programs that have been in place.

The following history of gypsy moth detection records and treatment efforts is copied from the CFS publication Gypsy moth Pest Leaflet Number 75, Pacific Forestry Centre. This publication is currently undergoing revision to include up to date information on the history of gypsy moth in B.C.

The Distribution of Gypsy Moth

The gypsy moth is a native insect of Europe and North Africa, and it occurs across Asia to Japan. In North America, the European race is established in the northeastern United States and the provinces of Quebec and Ontario, having expanded from the original introduction at Medford, Massachusetts in 1868. During the 1970s and 1980s, it was found in numbers sufficient to cause concern in the western states of California, Utah, Oregon and Washington as well as in British Columbia.

These occurrences were caused by the transportation of egg-laden materials from eastern sources. In 1991, federal inspectors found egg masses of the Asian race on Russian ships at Vancouver waiting to load grain; male moths were subsequently trapped on shore. British Columbia therefore now faces the threat of gypsy moth introductions from sources to the east, south and west.

The Gypsy Moth in British Columbia

The first recorded interception of the gypsy moth in the province occurred in 1911, although unconfirmed interceptions may have been made two to three years earlier.

In that year a single egg mass was found on imported European nursery stock by a provincial inspector at Vancouver. About the same time, in Vancouver, more egg masses were found on ornamental *Thuja* trees from Japan.

The Gypsy Moth Threat to British Columbia

During the past nineteen years, an aggressive program to prevent permanent establishment of the gypsy moth has been successful. The program, based on comprehensive surveys

and spray treatments using the biological insecticide Btk (*Bacillus thuringiensis* var. *kustaki*), is coordinated through the Gypsy Moth Committee of the Plant Protection Advisory Council of British Columbia (BCPPAC) of British Columbia (BCPPAC).

The primary challenge of the program is to deal with repeated potential introductions of the pest.

To date, successful spray programs have been conducted at the following locations:

<u>Location</u>	<u>Year of Detection</u>	<u>Year of Treatment</u>
Kitsilano	1978	1979
Ft. Langley	1982	1984
Courtenay	1983	1984-85
CFB Chilliwack	1983	1985-87
Kelowna	1986	1988
Colwood (CFB)	1986	1988
Belmont Park	1990	1992
Parksville (North)	1987	1988, 1990
Parksville (South)	1991	1992
North Saanich	1990	1991
Richmond	1991	1993
Burnaby	1992	1993
Saltspring Island	1991	1993

The European race has also been found at 60 other locations during the same period. At these sites, moths were detected in traps but the authorities on the Committee did not consider treatment necessary.

Usually these detections were associated with isolated or single catches, with no evidence of gypsy moth being found during the years of intensive surveillance in. The following summary lists these regions where Gypsy moth has been found, but the control operations were not undertaken.



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<u>Region</u>	<u>No. of Locations</u>	<u>Year(s) Detected</u>
Greater Vancouver Area	16	1980-84, 1986-93
Fraser Valley	13	1982, 1984-85, 1988-93
Sunshine Coast & Howe Sound	3	1990, 1992-93
Greater Victoria Area	8	1985, 1989-1993
Vancouver Island	9	1986-87, 1989-92
Gulf Islands	1	1992
South Central Interior	10	1984-86, 1988-92

The battle with the moth continues. Currently, the following five areas of southwestern B.C. are threatened.

<u>Location</u>	<u>Year Detected</u>	<u>Year Treated</u>
South Vancouver	1991	1994
Victoria	1992	1993, 1994
Nanaimo	1992	1994
Whiskey Ck.	1992	1994
Hope	1992	1993, 1994

The program to prevent establishment by intensive surveys and applications of Btk will continue.

Trapping

Using pheromone traps, the Canadian Food Inspection Agency (CFIA) has monitored the occurrence of gypsy moth throughout British Columbia.

To provide first detection of new gypsy moth introductions, a trapping grid is set up yearly in most areas on Vancouver Island and the Lower Mainland. Traps are laid out in fairly low density in the beginning. Once moths are detected, a more intensive trapping density is used in the area the following year which helps to more precisely locate the population centre and determine realistic treatment boundaries.

Trapping in 1997 showed areas where gypsy moth populations were established and an eradication program was planned for spring 1998. A combination of ground spray and mass trapping was employed. Mass trapping uses pheromone-baited traps, commonly at a density of nine traps per acre, to capture all male moths prior to mating in a specific area. While not always catching all moths before they have mated, the high trap densities can be used to identify where moth populations exist.

True identification trapping is done at much lower densities, commonly 64, 36, or 16 traps per square mile. The trapping density used last summer (1998) depended upon previous years' trap catches and area history, with a higher

density used where populations are suspected to exist. General detection trapping, in areas where gypsy moth has not been trapped in the previous year, is most often at a density of one trap per square mile. This trapping procedure is a standard method used throughout North America.

1998 Trapping Data

More than 500 male gypsy moth adults have been captured on southern Vancouver Island. Most of the moths were collected from the Langford/Colwood and Esquimalt areas where the 1997 ground spray program was conducted. Egg masses have been collected, clearly showing the gypsy moth has an established and breeding population.

This year, a high number of adult male moths and egg masses were found in Esquimalt, Langford, View Royal, Saanich and Duncan, and smaller, but significant numbers were found in Brentwood, Metchosin and Nanaimo.

The numbers have almost doubled since last year. In 1995, only five moths were trapped but by 1998, more than 550 moths were trapped.

Based on all trap catches and egg mass survey data, treatment boundaries will be established, usually focussing in on the areas with the highest concentration of moths. These boundaries and the treatment methods have yet to be determined. When the treatment plans have been determined, they will be communicated through an official news release and also posted on this web site.

Where to Find Egg Masses

Look for the buff-coloured, spongy egg masses on the sheltered portions and crevices of items that are under or near trees.

This includes all: outdoor equipment, outdoor furniture, outdoor toys and playground equipment, fences, tree trunks, wood and lumber piles, garden sheds and other gardening equipment, recreational vehicles (RVs, boats, trailers), and any other object that was stationary in the area during the months of July through August when the adults are reproducing.

Where to Find Larvae

Larvae hatch in early April and are found until late May. The young larvae are very small and difficult to identify. They feed at night and hide on the underside of leaves during the day. As the larvae get older and larger (they grow to about six to seven centimetres), they become more obvious and feed voraciously during both day and night.

There are many other caterpillars that feed during the same period as the gypsy moth which can lead to confusion and mis-identification. Gypsy moth are dark, hairy and have distinctive pairs of five blue and six red dots or tubercles on their backs (but sometimes they can be all black or blue).

If you locate larvae, collect them in a tightly sealed plas-

tic bag or jar and call the Canadian Food Inspection Agency at (250) 363-3421 for an inspector to identify them.

Wrapping a band of burlap or tar paper around the trunk of host trees can be used to trap larvae and pupae. The caterpillars seek shelter during the day and so can be found resting under these bands. At the end of the feeding period, many insects pupate in these shelters.

Where to Find Pupae

The pupal stage occurs between the end of the last larval stage and ends when the adult emerges. This period usually occurs from mid-July to mid-August. The gypsy moth caterpillars find a sheltered location in which to pupate and are normally found next to or very near the egg masses. As noted above, pupae can often be found under tree bands.

The pupae are dark reddish brown, usually with a few yellowish hairs. You can easily tell male from female pupae as the female ones are much larger.

Where to Find Adults

Adults are present during the latter part of July and on through August. The male (a strong flier) is brown, with a small body and well-developed wings. The female is white with black markings on her wings, and much larger. Both male and female adults have a distinctive "chevron" marking on their wing. This marking is often difficult to see on moths caught in sticky traps and any suspect moth should be examined by a CFIA inspector.

The male also has large, feathered antennae that it uses to smell the female pheromone. Since the female does not fly, the adult female is usually found near the spot that she emerged from her pupal case. Unless consumed by other insects, her dead body is often located on or near the egg mass for an indefinite length of time.

The female attracts the male moth with a pheromone and then mates. Egg masses are usually laid nearby but the female can crawl a short distance into crevices and other sheltered locations which makes detection more difficult.

Adult male moths are readily attracted to sticky traps using a synthetic version of the female sex pheromone. These sticky traps are the key monitoring tool for estimating the abundance and occurrence of gypsy moth throughout North America.

Participation by homeowners in allowing traps to be hung on trees on their property facilitates the monitoring program and is greatly appreciated.

Gypsy moth impacts to the Garry oak ecosystem

Gypsy moths could severely impact the Garry oak ecosystem and other vegetation systems throughout southern Vancouver Island, the Gulf Islands, Sunshine Coast, Lower Mainland and B.C.'s southern interior valleys.

Garry oak ecosystems are restricted primarily to the south-east coast of Vancouver island and the southern Gulf Islands. These ecosystems occupy only a small portion of the coastal Douglas-fir zone. Garry oak ecosystems range from southwestern British Columbia to California. The Victoria area has a high concentration of Garry oak compared to the rest of the province.

The Garry oak is a favoured food of the gypsy moth, which makes it very vulnerable to this voracious feeder. The Garry oak ecosystem is also under pressure from two other introduced insects, non-native plant species, and the effects of urbanization in the Greater Victoria area.

An established gypsy moth population could kill large numbers of these trees and put the Garry oak ecosystem at severe risk. The Garry oak ecosystem is probably unique in its extreme vulnerability, but other deciduous trees will also be at risk. Where the moth has been established in the eastern United States for many years, foresters have found it has caused dramatic species shifts within hardwood forests as susceptible trees are repeatedly defoliated and weakened by the insect, then displaced by other species.

The establishment of the gypsy moth in B.C. is of minimal importance to forest health directly. However, there is significant potential impact to the forest industry from trade restrictions and quarantines on export to the United States if the gypsy moth were to become established.

The main impact to B.C. forestry, nursery and Christmas tree industries would be significant inspection and certification costs for products leaving the regulated area, including Christmas trees, nursery stock and unmanufactured logs. These certification requirements would apply to movement of commodities to uninfested areas in both Canada and the United States.

A report done in 1994 for the Ministry of Forests, Agriculture Canada and Ministry of Agriculture, Fisheries and Food concluded the following: "Apart from the susceptible Garry oak stands and perhaps aspen (especially in early years), B.C. forests should be quite resistant to gypsy moth."

In the March/April issue of the Leaflet, Part 2 will include information on Btk, some explanation of the procedures for inspection and a map showing the gypsy moth regulated areas on Vancouver Island.

Press releases included on the web site from Environment Minister Cathy McGregor and Forests Minister David Zirnhelt both express concern about the Garry oak ecosystem. From CM: "... a serious threat to our treasured Garry oak ecosystems." and from DZ "I am concerned for the forest products industry and other businesses at time when we are facing other serious economic challenges, in addition to the potentially devastating impact the moth could have on our Garry oak ecosystem."

Letter to the Oak Bay News, published November 4, 1998

Broom bashers are our environmental stewards

The wind and rain stopped and the sun came out to welcome the Broom Bashers at Cattle Point on Oct. 18.

It was our fourth annual community event and we stormed across Beach Drive and into Uplands Park behind the cenotaph. We removed the invasive Scotch Broom (one plant had a trunk diameter of about 15 cm!), Himalayan Blackberry and the new space invader, *Daphne laureola*. In two days 139 people made piles totalling 85 metres long by two metres wide by three metres high.

The pile was then chipped by the Oak Bay Parks Department. Many thanks to the parks department, the 100 girls, leaders and family members in Guiding, the enthusiastic Scouts and the other wonderful community volunteers. The importance of environmental stewardship is growing. By working together, each doing her/his share, we can save our natural heritage.

On Nov. 11, at the Memorial Day Service at Uplands Park cenotaph, we will see Guides and Scouts raise our Canada flag in memory of those that fought for our country. And behind we will see a Garry Oak Meadow that closely resembles that seen by the soldiers when they were alive. Remember our heritage.

Margaret Lidke
Chatham District Guider
Oak Bay

Letter to the Oak Bay News, published December 23, 1998

Letter to the Oak Bay News, published November 25, 1998

Broom puller's logic twisted — let the plant remain

Whether all the dead people (who are listed on the war memorial where some individuals have recently been killing common broom plants) would have enjoyed the sight of the beautiful yellow shrubs in the landscape during spring may never be known.

But, when a self-righteous individual invokes their name in order to get on her high and mighty white horse of puritanical botanical rectitude (*Oak Bay News*, Nov. 4, letter) and claims to be providing a role model for young people, (in "Guides" etc.) by attacking the plant, (and even boasts about eliminating a particularly venerable specimen) — well, it's more than time that we should stop, step back and think about what is really being done (and make some sensible decisions before any more destruction is inflicted on broom and its special fauna here. If, indeed, it isn't already too late).

A lot of what has been said about broom by such persons is garbage.

Instead of letting bands of the fanatical exterminators loose in our parks to devastate something wonderful that they happen to hate there should be a serious effort made to systematically protect this plant that has lived here for such a long time now that it is far more native than the vast majority naked-apes.

Exactly where is the plan to preserve it (especially the untamed stands of old growth broom which co-exist much better with aboriginal food plants like camus and Garry oak than do indigenous species of shrubs)?

One of the ways that stone-age man/woman dealt with these indigenous shrubs (which would reclaim the land he/she had arbitrarily usurped for his/her own food production) was by setting fire to them.

And, those individuals who, today, are making noises (in their circles of associates) about burning the vegetation again; should forget it. We have worked hard to get rid of smoking in public places; to close etc. etc. in order that our health is not subjected to such assaults.

There is a lot more that needs to be done to clear the air of particulates and noxious gases. Don't add to the problem.

K. Gibbens
Victoria

Scotch broom is a serious threat to Garry oak ecosystem

Re: Broom puller's logic twisted — let the plant remain (Nov. 25, 1998)

Upon reading K. Gibbens letter I assumed it was a joke, but the unwarranted attack on Margaret Lidke convinced me the letter writer was serious. The garbage Gibbens writes about is, in fact, his or her own.

The broom bash at Cattle Point is one of many events co-ordinated each fall by our soci-

ety during its annual City-Wide Broom Bash.

Had Gibbens bothered to consult with local scientific experts, he or she would have found out that Scotch broom is indeed a serious threat to the endangered Garry oak ecosystem.

For example, the Ministry of Forests document "Broom and Gorse in British Columbia: A Forestry Perspective Problem Analysis", published in 1992, states: "In British Columbia, broom is considered a potential threat to maintenance of native biological diversity by

precluding the establishment and spread of rare endemic plant species, particularly those that occur within the unique Garry oak ecosystems in the small coastal Douglas-fir zone." (page 10).

In 1993 the Ministry of Environment published a brochure on the Garry oak ecosystem, labeling it as being "at-risk".

It states: "One of several recognized Garry oak vegetation types, the Garry oak-grass community, has been rated as one of the most endangered in British Columbia; other types are rated as threatened... Rapid spread of broom has also displaced native plants, changed soil nutrients and dramatically altered the make-up of these ecosystems. The increased rarity of native species is another result of these changes."

We are aware that by removing broom and Himalayan blackberry (also non-native), that protective bird cover is removed.

However, while there is lots of brush cover in parks, forests and some backyards, there are very little areas of open grassland left, particularly Garry oak meadows, in which numerous bird and invertebrate species live.

Some bird species require that open grassland and according to Ministry of Environment endangered species specialist Dave Fraser, at least two bird species are no longer breeding because of diminished grassland habitat. The streaked horn lark is rated SH (extirpated) and the vesper sparrow S1 (critically imperiled) in the Conservation Data Centre's Red list.

Fire, by the way, is a natural phenomenon. The survival of some plants is even dependent on it. Scientists and foresters are now trying to educate the public that our history of fire suppression has actually caused serious alterations to some ecosystems.

Scotch broom will never be eradicated in this province; it is too well established. All we

Letter cont. on page 8

The web below

This article by Carl Zimmer is from the November 1997 issue of Discover.

Walking through a forest is like sailing past an iceberg: you're missing a big part of the picture.

Trees hide nearly half their biomass in a vast tangle of roots, which in turn are usually woven into an even bigger web made of fungus. This benign fungal infection is a classic example of symbiosis, a relationship in which both organisms benefit.

Trees can make new tissue from sunlight, water, and air, but their roots can't extract enough vital nutrients such as nitrogen and phosphorus from the soil. Fungi produce digestive enzymes that free these compounds, but they can't draw carbon from the air.

So the organisms collaborate, the fungus taking carbon from the roots and pumping in soil nutrients in return.

Scientists have known about this relationship for decades, but recent experiments are revealing unsuspected complexity. One was conducted by Suzanne Simard, a forest ecologist at the British Columbia Ministry of Forests in Kamloops.

Simard had been taught to view trees as rugged, competitive individuals, each trying to struggle above its neighbours to get as much light as possible. But she couldn't help being struck by the subterranean partnerships trees form with fungi — and that the same fungal threads often connected to other trees, even trees of other species.

"I was always perplexed by the fact that we could only explain 10 to 20 percent of the variation in how these species grew — their height, their density — by competition," says Simard.

Simard's experiment shows just how interlinked the trees are. She planted seedlings of Douglas fir and paper birch, letting them become infected by local fungi.

After a year Simard returned and puts tents over some of the trees. A Douglas fir trapped in the shade would photosynthesize less, while a paper birch in the sunlight would continue to draw its usual amount of carbon from the air.

After six weeks Simard began to track what was happening to the carbon the trees were capturing. She put sealed plastic bags over the trees and injected carbon dioxide loaded with different carbon isotopes into the bags. (Isotopes are atoms of a given element that have varying numbers of neutrons.) After nine more days Simard uprooted the trees, ground them into a paste, extracted the isotopes, and measured how much of each the trees had.

She discovered that the isotopes absorbed by one trees often ended up in another, and that shaded trees took far more carbon from their sun-drenched neighbours than they gave.

This happened even if it meant that carbon absorbed by a paper birch travelled not to another birch but to a Douglas fir.

Simard could only conclude that the fungus was managing the trees, extracting carbon from healthy ones and pumping it to shaded ones, regardless of species. The fungus gave shaded trees six percent or more of their carbon, an amount that can ultimately make the difference between being able to produce seeds and being barren.

Simard's results force a fresh look at some conventional notions in biology. How, for example, can the standard view of evolution — an every-organism-for-itself scramble for resources — be squared with trees that surrender precious carbon to trees from another species?

For one thing, Simard suggests, this arrangement aids the fungus: "There's definitely something in it for the fungus if the trees are doing well."

And perhaps the trees themselves can evolve only in a partnership. "The survival of a group of plants may depend on an individual and its neighbours as well. From a strictly evolutionary perspective it may not make sense, but from an ecological one it does."

That perspective should give pause to foresters. In many forests Douglas-fir is the preferred species and paper birch — a fast-growing tree that can shade the slower growing firs for decades — is considered a weed.

But Simard says the birches may be nurturing the firs. "These species that we think of as weeds are serving as critical links, and once we sever these links, we are affecting the stability of those ecosystems. Our practices are still based on the notion that forests act like gardens, and we should weed out what we don't want. But forests are far more complex than that, and we need to maintain this biodiversity."



PAPER BIRCH (left) and DOUGLAS-FIR (right). Images are from *Tree Book: Learning to Recognize Trees of British Columbia*



broom bashers are doing is trying to increase the chances of our local endangered flora surviving over the long term.

Katie Stewart, President
Garry Oak Meadow
Preservation Society

AGM March 18

Yes, it's approaching that time of year again. And once again, I will ask one or more of you to please step forward and offer your energy, time and passion to help keep this society alive.

Directors Pierre d'Estrubé, Hal Gibbard, Tom Gillespie and Sharron Waite are all willing to stand again. However, Paul Gareau does not want to stand again. All of these people have been directors for at least the last four years.

If you're worried about not knowing enough, don't worry. We all started out that way, fumbling along sometimes. I did not have any idea of what I was in for when I volunteered for the board in November 1994. I've learned so much along the way, and more importantly, I've met some great people and seen some wonderful Garry oak woodlands and meadows.

You'll never know where this might take you: to Kamloops for a February conference, to sit on a task force, to walk around counting maps and trees, to talk to MLAs, municipal councillors and developers, to learn from esteemed scientists and to broaden your learning from identifying wildflowers to learning about biodiversity, endangered ecosystems, bioregionalism, regional planning etc.

All it takes is volunteering. Let me know if you'd like to stand for election. We need you.

The AGM will be held at 7:30 p.m., March 18 at Swan Lake-Christmas Hill Nature Sanctuary. We will send out a reminder in early March. Hope to see some new faces.

— Katie Stewart

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

PRESERVATION/RESTORATION COMMITTEE

SEED/SEEDLING EXCHANGE. Interested members contact Katie Stewart at 386-4792.

OPERATION CLEAN SWEEP (broom removal). Call Eric Redekop at 595-7270 for information.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you'd like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President and Public Relations Chair	Katie Stewart	386-4792
	e-mail	camassia@bc.sympatico.ca
Vice-President	Pierre d'Estrubé	477-2410
Treasurer and Finance Chair	Tom Gillespie	361-1694
	e-mail	garryoak@netscape.net
Secretary and Membership		
Development Chair	Sharron Waite	479-3380
Director and Program Chair	Paul Gareau	592-9089
	e-mail	upgareau@islandnet.com
Director	Hal Gibbard	477-2986
Director	Michael Meagher	727-7675

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MEMBERSHIP DUES:

Donation

Individual \$15 Family \$20

Please send more information about:

Youth and Associate \$6 (no newsletter)

Local sources for Garry oak meadow plants

Gift memberships, send receipt to:

Garry Oak Inventory Project

Operation Clean Sweep (broom removal)

Growing, planting Garry oaks



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

MARCH/APRIL 1999, Vol. 6, No. 2

International Garry Oak Meadow Symposium May 5-9, University of Victoria

Sponsored by the School of Environmental Studies and
Restoration of Natural Systems Program, University of Victoria

in partnership with the Pacific Wildlife Research Centre of the Canadian Wildlife Service,
the Garry Oak Meadow Preservation Society
and the Society for Ecological Restoration, Northwest and B.C. Chapters

Co-chairs: Drs. Nancy Turner and Richard Hebda

Wednesday, May 5

Registration and keynote speakers: *Garry Oak Meadow Ecosystems: Past, Present and Especially Future* (Bill Turner, The Land Conservancy of British Columbia and Dr. Richard Hebda, Natural Systems Program); **Welcoming Reception** (Dr. Strong, President UVic).

Thursday, May 6

Origins and History of the Garry Oak Meadow (Richard Hebda, Greg Allen, Kendrick Brown, Uvic); *Preparing Eden: Colonialism and Garry Oak Ecosystems* (John Lutz, Uvic); *Garry Oak Meadow Ecosystem Classification* (Wayne Erickson, Ministry of Forests, Victoria); *Oak Communities in Other Places* (Sue Glenn, UBC, Vancouver); *Vascular Plants of the Garry Oak Meadow: an Overview* (Speaker TBA); *Vertebrate Wildlife of the Garry Oak Ecosystem: Mammals* (Trudy Chatwin); *Birds* (Dave Fraser, Bruce Whittington), *Reptiles, Amphibians* (Speaker TBA); **Panel presentation: Protecting Garry Oak Ecosystems: Rare and Endangered Species** (Adolf and Oluna Ceska); *Caring for Oaks* (Speaker TBA); *Invasive Species*

(Joel Ussery, CRD Parks); *Insect Pests* (Bob Duncan, Pacific Forestry Service). Poster sessions also.

Friday, May 7

Insects of the Garry Oak Meadow (Richard Ring, Uvic); *Biology and Genetics of Garry Oak* (Mike Meagher, MDM Forgene and George Edwards, Forest Tree Beginnings); *Protection of California Oak Ecosystems* (Tim Nosal, Calif.); *Restoration of Garry Oak Meadows* (Brenda Beckwith, Uvic); *Special Topics: Pocket Grasslands and "Garry Oak Meadows" on Vancouver Island* (Dr. Hans Roemer); *Acorns, Seedlings and Stellar Jays* (Marilyn Fuchs); *the Garry Oak Working Group of the Society for Ecological Restoration* (Dennis Martinez, Oregon); *Aboriginal Perspectives on Garry Oak Ecosystems* (Speaker TBA); **Panel Discussion: Protecting Garry Oak Ecosystems: How Can We Do It?** Lloyd Rushton, CRD Parks; Alan Hopper, Municipality of Saanich planner; Ross Meek, developer, Katie Stewart, Garry Oak Meadow Preservation Society. **Banquet** featuring songs by Holly Arntzen; **keynote speaker: Dennis Martinez:**

Restoration Ecology, Ethnecology and Oak Restoration.

Saturday, May 8

FIRST ANNUAL GARRY OAK MEADOW COMMUNITY FESTIVAL

Designed for families and combines fun and education. There will be many activities for people of all ages, including workshops and demonstrations, beautiful artwork from local artists, entertainment throughout the day and informative displays. Many small community groups have been invited to put up displays highlighting their activities related to Garry oak habitat. Attendance at the Community Festival is by donation and the public is invited to spend the day and bring a lunch. In the evening, a ceremonial symbolic fire will be lit.

Sunday, May 9: Field Trips

Tour 1: Urban Garry oak meadows and their restoration, visiting sites around Victoria such as Christmas Hill, Mount Tolmie, Beacon Hill Park and Government House — Ross Archibald (by bus); **Tour 2:** Protected Garry oak

Notes cont. on page 2



Garry Oak Meadow Community Festival

Admission
by
Donation

Saturday, May 8, 11am - 6pm
MacLaurin Building @ UVic

Raffles!
Prizes!

Themes

Kids of All Ages

Nifty Things to Make with Native Plants!
See Kids Make a Difference!

In Our Ecosystems

Who's that Bird? What's that Bug?
The Good, the Bad, and the Ugly:
Treasures and Pests!

Backyard Gardening

Gardening with the Oaks!
Get the Dirt on Native Plants!

Mapping & Activism

The Bigger Picture:
Connecting Communities!
Map Your Special Places!

Featuring

Dennis Martinez

Slide Show on Takelma Inter-tribal Project

Holly Arntzen and David Sinclair

Rock-folk-blues-ragga

Wrangellian Gumboot Ensemble

Bring your Gumboots and learn how!

"Junior
Garry Oak
Officer"
Badge
For all kids
participating
in theme
activities

The
Fraternity
of the
Scotch Broom
PUBLIC DEBATE
The Mighty
Garry Oak
Alliance

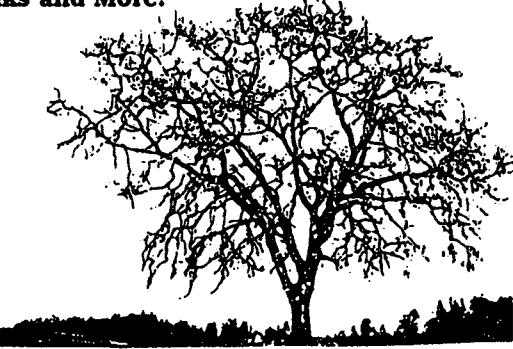
Plus

First Nations Representatives
Local Environmental Art Show
Guided Walks and More!



Proudly Sponsored by the
School of Environmental Studies
& Restoration of Natural Systems
Program

For more information contact:
Brenda Beckwith 472-4694
<http://www.uvcs.uvic.ca/conf/garryoak>



Continued from page 1

meadows: Uplands Park and Mill Hill Park — Joel Ussery and Chris Kissinger, (by bus); **Tour 3:** Western Garry oak stands: Metchosin, Mary Hill (monitoring plots) — Richard

Hebda and Marilyn Fuchs (by bus); **Tour 4:** Mid-island Garry oak communities: sites such as Mt. Tsuhalem, Somenos and Eagle Heights — Adolf and Oluna Ceska, Nancy Turner, Hans Roemer (by bus).

EARLY REGISTRATION BEFORE APRIL 12: \$135, AFTER APRIL 12: \$155. STUDENTS \$80.
Other costs: Field Trips, \$28-50; banquet, \$30; lunches \$7 ea. Thursday and Friday, parking pass 2 days, \$8.



Gypsy moth information from the BC Ministry of Forests - Part 2



The Ministry of Forests has established quite an extensive web site on Gypsy Moth on the internet. Some topics include biology, impact on the Garry oak ecosystem, status of regulated areas, fact sheets on Btk, public involvement and shortly, management options. Some of this material is presented here.

Moth Traps, Egg Masses Confirm Need for Spraying

November 27, 1998

VICTORIA — Gypsy moth trap data and egg masses reconfirm that a gypsy population is established on parts of southern Vancouver Island, reaffirming the need to conduct an aggressive treatment program that will include aerial and ground spray, and mass trapping, Forests Minister David Zirnhelt said today.

"The Canadian Food Inspection Agency placed and collected gypsy moth traps," said Zirnhelt. "It is clear from the numbers caught in the traps that the eradication program used earlier this year was not successful and that we must employ tougher measures to get rid of the non-native pest."

More than 500 male gypsy moth adults have been collected on southern Vancouver Island — almost double the amount collected last year. Many of the moths were collected from Langford, Colwood and Esquimalt, in areas where ground spraying was done earlier this year.

In addition, egg masses were found, reconfirming the gypsy moth has a breeding population on southern Vancouver Island.

"Gypsy moth is a real threat to the economy and environment on southern Vancouver Island," added Zirnhelt. "I am concerned for the forest products

industry and other businesses at a time when we are facing other serious economic challenges, in addition to the potentially devastating impact the moth could have on our Garry oak ecosystem."

Specialists from the provincial government and Capital Health Region are working closely with the CFIA to develop tentative spray zone boundaries based on the data.

On Oct. 27, the CFIA established two regulated zones on southern Vancouver Island to make sure that products being shipped out of infested regions are free of the insects. This restricts the movement of nursery and wood products, Christmas trees, personal outdoor articles and recreational vehicles.

Because the provincial government committed to a spray program in spring 1999, the CFIA reduced the area of the regulated zones. Once the results of the spray program are known, the CFIA has committed to reassessing the need for regulated areas.

Door-to-Door Gypsy Moth Egg Searches in Effect

November 26, 1998

VICTORIA — Inspectors are searching door-to-door for gypsy moth egg masses in Nanaimo and Victoria residential areas.

The inspectors, hired by Ministry of Forests and directed by Canadian Food Inspection Agency are focusing on neighbourhoods in the centre of a gypsy moth population, where there is a good chance of finding egg masses.

Specific areas include Langford, Colwood, Craigflower, Esquimalt, Saanich, Songhees, View Royal, Nanaimo and Duncan.

One of three professional environmental management companies will be

conducting the egg mass searches. The searches will take about 20 minutes for each property, and inspectors will examine trees, shrubs, plants, fences, outdoor furniture and vehicles. The gypsy moth female often lays her eggs on trees and plants but could also lay eggs on anything left outside.

Inspectors will notify homeowners before beginning work in a yard. Should there be no one home, the workers will carry on with their outdoor search of plants and articles and will leave a letter informing residents of the activities that took place. A brochure describing the life history, biology and impact of the gypsy moth will be attached.

The gypsy moth, a hardwood defoliating pest that could affect the health of native and urban trees and plants, was recently introduced to land districts around Nanaimo and southern Vancouver Island. It is vital the insect population does not expand.

Currently, the gypsy moth is in its egg stage (resting stage) and will not develop until the spring. However, as the temperature warms up, the eggs will hatch and the resulting caterpillars will feed on over 500 different types of plants.

The Ministry of Forests and Canadian Food Inspection Agency thank residents in advance for their cooperation in the eradication efforts. The public's help in this campaign is critical to its success.

Continued on page 4



New Evidence Shows Gypsy Moth Population a Concern

October 22, 1998

VICTORIA - The province is prepared to implement an aerial spray program in spring 1999 to ward off serious economic and environmental impacts as a result of new evidence showing the gypsy moth population on southern Vancouver Island has expanded, Forests Minister David Zirnhelt said today.

"The moth population is larger than expected and poses a real threat to forest products and other businesses on southern Vancouver Island," said Zirnhelt. "Our information shows that a quarantine by the Canadian Food Inspection Agency is imminent."

"The new information shows the moth population is established, and the infestation has expanded beyond last year's boundaries, posing a serious threat to our treasured Garry oak ecosystems," added Environment Minister Cathy McGregor.

The environmental and economic impacts of the infestation and imminent quarantine are significant, and in light of this, the province is prepared to take the necessary steps to allow aerial spraying of Btk next spring."

The CFIA and the U.S. Department of Agriculture are negotiating the terms of a quarantine. Areas under consideration include southern Vancouver Island, including Duncan and Victoria, and parts of the eastern island, including Nanaimo and Ladysmith.

The quarantine could affect most products leaving these areas, possibly including logs, wood chips, Christmas trees, nursery products and lumber.

"We will work closely with the federal government in eradicating this non-native pest, and we expect continued support from the federal government," said Zirnhelt.

Earlier this year, the Environmental Appeal Board ruled against aerial spraying, instead calling for ground-

based treatments. Results of this treatment indicate the moth infestation has spread, resulting in a need to conduct aerial spraying in spring 1999.

A similar eradication program for the Asian gypsy moth was done in 1992 in Vancouver. Aerial spraying over urban areas eradicated the moth infestation in that region.

Btk is a biological insecticide used to kill moth populations as larvae are feeding. Scientific evidence shows that Btk is not harmful to humans.

Legal Provisions for the Gypsy Moth Eradication Program

March, 1999

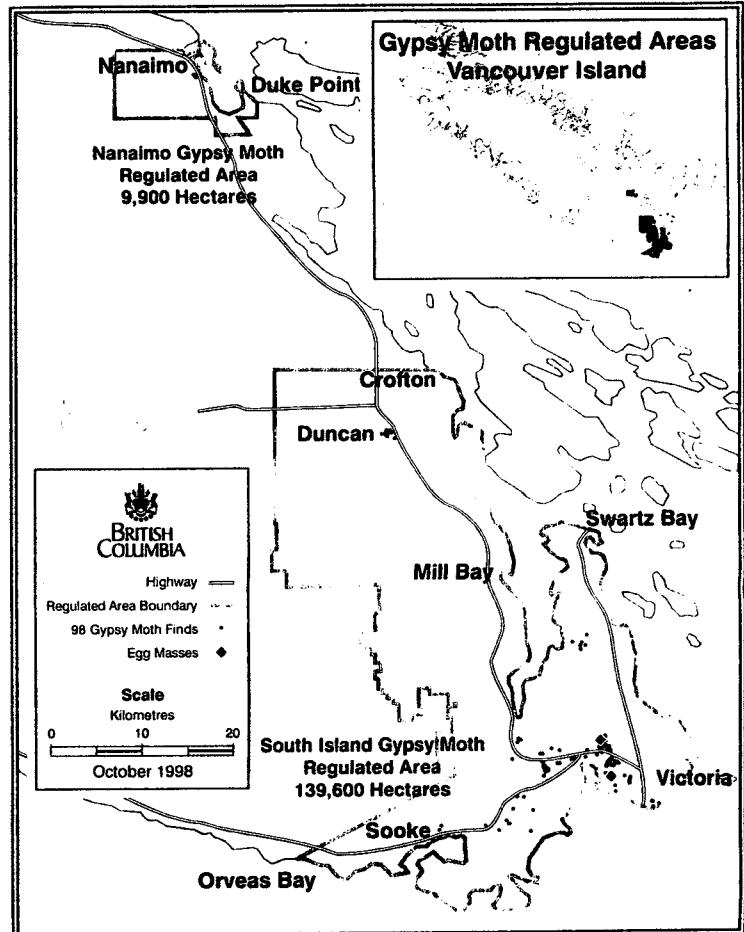
The provincial government has passed a special legal provision called an Order in Council (OIC) to eradicate the gypsy moth from southern Vancouver Island.

The gypsy moth has become established in Victoria, Brentwood, Duncan and Nanaimo and threatens forest products and the Garry oak ecosystem.

Background

In the spring of 1998, the Canadian Food Inspection Agency (CFIA) was granted a Pesticide Use Permit under the provincial Pesticide Control Act to eradicate the North American gypsy moth in Greater Victoria.

This permit allowed both ground-



based and aerial spray treatments using the biological insecticide Btk. Scientific evidence shows Btk is not harmful to humans.

Shortly after the permit was issued, the Environmental Appeal Board ruled against aerial spraying and instead called for ground-based treatments. These treatments proved ineffective.

Impacts

Gypsy moth infestations are an economic threat to a number of forest and nursery industries and put sensitive Garry oak ecosystems in jeopardy.

Garry oak is restricted primarily to the southeast coast of Vancouver Island and the southern Gulf Islands where it is already under pressure from urbanization. Garry oak is also the favoured food of the gypsy moth, a voracious feeder.

The establishment of the gypsy moth in B.C. has significant potential to impact forestry, nursery and Christmas

1998 Vancouver Island Egg Mass Sampling Record
Male Gypsy Moth, *Lymantria dispar* (North American Biotype)

Site	Fall of 1997 & Spring 1998	Nov. & Dec. 1998		
		Viable	Not Fertile	Hatched*
Jacklin Rd	85+	1 _A	1 _{ABCD}	10 _{BE(81)}
Craigflower Rd.	2	23	12	10
Highrock Park	0	0	0	1
Knocken Hill	--	25	3	6
Fairfield	--	No Egg Masses Found		
Brentwood	--	0	1	1
Centennial Park	--	10	2	4
Rosehill (Nanaimo)	--	1	1 _{AB}	0 _{BCD(40)}
TOTAL	87	60	20	32

Prepared by Gordon Henry, CFIA Victoria, February 2, 1998.

tree industries if trade restrictions and quarantines on exports to the United States are applied.

These industries could experience significant costs for inspection and certification for products leaving a quarantine zone. The certification requirements would apply to movement of commodities to uninfested areas in both Canada and the United States.

To avert a full quarantine by the federal government, the Ministry of Forests announced the province was prepared to implement an aerial spray program in the spring of 1999.

In response, the federal government established two regulated zones on southern Vancouver Island to ensure products shipped from infested areas are free of gypsy moths.

Order in Council

In February 1999, the Lieutenant Governor in Council passed an OIC to provide the legal authority to allow the province to manage the gypsy moth situation on Vancouver Island.

An OIC is a legal instrument used by the Provincial Cabinet to approve

and implement decisions of government. In order for Cabinet to make an OIC, a law must exist which gives Cabinet the authority to do so. The gypsy moth OIC was passed under the authority of several applicable laws of the province.

Key Provisions of the Order in Council

Gypsy Moth Eradication Regulation

The OIC creates the "North American Gypsy Moth Program Regulation."

Emergency Declaration

It declares an emergency exists and limits the application of the Pesticide Control Act to the extent necessary to allow the treatments in the regulation to be carried out.

Suspension of Requirement for Pesticide Use Permit or Pest Management Plan

The OIC enables eradication treatments to proceed without the requirement of a Pesticide Use Permit or Pest Management Plan under the Pesticide Control Act. This means the Environmental Appeal Board could not be in-

volved in any appeal of the treatment.

North American Gypsy Moth Program Regulation

Project Management

The regulation establishes the North American Gypsy Moth Eradication Program, conducted by a multilevel government project team, including representatives from:

- Canadian Food Inspection Agency
- Ministry of Forests
- Ministry of Environment, Lands and Parks
- Ministry of Agriculture and Food
- Capital Health Region
- City of Victoria

The Ministry of Forests is the lead agency.

Method of Treatment

The regulation requires Btk use in the commercial formulation Foray 48B or an equivalent product. It must be applied at a rate of four litres per hectare, using a maximum of four aerial and

Min. of Forests continued on page 8

Ministry of Environment, Lands and Parks BTK Fact Sheet

BTK: An Alternative to Chemical Pesticides

What is BTK?

BT is an abbreviation of the scientific name of a species of bacteria, *Bacillus thuringiensis*, that kills some groups of insects.

BT occurs naturally and is commonly found in soils worldwide. It was first discovered infecting silk-worms over 90 years ago in Japan, where it became known as Sotto disease.

For many years, the possibilities of using this naturally occurring organism were not recognized, but in the 1950s, research began in earnest on its effectiveness as a pest control product.

A commercial BT product was first registered in the United States in 1958; by 1960 it was cleared for use on food crops and in 1961 was registered for use in Canada. It is now the most widely used naturally occurring pest control product in the world.

It is important to realize that BT is not a synthetic chemical. BT products contain the highly specialized protein crystals and dormant spores of bacteria. These are only activated when they are eaten by a susceptible species of insect. Unlike broad spectrum insecticides, BT is highly specific — that is it affects only certain species of insects and has no effects on others.

How does it work?

BT begins to work after a caterpillar eats a piece of leaf with BT crystal proteins and spores on it (caterpillars are the immature stage of butterflies and moths).

Susceptible caterpillars have a strongly alkaline digestive track (in contrast, humans and other animals

have acidic digestive tracks). When the crystals reach the caterpillar's gut, they dissolve in the alkaline conditions and release the proteins contained in the crystal.

Through a series of complex biological processes, the proteins disrupt the lining of the gut, which cause the caterpillar to starve. Infected caterpillars may not die for several days, but they usually stop feeding immediately because their digestive track is paralyzed by the activity of the crystal proteins.

What are BTK and BTI?

Since BT was first discovered, researchers have found many different subspecies of BT, some of which are now commercially useful because they infect different groups of insects.

BTK is the abbreviation for *Bacillus thuringiensis* var. *kurstaki*, the subspecies that kills young larvae of mosquitoes and black flies. BTI is used widely in British Columbia in mosquito control programs. A new subspecies that has been registered recently is *Bacillus thuringiensis* var. *tenebrionis*, which affects the larvae of some beetles.

Is BT safe to use in yards and on food plants?

BT is not a synthetic chemical — it is a naturally occurring organism. It is non-toxic to humans, other mammals, birds, fish and most insects, therefore it is a good choice for use on food crops. BT products have been approved for use on organically grown food for many years.

Does BT harm earthworms, honeybees

or other beneficial species?

BT strain infects a relatively narrow range of insects. Studies have shown that predatory insects, such as lady beetles, are not at risk if they eat an insect that has been infected with BT. BT does not infect earthworms, nor does it kill honeybees or many other species of insects. BT is an excellent choice for control of many pest caterpillars because it does not harm predatory insects, birds, snakes and other animals that keep pest numbers low in the yard and garden.

Does BTK harm butterflies?

Many caterpillars, which are the immature stage of butterflies and moths, are potentially susceptible to BTK. Although the effects of BTK have not been tested on the caterpillars of every species of butterfly, we do know that it does not harm the adult butterflies, their eggs or the chrysalis stage (an immobile stage, when the caterpillar turns into a butterfly with a silken case).

Generally, only the young caterpillars of susceptible species are killed by the product and even they must eat a sufficient does of BT to be affected. To be effective on pest caterpillars, sprays must be timed to coincide with the most susceptible age of insect because BTK lasts for a short time in the environment. Unless butterfly caterpillars are in the same place at the same time as the target caterpillars, they would not be at risk of being infected.

To minimize the impacts of sprays on non-target caterpillars in a home garden, homeowners

should spray only if they are sure the caterpillars are causing significant damage (caterpillar damage often looks worse than it is; plants usually recover quickly by growing new leaves).

How long does BT last in the environment?

There have been numerous studies on how long BT lasts in the environment. In general, it has been found that there is a rapid decline in the ability of the bacteria to infect insects within 12 to 48 hours after it applied.

After the product has been mixed with water and sprayed onto leaves, it is destroyed by the ultraviolet radiation within a few days.

It is also degraded rapidly by high temperatures and substances on plant leaves. It is also washed from leaves into the soil by rainfall.

In the soil, where BTK spores are protected from sunlight, they remain dormant. The spores of BTI may also remain dormant in the mud at the bottom of a stream or pond for several months.

The spores cannot germinate in either soil or water — to do this they must be eaten by a susceptible insect.

What is in commercial BT products?

To enable BT to be made into a commercial product, the bacterial cultures and the food medium the bacteria are grown in are mixed with other ingredients.

These are added to make the products stable, mix easily in water and stick to leaves. BT is so fragile in the environment that ultraviolet protectants to shield it from the sun are usually also added.

These ingredients make up approximately five per cent of the concentrated product, which is later diluted with water to make a spray.

The largest component of any BT spray is water; for example, a common BT product sold for gardeners is diluted 150-300 times before spraying.

These additional products are part of the registered product formulation that is submitted to the federal Pest Management Regulatory Agency for registration.

Under current regulatory practice in Canada, all ingredients in pesticides are known and are tested for toxicity in the whole formulation.

They are approved by federal health officials when the product is approved for registration. BT

products registered in Canada are required to meet stringent quality standards similar to those used in the food industry.

Why should we use BT products?

Using BT instead of a chemical insecticide to control caterpillars is an important step in reducing your exposure to chemicals in the environment. It is also the best choice to avoid harming the many native beneficial species of insects and other animals.

As with all pest control products, BT should be used only when you know that control measures are necessary. BT last for only a few days once it is sprayed, therefore spraying it before caterpillars appear is a wasted effort.

Are BT products available to home gardeners?

At any garden centre, you can find one or more products containing BTK to control caterpillars such as cabbage loopers, imported cabbageworm, fruit-tree leafrollers and other caterpillars that attack garden plants and trees. The products are in powdered or liquid concentrate form that must be mixed in a larger volume of water to make a spray for plants and trees. Always follow the directions on the label to mix and use the products correctly.

IN A NUTSHELL: NOTES FROM THE PRESIDENT

At the March 18th Annual General Meeting, directors Pierre d'Estrubé, Hal Gibbard, Tom Gillespie and Sharron Waite were acclaimed for another two-year term each. We are still seeking another director. You might notice that the position of the direc-

tors on the back page of the *Leaflet* has not changed. We will not be having a directors' meeting until after this edition of the *Leaflet* is printed, at which time we will decide who is doing what.

Paul Gareau will continue being coordinator of the Garry Oak Inventory Project. I'd like to thank Paul for his valuable work as a GOMPS director. We'll miss him and his sage advice at our meetings.

Continued on page 8

four ground-based treatments applied to each treatment area.

Conditions

The regulation establishes a number of treatment conditions:

- Treatment areas to be identified by the project team and approved by the Deputy Minister of Environment, Lands and Parks.
- Btk applications to occur only in April, May and June 1999.
- Aerial applications to occur only in the early morning in daylight until 7:30 a.m. in April and until 7:00 a.m. in May and June.
- Btk applications to be carried out by persons licensed and certified under the Pesticide Control Act.
- Aerial applications to be carried out by airplanes with two or more engines, for safety reasons.
- Written notification to be provided at least 24 hours in advance to:
 - school principals and hospital head administrators in each treatment area
 - Vancouver Island newspapers
 - Radio and television stations located on eastern Vancouver Island
- A health surveillance study related to any aerial applications of Btk to be led by the Capital Health Region.

For more information, please contact the Pollution Prevention and Remediation Branch at (250) 387-4441.

Notes continued from page 7

Hal Gibbard and Mike Meagher have represented GOMPS at several Ministry of Forests' Open Houses on the Gypsy Moth Aerial Spray Program.

We hope to meet some of you at the Garry Oak Meadow Community Festival on May 8. Drop by our display to say hello!

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

PRESERVATION/RESTORATION COMMITTEE

SEED/SEEDLING EXCHANGE. Interested members contact Katie Stewart at 386-4792.

OPERATION CLEAN SWEEP (broom removal). Call Eric Redekop at 595-7270 for information.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you'd like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President and Public Relations Chair	Katie Stewart	386-4792
	e-mail	camassia@bc.sympatico.ca
Vice-President	Pierre d'Estrubé	477-2410
Treasurer and Finance Chair	Tom Gillespie	361-1694
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Development Chair	Sharron Waite	479-3380
Director and Program Chair	vacant	
Director	Hal Gibbard	477-2986
Director	Michael Meagher	727-7675

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Donation

Individual \$15 Family \$20

Please send more information about:

Youth and Associate \$6 (no newsletter)

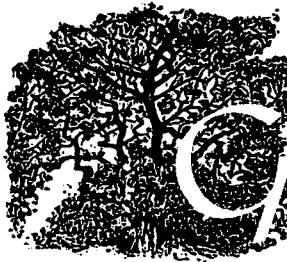
Local sources for Garry oak meadow plants

Gift memberships, send receipt to:

Garry Oak Inventory Project

Operation Clean Sweep (broom removal)

Growing, planting Garry oaks



GARRY OAK LEAFLET

MAY - JUNE - 99 VOL 6 - NO 3

Newsletter of the Garry Oak Meadow Preservation Society AUGUST/SEPTEMBER 1998, VOL 5, NO 7

Slim chance remains for 'a perfect Eden'

The following opinion piece was written by Dr. Nancy Turner with input from Dr. Richard Hebda, PhD candidate Brenda Beckwith and other people who attended the International Garry Oak Meadow Symposium and Community Festival, May 5-9 at the University of Victoria. It was published

in the Times Colonist May 28.

The majestic Garry oak, which lends its name to many Island places (Oak Bay, Royal Oak), is more than just another tree. Its gnarled limbs, broad canopy, and the meadows and rocky hilltops where it grows combine into

as distinctive a landscape and habitat as any major ecosystem in Canada.

The array of species associated with the Garry oak parkland ecosystem compares in numbers of rare and endangered species to two noted national

A perfect Eden cont. on page 2



JUNE 30 1999 is the deadline for purchase of the Elkington property on Maple Bay Road, near Duncan. Barb Stone, a Maple Bay resident, is spearheading the local effort to raise money. Over \$600,000 has been raised to date. To make a tax-deductible donation, mail a cheque to Cowichan Community Land Trust, #6-55 Station Street, Duncan, B.C. V9L 1M2.

biodiversity hotspots: the Carolinian hardwood forest ecosystem of southern Ontario, and the dry grasslands of the southern Okanagan region. Furthermore, the Garry oak parkland is threatened not just in Canada, but throughout its range.

This month, scientists, conservationists, indigenous people, educators, municipal officials, artist and community activists shared their knowledge, experiences and concerns about Garry oak and its associated plants and animals at the University of Victoria as part of a symposium and community festival. And they celebrated the Garry oak parkland and all that this unique ecosystem has to offer to residents and visitors of southern Vancouver Island.

Garry oak parkland has been an integral part of First Nations lifeways for thousands of years. The Songhees, Saanich, Hulquimini and other Salishan peoples of southeast Vancouver Island and the Gulf Islands relied on the Garry oak meadows for many resources, including game, berries, and root vegetables.

A special delicacy was the bulbs of two species of edible blue camas, almost as widely used and traded as salmon. First peoples managed these bountiful resources using controlled burns and other techniques to maintain optimal habitats for these species and to enhance their productivity.

Captain George Vancouver, when he sailed near Victoria in 1792, described the Garry oak parkland as enchantingly beautiful. James Douglas, founder of Fort Victoria, called the parkland a perfect Eden.

However, early settlers cleared the woods and brush, established farms and orchards, drained the wetlands, and set their horses and livestock to graze on the luxuriant meadows.

The original parkland areas were soon plowed and invaded by roads and houses. And we continue to convert the remaining meagre patches to streets,

buildings, extensive parking lots and lawns as our population grows.

Never in the last 10,000 years has the Garry oak parkland been more threatened than today. Scattered oaks remain, including magnificent old giants, but there are fewer and fewer each year.

They have been ravaged by a succession of insect pests — the winter moth, the oak phylloxeran and the jumping gall wasp. Now, gypsy moth damage is a concern. Young oaks are especially vulnerable.

Some municipalities, including Saanich and Oak Bay, have tree cutting bylaws that protect mature oaks to some extent, but nowhere are seedlings, saplings and slender young oaks protected. They regularly succumb to mowing, bad pruning and clearing.

Of even greater concern are the many other life forms, both plant and animal, associated with the increasingly fragmented and diminishing Garry oak habitat. Birds that were once abundant — meadowlark and western bluebird, for example — are no longer to be found. Reptiles, amphibians, butterflies and some insects, too, are far less common. Some are virtually extinct.

Plant species that used to grow commonly, but are now hard to find include: Macoun's meadowfoam, deltoid balsamroot and especially the once abundant native grasses such as California oatgrass and Roemer's fescue.

Even wild strawberries, which used to abound, have declined in much of their range. Aggressive invaders such as Scotch broom, gorse, orchard grass, cheat grass, starlings and English sparrows, have widely replaced native species.

The Garry oak parkland is too precious to lose. If we are to save it, we all must work together and enhance what is left, and to restore areas that have been degraded.

Victoria is known as the Garden Capital of Canada. Yet our spectacular wildflower meadows, which are even

more priceless and remarkable than our glorious gardens, are little known.

It is time to change, to reverse the destruction of the ecological gem of southeastern Vancouver Island, the Garry oak parkland.

There is much each of us can do:

1. Tell others that the Garry oak parkland is the smallest and most threatened major distinctive Canadian ecosystem. It is globally significant.

2. Respect and acknowledge Aboriginal traditional use and management of these areas.

3. Support all efforts to preserve remaining patches such as those identified in the federal/provincial sensitive ecosystems inventory and by local naturalist groups.

4. Encourage careful stewardship of Garry oak parklands in publicly owned lands like Uplands and Beacon Hill parks.

5. Ask our municipal governments to protect Garry oak parkland in rezoning and other decisions, and to enact tree preservation bylaws and restrictions in blasting bylaws to protect the parkland.

6. Foster Garry oak parkland habitats on our own property by growing and encouraging native species and reducing the area under lawn. (Saves water too!)

7. Learn more about our special species and places through field trips, publications and by joining local groups such as the Garry Oak Meadow Preservation Society, the Victoria Natural History Society and others.

8. Run for municipal elections. Much of the protection of the Garry oak parkland will take place at the municipal level; having people who care about the parkland on councils would be instrumental in protecting these precious places.

IN A NUTSHELL

This issue of the *Leaflet* focuses on the Garry Oak Meadow Symposium, which was held recently at UVic, and further information about the controversial management of gypsy moth.

The GOMPS board voted unanimously in February 1998 to support the **aerial spray program**. We discussed the issue at length three or four times and researched, including talking to local scientists who are not unanimous about the necessity of spraying.

For example, **Bob Duncan**, an entomologist with the Pacific Forest Centre, is adamant that spraying is necessary but entomologist **Dr. Richard Ring** of the University of Victoria thinks the government should be concentrating on preventing the gypsy moth from entering the province and not be spraying.

We are concerned about human health factors but so far have not seen any studies indicating that spraying with Foray 48B (Btk) is harmful.

Our decision to support the spraying program has pitted us against many of the local environmental groups in Victoria. At least two GOMPS members have resigned from the society as a result of the board's decision.

I was criticized for publishing Ministry of Forests propaganda in the last *Leaflet* by one of the persons resigning.

Part of my reason for doing so was that since the board had let it be known what our position was, I assumed our members knew this, but apparently that was not the case. The other reason was that it is not always easy coming up with material for the newsletter at times

and even though it was "propaganda", I didn't have to write it.

Anyhow, I explained the board's viewpoint to this person and also suggested that if the member did not like our decision he was welcome to run for the board. Your board consists of seven volunteers who are concerned enough about Garry oaks and their habitat to have become somewhat knowledgeable about the ecosystem, attend monthly board meetings, write letters, go to council meetings and public hearings, meet politicians, meet the public at community forums, pull broom and cut ivy, relay information etc. We try to represent your interests.

If GOMPS members are dissatisfied with our decisions, by all means let us know. Not giving us any feedback either at the annual general meeting (which is attended by usually no more than 15 people) or at any other time of the year and then giving us a blast and resigning seems quite drastic.



Around 100 people, including presenters, attended **The Garry Oak Meadow Conference** held at the University of Victoria May 5-9. Of particular interest to me was a talk given by UVic historian **John Lutz** on aboriginal landscape management and the European settlement of the Victoria area. He mentioned that James Douglas arrived in the Victoria area when the vegetation was lush and verdant and assumed that the locale would be an excellent site for farming, choosing the site over a Fraser Valley location.

Later I began musing "what if he had arrived in August?" How would this area have been developed if it had been a backwater as opposed to the provincial capital? For that matter how would British Columbia have developed had its boundaries been permanently established at the mouth of the Columbia River?

I was part of a panel on "Protecting

Garry oak ecosystems: How can we do it?" along with **Jeff Ward** from CRD Parks; **Alan Hopper**, Saanich Municipal Planner; and **Ross Meek**, developer of his family's Hutchison property

I found it difficult to be optimistic, given my experiences as recent president of GOMPS. Particularly galling to me has been the unwillingness of the provincial government to enact any kind of legislation with teeth and how quick every provincial politician has been to say it's a municipal responsibility to protect habitat within an urban/semi-urban area.

Clearly it's going to take a citizenry even more outraged at this habitat's destruction than opponents were at clearcutting Clayoquot Sound to wake up the provincial government.

All local governments, municipal and parks planners were notified and invited to the symposium. Other than Alan Hopper, the only planner I saw at the symposium was Colwood's **Simon Lawrence**. Saanich Parks was well represented and there were personnel from Oak Bay and Victoria Parks Departments. Where were the politicians?

Jeff Ward said that although it appears that we are well endowed with green space, most of it is privately owned and that we have a little over seven per cent in parks, unlike Greater Vancouver which has 22 percent. He said they hope to acquire more parkland in the future and will try to get more Garry oak habitat, which is underrepresented in CRD Parks, protected.

Proceedings of the symposium will be reproduced and I expect anyone wanting a copy will be able to buy one. We sold our last five colloquium proceedings from the 1993 conference and took orders for another seven copies

In a Nutshell continued on page 4

In a Nutshell continued from page 3 which Tom Gillespie had reproduced this week.

The Community Festival organized by Brenda Beckwith had much to offer. There were four great theme rooms on mapping, the ecosystem, backyard gardening and using native plant materials. The organizers for each room did a tremendous amount of work and each room was very interesting. As well, there were artists on site, three native plant growers, entertainment and almost 30 displays.

Unfortunately, only Friends of Beacon Hill Park had a display. We had hoped to highlight some of the smaller, local groups active in park protection and restoration, but none were able to attend the festival.

As for the Sunday field trips, people were more interested in going up-Island. I went on one that Hans Roemer led. He had prepared species lists for Eagle Heights Grassland and Mt. Tzouhalem Ecological Reserve. At the Grasslands tour, local activist Don Webb met us for the walk and at Mt. Tzouhalem, its local warden came along.

GOMPS received a \$500 donation in late winter towards a new display and we decided to spend an additional \$500+ for a display that can be either used on a table or freestanding. Less than \$200, I think, was spent on enlarging photos and mounting them. I'd like to thank Willie MacGillivray in particular for the use of his slides for the display.

On May 27 the display was at Cedar Hill Junior Secondary School for its environment week and at the Hagen Creek Stewardship Open House on May 29, at which Sharron Waite represented GOMPS.

In addition to the new display, we have a new full colour brochure, produced by me with a \$2000 grant given

to us by Canada Trust Friends of the Environment Foundation. It proved quite popular at the symposium as the copies I put out kept disappearing. We really appreciate the foundation's generosity. Friends of the Environment Foundation also funded our original print run of the Garry oak meadow poster.

The printing costs were almost \$1900 for 1000 copies. We were able to give Briony Penn and her partner Donald Gunn a small honorarium for the use of their paintings reproduced in the brochure. Donald, in fact, did a special last-minute painting of a band-

tail pigeon and emailed it to me. Many thanks for the heroic effort!



On May 31, the proposed 1500 Arrow Road six-lot subdivision came before Saanich council. This property is of concern to us because of the number of Garry oaks that will be impacted or removed. Approximately one third of the property is supposed to be added to Feltham Park.

Also up before council the same evening was the rezoning of Rogers Farm for a proposed residential subdivision and parkland addition to Swan Lake Christmas Hill Nature Sanctuary.



From May 20 to June 20 is Bottles for Greenspace month, an initiative of Vic Derman, Vice-President of The Land Conservancy. Vic's students at Cedar Hill Junior Secondary School, along with students from Rogers, Reynolds, Cloverdale and Willows Schools conducted a May 29 and 30 giant bottle drive.

Money raised from the bottle drive will go towards purchasing land on Christmas Hill and establishing a Garry oak meadow at Cedar Hill School. Save up your beer, liquor, wine, pop, bottled water and juice containers. You can drop them off at the Saanich, Esquimalt and Colwood Public Works yards Monday-Friday or at several local bottle recycling businesses.

Just think, ten beverage containers per person at 10 cents each item would raise over \$300,000 to purchase local greenspace!!



The new GOMPS president is Pierre d'Estrubé and vice-president is Hal Gibbard. Sharron Waite will continue as secretary and Tom Gillespie as treasurer. Linda Grimm

In a Nutshell continued on page 8

The Garry oak ecosystem and gypsy moths

The following article was written by Hal Gibbard and submitted to the Times Colonist for publication as an opinion piece in late April but has not been published. It has been published in the Saanich News and in a Nanaimo newspaper.:

Why worry about Garry oaks?

In Canada, Garry oaks are found only on Southern Vancouver Island, the Gulf Islands, and a couple of small locations on the Lower Mainland. They have been reduced to about one percent of their original range in historical times.

Garry oaks are a keystone species in the Garry oak meadow ecosystem. If you lose the Garry oaks, you will eventually lose the rest of the ecosystem. The Garry oak meadow is estimated to contain one-fifth of the rare plants in British Columbia.

Why be concerned about the extirpation of plants?

There are many philosophical arguments about whether mankind has the right to cause the elimination of species, and after all, the gypsy moth is introduced into the area by man, but there are also practical reasons to be concerned.

Many of our medicines are discovered in, and derived from, plant materials. If you lose a plant, then you lose all future options for the discovery of beneficial products based on that plant or anything it may evolve into in the future.

What will be the likely impact of gypsy moths?

A recent scientific paper by Davidson, Gottschalk, and Johnson [1999] states, among other things, that mortality in oak stands in various locations in the eastern U.S. during an outbreak was 23 percent in the first year, rising to 30 percent in the second year, and 50 percent in the third year. Other studies by Kegg placed mortal-

ity as high as 69 per cent over four years.

This assumes moderate to heavy defoliation, a common situation where oaks are in an area where there is an outbreak of the moth. Tree mortality also depends to some extent on other physiological stresses such as other parasites, diseases, or drought conditions. Our Garry oaks face all of these, perhaps even greater stresses than those reported in the above scientific papers.

There will be an outbreak of gypsy moths with very high populations once it is allowed to establish here. This will last for a few years, doing the kind of damage mentioned, then it will abate with further outbreaks occurring periodically.

Garry oaks will be the prime target of gypsy moths in this area, and they are generally found in stands which make them particularly attractive and vulnerable to moths.

How can we virtually eradicate this infestation?

The practice of trapping the moths to control them has been tried here, and elsewhere, but is not effective when significant numbers of moths exist. Even the theory of this method is questionable because only males are caught and they may well have mated with one or more females before being trapped.

Despite efforts by volunteers, in the current infestation, the population of moths has not been controlled and is increasing in area. The area infested is so large already that to even attempt to eradicate the moths before trapping would require an estimated 125,000 traps.

Each trap requires permission from the land owner, then placement, all in a short period of time. Finally, there is retrieval. Thus at least 250,000 visits would be necessary. This is clearly impractical.

Spraying from the ground is only ef-

fective on the vegetation directly sprayed so is only a spotty treatment at best, does not reach the top of the tallest trees, is cost-prohibitive, and requires access by a large truck or trailered pump.

There has been a much misquoted history of gypsy moth detection and treatment in B.C. The earliest recorded detection was an interception of Asian gypsy moths in 1911, but these were destroyed before they could be introduced to B.C.

The first detected introduction was in 1978 and it was treated in 1979. Since then there have been about 13 different years of detections which have been successfully treated with Btk. There have also been quite a few smaller detections that were untreated. There have been about 10 treatments on Vancouver Island so far.

Aerial application of the biological spray Btk [Foray 48B] remains, to this day, the only way of eradicating any given introduction of gypsy moth, and treatment is required before numbers of insects and the area involved become too big. There are several other biological control methods being sporadically worked on, but they are not yet anywhere near the practical application stage.

What are the trade-offs to aerial spraying?

Some other species of butterflies and moths may be killed within the target areas. Not all, however, because spraying will only kill those individuals and species that are in the same stage of development, i.e., actively feeding caterpillar. Not all species have their life cycles in synchrony with each other.

However, the areas sprayed are relatively small compared to the total range of the vulnerable species [except gypsy moth] and so they will, of their own accord, move back into the area and

Gypsy moths continued on page 6

repopulate it. Gypsy moths, on the other hand, would have to be brought in again by man if they are eradicated.

There is a butterfly that depends entirely on Garry oaks for its habitat and it may be affected by spraying but not nearly so seriously as if it loses its habitat [Garry oaks] by not spraying. The same can be said for everything else in the Garry oak ecosystem: if you lose the oaks, you lose everything else in the ecosystem.

Some people feel there are health risks associated with the spray. These assumptions are based on anecdotal stories where people assume a cause and effect relationship to their discomfort.

On three or four occasions of aerial spraying in B.C. alone, when spraying dates were announced or planes flew overhead, people phoned and wrote about their maladies "caused by spraying" only to find out that the spraying had not, in fact, taken place.

I prefer to rely on the advice of experts in the field who say health risks are minimal. It is only another anecdotal story, but I am asthmatic and have

been exposed to Foray 48B with no noticeable effect.

There are also health risks associated with failure to spray, and the subsequent establishment of gypsy moths. Some people are known to be allergic to the hairs on caterpillars, children being particularly susceptible.

I know our government toxicologists have looked at Foray 48B [Btk formula], knowing what is in it, and said it is safe. Would you really rather listen to people who have no training and do not know what is in it? Disbelievers can always stay indoors for a couple of hours or go visit a friend or relative.

The bottom line

We are faced with the permanent establishment of gypsy moths in our area if we do not treat them with aerial Btk. Once established, they will have an outbreak that will probably cause the loss of a very significant proportion of our Garry oaks. This has been the experience elsewhere.

Can you visualize the Victoria area, for example, with over half its Garry oaks dead? That could be the result of

just one outbreak, and if the moths become established, there will be more outbreaks.

In Ontario, they mapped 1000 hectares of defoliation in 1981, and planned to spray in 1982. Public opposition lead to its cancellation. The area of moderate-to-severe defoliation jumped to nearly 250,000 hectares in 1984. In 1985, public opinion had changed, and considerable public support meant spraying commenced. It was too late!

Gypsy moths are now permanently established in that province, but they still must use the spray in order to suppress the effects of moths in provincial parks and the like.

They say those who do not learn from history are doomed to repeat it. Please, not here!

Hal Gibbard was a member of the Gypsy Moth Task Force established in 1998 by the B.C. Ministry.

The executive summary from the Gypsy Moth Task Force will appear in the summer issue of the Leaflet.

Sierra Club Action Alert: Privatization of B.C.'s Public Lands

The provincial government has negotiated behind closed doors an agreement to compensate timber giant MacMillan Bloedel \$83.75 million for parks created in the early 1990s on Vancouver Island. MB held timber rights to these public lands, but did not own the land.

The government proposes to use up to 120,000 hectares of prime forestland as currency for payment. If the deal goes through as planned, all of these lands will be exempt from laws that protect jobs and the environment.

The deal will affect land mostly on

Vancouver Island, but some forests on the Sunshine Coast (Powell River) and the Queen Charlotte Islands are also included. Ninety thousand ha are MB's private land currently held within their tree farm licenses (TFLs).

This 90,000 ha will be taken out of the TFLs, which means it will no longer be covered by the Forest Practices Code or provincial export regulations. The other 20-30.00 ha is public land that will be directly given to MB as private land.

All of this land will then be covered by the new forest practices regulations for private land that have been

announced, but not yet revealed to the public. These regulations were virtually written by the corporate landowners themselves. The Sierra Club has seen those regulations and we know that they will not protect fish, wildlife, tourism and employment values on private land.

Transferring land to ML is in direct conflict with on-going treaty negotiations with First Nations. It would also severely limit the opportunities for community forests, Small Business (forestry) and other community transition strategies on Vancouver Island. If land is transferred to MB as

part of this deal, it will set a dangerous precedent for B.C.; already, three more parks-related compensation deals are under negotiation elsewhere in the province, and at least nine licensees have been identified for possible compensation due to the completion of the Nisga'a treaty.

This backroom deal is the first step in a broader plan for both industry and the government to privatize B.C.'s public forests. It is being done with little public consultation. It is a piecemeal approach to tenure reform on corporate terms.

The government needs to hear how you feel about this deal, the others under negotiation, and privatization of our public lands in general!

David Perry, a Victoria lawyer, has been contracted to conduct a public consultation process around the MB deal. He is to provide recommenda-

tions to government regarding (a) the public's reaction to the use of land as currency, and (b) which parcels of land (selected from the candidate parcels put forward by MB) would be "okay" to transfer to MB. He will be holding both open house style hearings as well as direct meetings with specific groups that have more detailed critiques or information to give him. These will take place in June throughout the Island.

Mr. Perry needs to hear that:

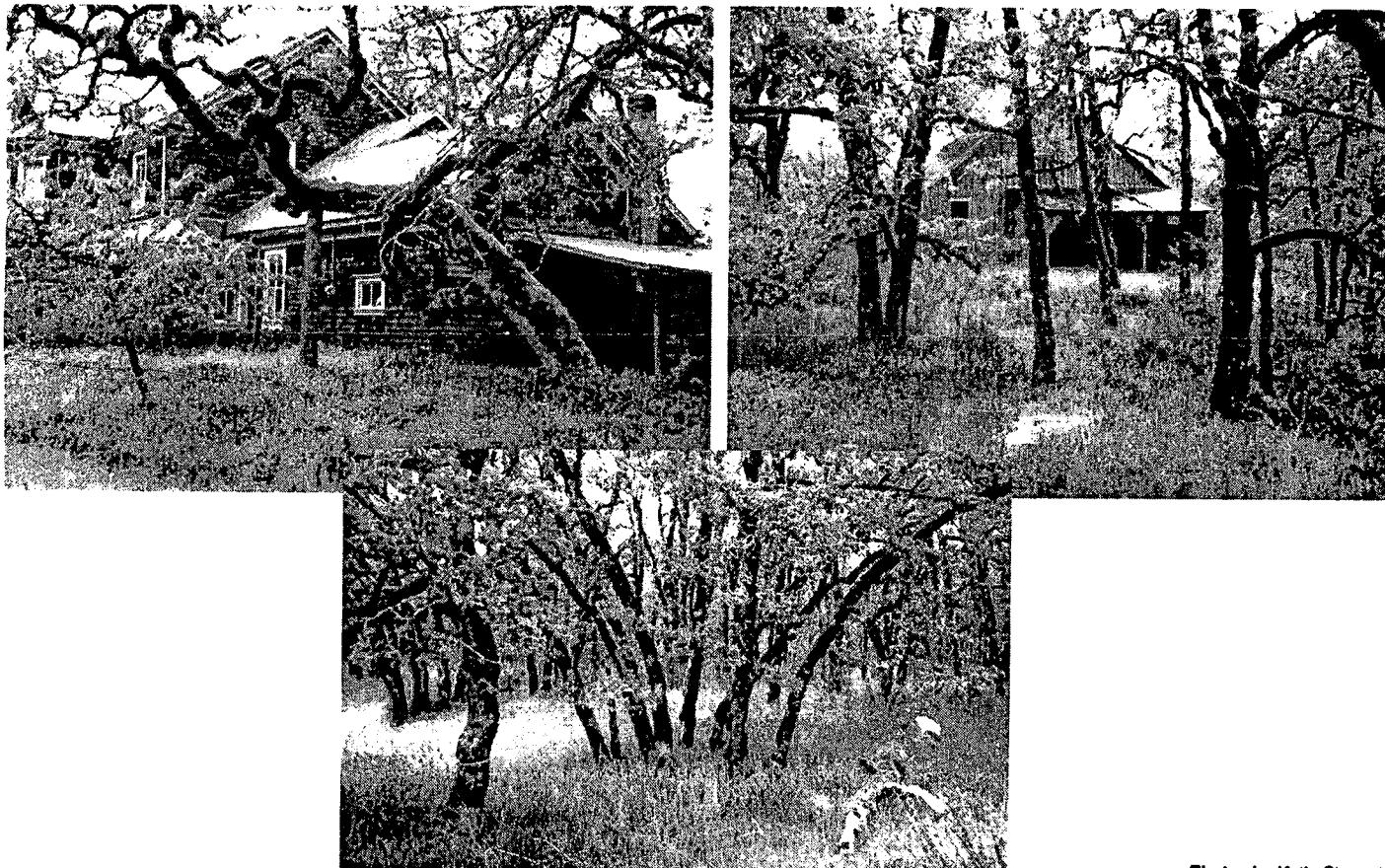
- British Columbians oppose privatization of public lands.
- The case for compensating corporations for public decisions about public lands, especially so generously, has not been proven to the people of British Columbia.
- Privatization of public lands is an unacceptable interference in the honourable settlement of First Nations land claims.

- One month is not enough to carry out this task, so this process is not valid; open houses should be held throughout the province to ensure full, informed debate about both the compensation and privatization issues.

Please send Mr. Perry letters to Suite 101, 2750 Quadra Street, Victoria, B.C. V8T 4E8. FAX: 250-380-3090; phone 250-380-1466. Also send copies of your letters to Premier Glen Clark and Minister of Forests David Zirnhelt at the legislature.

To get more details about the settlement deal and to view the maps showing the candidate parcels selected by MacMillan Bloedel, check out the Ministry of Forests website at www.for.gov.bc.ca. There is a selection button for the MacMillan Bloedel Settlement Agreement.

Photos taken on the Elkington Property, near Maple Bay



Photos by Katie Stewart

volunteered to be a director at large for the next year, which the other board directors greatly appreciate. Mike Meagher and Katie Stewart are also directors at large.

The directors have assumed responsibility for various areas as follows:

Finances, selling posters, memberships: Tom Gillespie
science of oaks: Mike Meagher
growing oaks, dealing with ivy: Pierre d'Estrubé
ivy, gypsy moth: Hal Gibbard
political concerns: Sharron Waite
botany questions: Linda Grimm
botany/newsletter: Katie Stewart.

Please direct any inquiries to the person concerned.



Western Canada Wilderness Committee has printed thousands of beautiful postcards that the public can send to **Geoff Young**, CRD Board Chair, and **Maurice Chazottes**, Chair of the CRD Parks Master Plan Public Advisory Board.

The campaign is to let our politicians know that the public supports a \$10 levy per household for the next 10 years to acquire parkland. Although polls indicate that the public wants more parkland and habitat protection, the CRD board is timidly suggesting that \$2 a year is an adequate amount to add as a levy.

Ten dollars would accomplish much more. If you want to send a postcard or distribute them, you can pick them up at WCWC's office at 507-620 View Street.



The Corporation of the District of Central Saanich invited GOMPS to its **Oak Haven Park** (we had called it the FAMA Garry oak meadow) dedication on Saturday, June 5. A ceremonial oak tree was planted.

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

PRESERVATION/RESTORATION COMMITTEE

OPERATION CLEAN SWEEP (broom removal). Call Eric Redekop at 595-7270 for information.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you'd like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President	Pierre d'Estrubé	477-2410
Vice-President	Hal Gibbard	477-2986
Treasurer	Tom Gillespie	361-1694
	e-mail	garryoak@netscape.net
Secretary	Sharron Waite	479-3380
	email	garryoak@yahoo.com
Director	Michael Meagher	727-7675
	email	mmeagher@pfc.forestry.ca
Director	Linda Grimm	995-0001
	email	grimm@camosun.bc.ca
Director	Katie Stewart	386-4792
	e-mail	camassia@bc.sympatico.ca

MEMBERSHIPS AND DONATIONS

NAME _____

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MEMBERSHIP DUES:

Donation

Individual \$15 Family \$20

Please send more information about:

Youth and Associate \$6 (no newsletter)

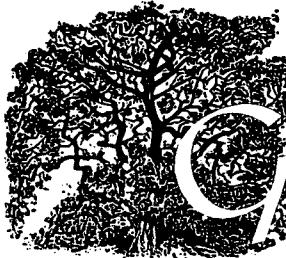
Local sources for Garry oak meadow plants

Gift memberships, send receipt to:

Garry Oak Inventory Project

Operation Clean Sweep (broom removal)

Growing, planting Garry oaks



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

JULY/AUGUST 1999, Vol 6, No 1

From a tiny acorn: How one local politician saved Canada's northernmost grove of Garry oak groves

By Rex Weyler

This article is published by permission of *Shared Vision Magazine*. It appeared in the April 1999 issue.

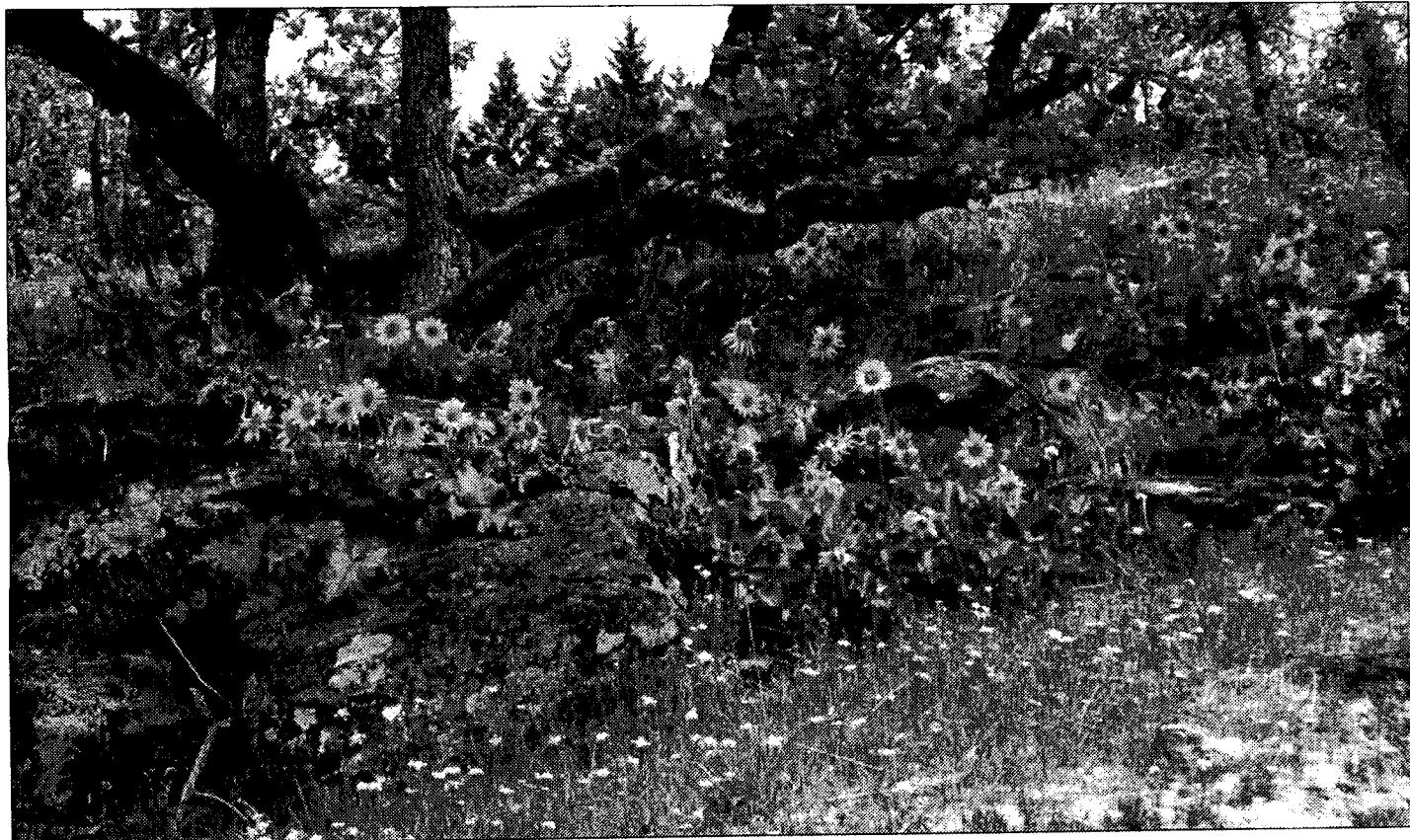
On January 9, 1997, George Sirk was on a tour of Courtenay public facilities with other Comox-Strathcona Regional Board members. They were shown the garbage dump, the sewage

ponds, government offices and, finally, late in the day, a proposed site for the brand new Comox Valley Sports Centre ice rink, between the existing ice rink and a number of oak trees.

As the Electoral Area 1 director for Cortes Island, Sirk sat on the Regional Board with other representatives from Comox, Courtenay, Quadra Island,

Black Creek, Campbell River, and the surrounding areas. He had only been in this office for one month, and he quietly looked after the interests of his island community. However, Sirk is also an experienced naturalist who has conducted countless nature tours, in British Columbia and Central America.

From a tiny acorn cont. on page 2



RED-LISTED DELTOID BALSAMROOT (*Balsamorhiza deltoidea*) in full bloom at the Mount Tzouhalem Ecological Reserve, May 1999. Prior to 1949 this species was known to exist in 13 locations; now it is down to 11 locations. It is one of 129 rare taxa in the Duncan Forest District: 64 red-listed and 65, blue-listed, though not all are in the Garry oak ecosystem. Only the Penticton Forest District contains more rare taxa: 70 red-listed and 63 blue-listed. Information comes from *Rare Native Vascular Plants of British Columbia*, published by the Ministry of Environment.

Photo by Katie Stewart
Garry Oak Leaflet 1

From a tiny acorn cont. from page 1

He knows every bird call heard from shoreline to deep forest, and knows the local ecology like the back of his hand.

On this particular January morning, as Sports Complex Manager Mike Creedon was pointing out the site for the new ice rink, Sirk's attention was captured by the unusual stand of Garry oak trees.

The stand was unusual because it was so far north. Sirk knew that these oak trees were rare in B.C., and that southeastern Vancouver Island was the northernmost range of these trees, but he had never seen this particular stand.

He thought to himself that this must be the most northernmost stand of Garry oak trees in Canada and immediately wondered what kind of shrub and wildflower mix there might be this far north.

Sirk knew that the Garry oak meadows provided habitat for camas, Nootka rose, chocolate lily and white fawn lily. He knew that the wetter stands, like this one, might have snowberry, oceanspray, and Oregon grape. This was a rare stand of Garry oak trees indeed.

"Any questions?" Mike Creedon asked the assembled politicians? "Uh, yes," said Sirk, "Where is the parking lot going?"

"Right there," said Creedon, pointing towards the oak grove, "where those trees are." Sirk swallowed silently and looked around. No one in the group seemed disturbed by the idea. "You're going to cut down those trees for the parking lot?" Sirk asked. "Yep," said Creedon. Sirk smiled and nodded. This was not the time or place to kick up a fuss, but underneath his breath he muttered to himself, "I don't think so."

Back inside the van with the other directors, Sirk mentioned casually that the trees were rare Garry oaks. His comment elicited some interest, so Sirk filled in the story with details of Garry oak history, explaining that Captain



GEORGE SIRK holds an acorn from the Garry oak grove in Courtenay. Sirk points out that, for this stand of trees to self-regenerate, they must be preserved intact.

Vancouver and James Douglas had both remarked on the beauty of the oak meadows when they first arrived in the region.

These oak ecosystems are considered the most endangered habitats in all of British Columbia, creating rare soil mixtures and attracting rare flora and fauna such as the checkerspot butterfly, western bluebird, and northern alligator lizards.

Sensing that he might have some support on the board, Sirk went to work doing some research, and contacting his naturalist colleagues.

He read the bylaws of Oak Bay and Esquimalt which protected Garry oak stands on private and public land. He spoke with Dr. Adolf Ceska, ecologist with the British Columbia Conservation Data Centre and confirmed that this stand was indeed the northernmost Garry oak meadow in its entire range of distribution.

Ceska visited the site and explained that this stand had somehow escaped notice by B.C. ecologists because it was apparently just under the two-acre minimum size for inclusion in the census.

Ceska noted that the stand was "close to critical size when it still can act as a plant community." He added that "the species composition of this stand is so unique that it is difficult to compare it with any other stand in British Columbia."

Rather than raise a public ruckus, Sirk decided to work quietly within the Regional Board. On February 6, he wrote a confidential memo to the board outlining the rare nature of the oak meadow, noting that this ecosystem contained some 70 trees 40-80 feet tall, numerous saplings, and one 400-year-old 'grandparent' tree well over 80 feet, with a circumference of 13 feet.

On February 24, Sirk presented a motion to the board to halt any removal of or disturbance to the trees until the environmental issues could be resolved. The motion failed.

In March, the Comox Valley Sports Commission conducted their own review by "contacting several certified arborists" and determined that "this type of deciduous tree ... is not considered at risk by any authorities and is not on an endangered or protected list."

Arborist Charles Moore reported that "there are two major trees" and that the stand is characterized by "crowded conditions ... abundant dead limbs, cavities in trunks, dead tops, and leaning trees."

Sports Commission Facility Planning and Projects Manager Blair Pettis recommended that "the arena project proceed as per the conceptual plan."

To make room for the parking lot, Pettis recommended clearing all trees within 20 feet of the north wall of the new complex, and clearing any tree deemed "necessary" for construction within 40 feet of the wall.

"Aside from missing the point that this is a completely unique ecosystem," says Sirk, "they were just plain wrong. Garry oak meadows are at risk in B.C. and they are protected in many areas. All natural ecosystems contain dead limbs, and there are 70 major trees, not two."

Still, without creating any public outcry, Sirk sent a confidential memo to the Comox Valley Sports Centre Commission pointing out the errors of their report, providing information from the Conservation Data Centre,

copying a 1993 letter from Regional Planner Beth Rees to the Transportation Planning Engineer suggesting that highway planning should take note of this rare oak ecosystem, and finally recommending that the oak grove "be set aside in perpetuity."

In April, Sports Centre Manager Michael Creedon responded by sending Sirk a copy of the original arborist's report about dead limbs.

The Garry Oak Meadow Preservation Society of B.C. intervened by scheduling a briefing with the District 71 School Board. On May 20, they presented their brief, including recent information from the Ministry of Environment botanist who had examined the site.

On that very day, as they pre-

sented their brief to the School Board, the sound of chainsaws cut the air in the oak meadow. Eight Garry oaks, all over 200 years old, were felled by the Sports Complex crew.

Sirk decided it was time to go public. He started talking to the local newspapers, and letter began pouring into the Regional District and to the Sports Centre Commission from concerned citizens, from the Garry Oak Meadow Preservation Society, and from biologists like Dr. Ceska.

The public outcry began to make it difficult to defend the parking lot plan at the expense of this unique ecosystem.

Sirk took the fight to the annual Union of B.C. Municipalities convention where he presented a motion to request that the B.C. government protect all the remaining Garry oaks in the province.

The motion passed, and Jenny Kwan,

Minister of Municipal Affairs and Housing, wrote to the Comox-Strathcona Board recommending that the preservation of the oak grove be "pursued as part of the Municipal Act."

On February 2, 1998, just over one year after Sirk first set eyes on the world's most northernmost grove of Garry oaks, the Comox-Strathcona Regional District wrote a new lease with the Comox Valley Sports Centre Board which contained this item:

"The Board and District agree to protect and maintain the remaining existing Garry oak trees within the lease area for the duration of the lease." The trees and their unique ecosystem were saved.

"About a quarter of the oak grove was destroyed before we settled this," laments Sirk, "and still, it isn't over.

From a tiny acorn cont. on page 4

GARAGE SALE DONATIONS WANTED

TLC The Land Conservancy of British Columbia will be holding a Giant Garage Sale on September 18 at Cedar Hill Junior Secondary School. We are seeking donations of books, records (yes, records), nature/recreational items, kitchenware, gardening items, white elephant misc., tools etc. plus baking for a bake table. Volunteers are needed as well. As the event will be outdoors, we also need to borrow some tarps. Please contact Katie Stewart at 386-4792 if you can donate or help out.

In a Nutshell continued from page 3

The terms are in the lease, but leases can be changed. I would like to get this oak habitat preserved in perpetuity by either the province or by the municipality. It's amazing how something like this can happen. It's not ill will, but just lack of knowledge.

"They looked at the trees and had no idea what they were looking at. This is why environmental education is so

important. Here we have the most northern stand of a rare tree, creating an absolutely unique ecosystem unlike anywhere else in the entire world, and we're about to trade that for a parking lot. It just gives me the shivers."

Sirk continues to lobby for the preservation of all the Garry oaks in B.C., and the struggle has changed him. "I can't just sit back and quietly look after the interests of Cortes Islanders

anymore," he explains. "I've been branded. I have enemies now. Whenever I speak up at the Board, I see the eyes of those who see me as a meddlesome environmentalist. Maybe that is why politicians are so reluctant to take a stand." Sirk laughs. "So it goes. It was worth it. Every time I go by that little oak forest I just smile to myself. The alligator lizards would vote for me."

George Sirk's resolution by Katie Stewart

In the previous article, Rex Wyler wrote that "Sirk took the fight to the Union of B.C. Municipalities convention where he presented a motion to request that the B.C. government protect all the remaining Garry oaks in the province."

The actual motion reads: "**WHEREAS** a conscious effort has been made to protect the most northerly grove of Garry oak trees in British Columbia;

"AND WHEREAS the Garry oak has a limited range in British Columbia and its population is in serious decline;

"THEREFORE BE IT RESOLVED that the Provincial Government be encouraged to declare Garry Oaks in B.C. its second protected tree after the Dogwood."

Someone from the Ministry of Environment responded to this by suggesting that the *Dogwood, Rhododendron and Trillium Act* is "old legislation and protection is limited" and "adding Garry oak would provide only weak protection. Tree cutting bylaws created under the Municipal Act can provide much stronger protection. Ultimately, the ecosystem should be protected in its entirety."

Mr. Sirk asked me to comment on the Ministry of Environment letter because he had to respond to it at the July 26 Regional District of Comox Strathcona board meeting. The letter also said that Garry oaks *per se* were not endangered but that the ecosystem was, with "about 250 hectares protected, which is less than 0.5 per cent of the original habitat."

I wrote to Mr. Sirk, "I gather the MoE does not consider Garry oaks endangered; however, I do wonder who wrote the response.

"Perhaps if you contacted the Conservation Data Centre, you might get a different response. In addition to the red- and blue-listed plant species, and in addition to the endangered status for Garry oak ecosystems, the CDC lists four plant communities as being red-listed: Garry oak/ Big-leaf Maple/Wild Cherry (*Quercus garryana/Acer macrophyllum/Prunus* sp.); Garry oak/Arbutus (*Quercus garryana/Arbutus menziesii*); Garry oak/brome (*Quercus garryana/Bromus carinatus*); and Garry oak/Oceanspray (*Quercus garryana/Holodiscus discolor*).

"Therefore, I cannot see how you can actually separate Garry oak as not being endangered from the species

combination."

I agree that the *Dogwood, Rhododendron and Trillium Act* is old (enacted 1948, amended 1958) and ineffective, with only a \$25 fine for cutting or destroying these species on private, municipal or crown land. This prohibition does not apply to "free miners, land surveyors, timber cruisers, foresters and lumbermen engaged in the lawful carrying-out of their respective occupations, or to persons engaged in the lawful carrying-out of public work."

However, I do think there is some advantage to having the Garry oak "protected" under this act. Many people know that the dogwood, rhododendron and trillium are "protected" even if they don't realize that it means virtually nothing.

So there is some psychological weight. Furthermore, judging by how slow the City of Victoria has been to enact its own tree preservation bylaw, it would provide on paper some measure of protection until municipalities pass tree preservation bylaw.

Municipalities can do a more effective job if they choose to enact a tree preservation bylaw and if they choose to enforce it. Legislation is still needed that will empower regional districts to do so as well.

Gypsy Moth Task Force Executive Summary

GOMPS directors Hal Gibbard and alternate Mike Meagher represented our society on the Gypsy Moth Task Force last fall. They were among over 30 people ranging from horticulturalists to opponents of aerial spraying.

In September 1998, the B.C. Ministry of Environment, Lands and Parks created the Gypsy Moth Task Force. The goal was to review and develop approaches to prevent the gypsy moth from establishing in B.C. and come to consensus on short, medium and long term strategies for accomplishing this goal.

The Task Force met three times in September and October and worked between the meetings to produce a report. It began its deliberations by reaffirming that the goal of eradicating the gypsy moth in B.C. is valid and appropriate.

The group then focused on how to accomplish this goal and came to consensus on ten key recommendations.

1. Lead Agency

The Task Force is not in a position to recommend who should be the lead agencies for eradicating gypsy moth in the long-term future.

However, it believes that role clarity and continuity are important to an effective eradication process, and that the process must be sufficiently resourced to get the job done. Therefore, we recommend that negotiations between the federal and provincial governments be expedited to achieve this certainty, clarity and resource commitment.

2. Replace Pesticide Permits with Pest Management Plans

The Task Force believes that the concept of a Pest Management Plan [PMP] offers more opportunity for an integrated approach to dealing with entries of the gypsy moth in B.C. than the current pesticide application permit system. A PMP offers alternative ways of

dealing with a pest under different circumstances. It also allows for the use of a number of strategies in an integrated fashion at the same time, instead of relying only on a pesticide based strategy.

Approval of a PMP would be at least as rigorous as approval of a pesticide application permit, and subject to Environmental Appeal Board [EAB] appeals in the same manner as permits.

Therefore, the Task Force recommends that multi-year, province-wide Gypsy Moth Eradication Plans [GMEPs], which are a specific form of a Pest Management Plan, replace the current pesticide application permit system.

The report includes what is referred to as a framework for a specific form of a PMP called a Gypsy Moth Eradication Plan [GMEP] for B.C. The transition from framework to complete GMEP requires an intermediate step called a template.

Therefore, it is recommended that the framework for a GMEP provided in the report be adopted, and that the lead agency proceed to fill in some of the technical information in the next few months.

The issues around where, when and how to use specific measures, and how to evaluate results of the GMEP, damage assessments and action levels, would all be left for the next step, which would be the creation of a complete GMEP in a province-wide public involvement strategy spearheaded by the lead agency.

3. Public Consultation Improvements.

Public consultation should occur during the development of each new GMEP and also occur much earlier in the process of applying the GMEP to specific new entries, that is, much earlier in the gypsy moth eradication process. This will allow significantly more room for people to become informed

and educated and allow more room for involvement of all community points of view in the prevention, detection, delimiting and eradication initiatives.

The Task Force recommends much more extensive public involvement processes than have occurred in the past. To ensure more comprehensive processes, the report includes some principles and a framework for a thorough public involvement process.

4. Establish Regional Advisory Committees

The lead agency should establish regional advisory committees to coordinate the public information campaigns and the public involvement processes surrounding gypsy moth eradication measures.

Such committees would be composed of members appointed by the lead agency from individuals nominated by all of the constituencies and points of view in the region.

The committees would act as an advisor to the lead agency in terms of the public involvement process accompanying the development of all new GMEPs and the local application of all existing GMEPs.

It should be clear that the advisory groups would advise and monitor; it would not be responsible for doing the work. The members of a regional advisory committee should be reimbursed for any reasonable expenses associated with their involvement on the committee.

5. Allocate Sufficient Resources to Implement a Public Involvement Process.

The lead agency, using the above noted advisory committee as a resource and a source of advice, would prepare and apply the GMEPs. A public involvement process would be budgeted for and implemented by the lead agency.

Task force cont. on page 6

6. Enhance Public Notice When The GMEP Application is Made

After the GMEP is developed, an application will be made by the lead agency to MELP to approve the GMEP. At that time there should be a thorough public notice process as a final check on the comprehensiveness of the public involvement process which accompanied the development of the GMEP.

This media-based notice should proactively solicit input from groups and individuals interested in or impacted by the issue.

7. Invest in More Research and Information Sharing

It is necessary to compile and format existing studies and baseline data in a manner that supports year to year comparisons and communication to the public.

Also, better systems of tracking impacts of eradication measures are needed. All this would require a commitment to invest in such applied research, tracking and data presentation.

These resources should be identified in the negotiation of roles and resources between the federal and provincial governments.

8. Improvement the Environmental Appeal Board Process

The appointment of EAB members should be free of any taint or bias. The panels should not be unduly bound by the strict rules of evidence and should consider relevant scientific expert opinion as well as reliable hearsay or opinion evidence from qualified experts.

The panel's decision should be in writing with supporting reasons indicating the issues to be decided, the findings of fact in relation to each of the issues, the evidence to be found of significance in relation to each of the issues and the weight accorded to evidence of particular witnesses.

The EAB should also be in a position to call independent, outside technical experts as witnesses when it feels it needs an unbiased opinion on a matter.

The existing provincial policy on participant funding in public process and regulatory activities should apply to the EAB process.

9. Reaffirm the Ultimate Power of the Cabinet to Intervene

The provincial government has the authority to either overrule an EAB decision, declare an emergency and step in to make its own decision on situations such as those involving eradication measures for the gypsy moth in B.C.

When the overall provincial interest comes in conflict with a local interest, the provincial government is the only political body that should make the final decision.

Before the provincial government declares an emergency situation, which suspends due public process in gypsy moth eradication measures, the Task Force recommends that it should communicate with the regional advisory committees and provide a clear rationale for its decision and the factors on which it is based.

10. Increased Emphasis on Prevention

The Task Force believes that more emphasis should be placed on preventing new entries of the gypsy moth to B.C.

One of the most cost-effective strategies would be the mandatory inspection and certification (as pest-free) of goods as people move their household goods to B.C.

The provincial or federal government should initiate discussions with the companies that comprise the industry and find a way to ensure that such inspections are made.

Other Recommendations

The Task Force also recommends that Terms of Reference for the B.C. Plant Protection Advisory Committee should be clarified, that a national exotic pest eradication fund is required, and that eradication program funding be kept separate from funding used to support any EAB appeal processes.

Consensus

The above changes recommended by the Task Force will not change the fact that people have differing views about the eradication measures for the gypsy moth in B.C.

However, we hope they will put the decision-making process on a firmer footing with all parties understanding of and more comfortable with a process that is transparent, fair and equitable.

We also hope that the process will ensure that all points of view will be considered and evaluated fairly at the appropriate time.

During its first meeting, the Task Force agreed to a definition of consensus which was essentially that "on balance, the report would be a significant improvement over what we have now, and not include anything we can't live with."

By that definition, the facilitator believes that the group reached consensus with this report. That is not to say that every member agrees with every part of the report. Indeed, some believe that it doesn't include some important points. However, almost all would agree that, on balance, it is a strong step in the right direction.

Alan Dolan, representing a group called Stop Overhead Spraying, announced at the final meeting of the Task Force, that he would not be associated with the final report.

He participated right to the end of the process and his contributions were appreciated. However, he announced plans to submit a minority report.

Garry oak conservation/recovery strategy group forms

During the closing minutes of the Garry Oak Meadow International Symposium, held May 5-9 at the University of Victoria, participants asked, "where do we go from here?" In the May/June issue of the *Garry Oak Leaflet*, we published Nancy Turner's article outlining some possibilities.

Richard Hebda, Joel Ussery and Marilyn Fuchs organized a strategy meeting on June 16 at the Royal BC Museum which GOMPS directors Tom Gillespie and Mike Meagher attended.

Thirty people attended, including some of the most knowledgeable people in academia, science, government and conservation groups. Twelve or thirteen people have formed a working group, which will meet again on August 4.

Concerns of attendees:

- Garry oak ecosystems are ecosystems of the future (global warming);
- need for focused strategy before all is gone; current efforts too piecemeal; this is overdue;
- have seen dramatic losses over the decades;
- municipalities lack direction, not allocating money for conservation efforts; are empowered to do more than they put into place;
- 15 associated species currently on COSEWIC list, potentially will be over 50, sensible to tackle ecosystem as a whole instead of species by species;
- need to focus on whole ecosystem, including all flora and fauna, and wider watershed;
- urban ecosystems need attention;
- need to get organized internally and externally; change the public will to change how things are done;
- need to change legislation;
- much frustration from failures of past efforts;
- need better management of oak eco-

systems (invasive species, cultural techniques), and need associated research;

- oaks are declining and being removed despite tree bylaws;
- protect our oak ecosystems before losses are like those in California;
- need to stop conifer encroachment;
- focused strategy can facilitate research and help improve understanding of how to protect oak ecosystems;
- want to share expertise (management planning, access to funding, municipal experience, experience in S. Okanagan, mapping, restoration, plant ecology).

Context information:

1. Dave Fraser, Endangered Species Specialist with the Ministry of Environment reported:

- 1996, when Bill C65 died, National Accord for Protection of Species at Risk signed by provinces and federal gov't, which included 8 promises, including the development of recovery plans.
- New federal endangered species legislation will contain provisions that federal authority will be able to override provincial authority with respect to endangered species if the provinces don't live up to protection standards in the Accord.
- Required content/format for recovery planning being finalized next week. Dave will let us know what is developed.
- World Wildlife Fund (WWF) has been allocated Millennium funds for ecosystem recovery planning. They are focussing on ecosystems with species listed by COSEWIC. Garry oak ecosystems have been designated a high priority. We would need to submit an application.
- Recovery planning for ecosystems as opposed to single species planning is a new approach. Tallgrass Prairie

Ecosystem Recovery plan is the best model to.

Some questions we need to grapple with:

- Will we work with Washington State?
- What to do about extirpated species? Do we want to consider reintroductions?
- Do we want to include species of open meadows?
- Should we take species by species or ecosystem focus (or both)? There are pros and cons to each.

2. Michael Dunn, Senior Habitat Conservation Coordinator, Canadian Wildlife Service reported:

Georgia Basin Ecosystem Initiative (GBEI);

- is a federal action plan, targeted to protection of a large ecosystem, within a broad context of having sustainable communities;
- 15 agencies comprise the Georgia Basin Ecosystem Conservation Partnership to raise and distribute funds for the GBEI, including NGO's and gov't agencies;
- they are developing a list of sites, including Garry oak sites, of high conservation value to target acquisitions; they are currently contributing to the Nature Conservancy of Canada acquisition of the Elkington property in Duncan;
- GBEI also has a private land stewardship initiative;
- GBEI will contribute \$5,000 to help start our Garry oak strategy/recovery planning. We need to figure out how to spend and how to administer this (and any other) money, perhaps through a charitable group such as the Garry Oak Meadow Protection Society.

Working group cont. on page 8

Working group cont. from page 7

Partners in Flight program

- “virtual” organization involving Canada, US and Mexico;
- looking at joint strategies for protection of songbirds at risk; many are associated with oak ecosystems;
- they have a granting system; applicants must first put in a pre-proposal; funding available is up to US \$ 20,000 per proposal on a 2:1 basis;
- funds are targeted to restoration.

3. Karen Hurley, Environmental Manager for Saanich reported:

\$5000 (matching funds) has been allocated in Saanich for restoration of areas in their Environmentally Significant Areas Atlas; the bulk of the effort will go to Garry oak restoration.

The minutes from this meeting include another four pages concerning “how to we get to a plan” and are too long to include here.

The working group consists of Suzanne Caskanette, Victoria Natural History Society Greenways Inventory Committee; Brenda Costanzo, Asst. Curator, UVic Herbarium; Michael Dunn (as above); Wayne Erickson, ecologist; Dave Fraser (as above); Marilyn Fuchs, ecological consultant; Tom Gillespie; possibly Andrew Harcombe, BC Conservation Data Centre, Ministry of Environment; Richard Hebda; Gordon Ingram, landscape ecologist; Mike Meagher; John Olafson, Director, Native Plant Society of BC, Friends of Government House Garry Oak Woodland Working Group and Joel Ussery, CRD Parks Planner. For more information contact Marilyn Fuchs 385-6400.

Volunteers needed

Garry oak inventory coordinator Paul Gareau was hoping to complete the inventory this fall, but cannot unless more people volunteer to count oaks. Please call him at 592-9089 if you can help.

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

PRESERVATION/RESTORATION COMMITTEE

OPERATION CLEAN SWEEP (broom removal). Call Eric Redekop at 595-7270 for information.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you’d like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President	Pierre d'Estrubé	477-2410
Vice-President	Hal Gibbard	477-2986
Treasurer	Tom Gillespie	361-1694
	e-mail	garryoak@netscape.net
Secretary	Sharron Waite	479-3380
	email	garryoak@yahoo.com
Director	Michael Meagher	727-7675
	email	mmeagher@pfc.forestry.ca
Director	Linda Grimm	995-0001
	email	grimm@camosun.bc.ca
Director	Katie Stewart	386-4792
	e-mail	camassia@bc.sympatico.ca

MEMBERSHIPS AND DONATIONS

NAME _____

ADDRESS _____

MEMBERSHIP DUES:

Donation

Individual \$15 Family \$20

Please send more information about:

Youth and Associate \$6 (no newsletter)

Local sources for Garry oak meadow plants

Gift memberships, send receipt to:

Garry Oak Inventory Project

Operation Clean Sweep (broom removal)

Growing, planting Garry oaks



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

September/October 1999, Vol 6, No 5

Gardening under the oaks

By Pat Johnston

On our property are three big Garry oaks. We're on the corner of Roseberry and Kings Road in the Oaklands area, which is aptly named, given the grand, old oaks in the neighbourhood.

However, as in many areas of Victoria, there are few young oaks to replace these majestic trees - except at our

place. I invite you to come by and see if you can count the large number of oaks that have seeded themselves since the inception of the Native Plant Demonstration Garden in 1996.

My interest in native plants goes back a long way. Peering out the car window to identify plants alongside of the road is a lifetime habit, as is walking

through the woods at a snail's pace, eyes glued to the forest floor, scanning the flora and fauna.

It was only natural that I would be attracted to Victoria Horticultural Society's Native Plant Study Group (NPSG), which I joined in 1995. Not

Demonstration continued on page 2



SAVED! Thanks to a \$200,000 from Shell Canada, the Nature Conservancy of Canada was able to complete the purchase of the Elkington Garry oak preserve at the end of June. Local efforts raised \$150,000. The 100-year-old former owner, Gerald Elkington, will continue to live on the property. The Nature Conservancy is seeking additional money for restoration work to rid the property of Scotch broom and other invasive plants.

Photo by Margaret Lidka

long after joining, I decided to turn the front oak-tree-rocky outcrop into a native garden, envisioning that because of the layout of the property, it would make an excellent demonstration garden.

In 1996 I began to build the garden. The work was slow and hard, and in my efforts to get help, succeeded in acquiring labour from the West Coast Ecological Youth Alliance through their "Lawns to Meadows" program.

During the summers of 1997 and 1998 crews of young people came regularly to help me remove non-native plants, move rocks, dig new beds and plant natives. We had a lot of fun and the assistance was invaluable.

It was the summer of 1998 when a few of us from the Native Plant Study Group started visiting each other's native gardens, and during one of these gatherings we decided to work together to make the Native Plant Demonstration Garden become a reality.

Since September of 1998, seven of us (Linda Beare, Jean Forrest, Lynda Grant, Ruth Keogh, John Olafson, Pat Sinclair and myself, Pat Johnston) have been meeting two hours each week to develop the garden.

With the help of Carrina Maslovat of Woodland Native Plant Nursery, we spent the first sessions designing the garden, and since then have been doing a number of activities, including:

- Exposing rocky outcrop covered with grass and soil, and in the process discovering a set of old stone stairs (probably built in the early 1900s) buried beneath sand;
- Removing mounds of periwinkle and mulching with thick layers of newspaper and oak leaves in preparation for planting a thicket of native shrubs, some of which are: snowberry (*Symporicarpos albus*), Indian-plum (*Oemleria cerasiformis*), oceanspray (*Holodiscus discolor*), Nootka rose (*Rosa nutkana*), red-osier dogwood (*Cornus stolonifera*), mock-orange



NATIVE PLANT DEMONSTRATION GARDEN creators (left to right): Jean Forrest, Linda Beare, Pat Johnston, John Olafson and Jean Keogh (missing: Pam Sinclair).

(*Philadelphus lewisii*), thimbleberry (*Rubus parviflorus*), evergreen huckleberry (*Vaccinium ovatum*) and Oregon-grape (*Mahonia aquifolium*);

- Redirecting the waterline to the street and a water drainpipe underground;
- Building a stone pathway for public access;
- Weeding! Weeding! Weeding! Including removing hundreds (probably thousands!) of bluebells;
- Planting rescued, purchased and donated plants (as well as those won at NPSG meetings);
- Erecting a wooden sign signifying the garden as a Native Plant Garden, and providing a written handout about the garden to people who pass by;
- Rescuing native plants from construction sites (I planted over 600 rescued camas bulbs this spring!)

Our most recent challenge is creating a Garry oak meadow on the site. Research and field trips are helping us gather the information we need to build the meadow. Besides including camas (*Camassia quamash* and *C. leichtlinii*), Menzies' larkspur (*Delphinium menziesii*), western buttercup (*Ranunculus occidentalis*), shooting stars (*Dodecatheon hendersonii*), and fawn lilies (*Erythronium oregonum*) as some of the wildflowers in our meadow, we also want to plant native grasses of the Garry oak habitat. Any tips on creating meadows, and native grasses, are welcome.

Of course, not all is work, as we have a lot of fun, particularly as we sit around the kitchen table munching muffins, drinking tea and talking mainly about native plants and the Garry oak ecosystem.

I think, in fact, the main reason for working on the project together is comradeship. We learn a lot together, and from each other. Lynda Grant, the "Master Weeder", has taught me much about the act of weeding, and Jean and Ruth have yet to enlighten me on the tricks of building stone pathways.

And, we also do it for the love of native plants and the Garry oaks! We are concerned about the demise of the Garry oak ecosystem, and want to help create a healthy urban environment.

Native plants in our gardens will help us achieve this, first by eliminating the use of pesticides and fertilizers, and secondly, by decreasing the use of wa-

ter normally required for non-native plants and lawns.

Also, birds, butterflies, mammals and reptiles love native plants and are encouraged to nest and feed in our neighbourhoods, bringing nature closer to our doorsteps.

Besides rewarding the senses and lifting the mind, native plants produce seeds, teas, bouquets, medicines and berries for pies, jams and wines. The joys of a native plant garden are many!

We encourage you to initiate a project to develop a native plant demonstration garden project in your neighbourhood.

Just think how demonstration gardens in our neighbourhoods would benefit the Garry oaks, promote natural areas for wildlife, as well as educate others about the value and beauty of native plants.

An example of the effectiveness of our Native Plant Demonstration Garden occurred at the summer Victoria Flower and Garden Show when volunteering in their native plant demonstration garden.

When I asked a couple, who were touring the garden, if they were planning to grow native plants in their garden, their response was that "they had been watching their neighbour on the corner of Kings and Roseberry develop her native plant garden" and were now interested in native plants for their garden! So, you see, our actions do have an impact.

Now there will be two people in this neighbourhood with native plants under their oaks!

Editor's note:

Pat asked the GOMPS board in September for financial support (and received it) for the following idea:

"We are going to 'blow up' a city lot map (the same map as was used for the Garry oak survey), mainly of the Oaklands area, laminate it and then attach it to a board which will be erected on the corner of Kings and Roseberry.

We will then invite the people passing by to mark the number of Garry oak trees they have on their property.

"As Kings Road is a popular road for the neighbourhood to walk their dogs, run, skateboard, cycle and drive this is a good spot for a sign of this nature. We will also invite people to make any comments they have about the Garry oak trees (positive or negative) in the margins of the map.

"Information about the Garry oak

ecosystem will be available for people to take home with them. We think people will be inspired to respond, and will be forced to think about whether they have Garry oaks on their property, how many there are, and perhaps even have to ask the question, "What is a Garry oak anyway?"!

"It would be wonderful if, after people have made their marks on the map, they then go home and prod their neighbour to do the same! It's an experiment! We'll see what happens!"

Good reference books for helping you get started on your own native plant garden

Gardening with Native Plants of the Pacific Northwest, an Illustrated Guide, by Arthur R. Kruckeberg, University of Washington Press, 1982 (revised and enlarged 1996)

Grow Wild! Native Plant Gardening in Canada and Northern United States, by Lorraine Johnson, Random House of Canada, 1998

Native Plants in the Coastal Garden: A Guide for Gardeners in British Columbia and the Pacific Northwest, by April Pettinger, Whitecap Books, 1996

100 Easy-to-Grow Native Plants for Canadian Gardens by Lorraine Johnson, Random House, 1999

Propagation of Pacific Northwest Native Plants, by Robin Rose, Caryn Cachukski and Diane Hause, Oregon State University Press, 1998

Other books of interest

Attracting Backyard Wildlife: A Guide for Nature Lovers, by Bill Merilees, Voyageur Press, 1989

Butterfly Gardening: Creating Summer Magic in Your Garden by Xerces Society/ Smithsonian Institution, Sierra Club Books, 1990

Noah's Garden: Restoring the Ecology of our Own Back Yards by Sara Stein, Houghton Mifflin Co., 1993

Redesigning the American Lawn: A Search For Environmental Harmony, by F. Herbert Bormann, Diana Balmori and Gordon T. Geballe, Yale University Press (1993)

Requiem for a Lawnmower and Other Essays on Easy Gardening with Native Plants by Sally Wasowski, Taylor Publishing Co., 1992

Wildflower Gardens, edit. Colstan Burrell, Brooklyn Botanic Gardens, 1999

Other publications

Hortus West, the Native Plant Source Directory, published twice a year, lists native plant growers and their plant lists plus interesting articles. Subscriptions: 1-800-704-7927

Naturescape British Columbia: Caring for Wildlife Habitat at Home (3 booklets: Native Plant and Animal Booklet, Georgia Basin; Resource Booklet, Georgia Basin and Provincial Guide), 1995

99 Garry Oaks on the Island . . . Take One Down . . .

by Sharron Waite

The Matson Land . . . Remember the Matson Land fight in Esquimalt just before the last municipal elections? The Salvation Army wanted to build an 11-story concrete box on the last undeveloped piece of waterfront in the harbour, front and centre to greet Coho, Clipper, and cruise ship passengers to Victorian Victoria.

The developers won; they got the rezoning they were asking for, but thanks to market conditions, we didn't get stuck with their vision — or lack thereof.

Now developers are back, this time with a somewhat scaled back five- [or seven, if you count two floors of parking] story glass box, along with another condominium on the street [Dunsmuir] level, Craftsman-style townhouses on the upper level, and glass-clad townhouses on the waterfront. Total, 151 new residences, on less than 2 hectares of land.

Fortunately, because the current zoning is so specific, the merits of the plan will be debated at a public hearing into rezoning in front of Esquimalt Council. As a result of the last go-round, the public got the walkway [you know the one, from downtown past the Songhees to West Bay Marina] at the waterfront deeded to Esquimalt, and a covenant on Garry oaks on the west side of the property.

The current plan proposes a further covenant on a small oak grove on the southeastern tip of the property where it juts into the harbour. In place of an extension of the street down the hill to make a turnaround, a trail is proposed to the water's edge.

The developer has yet to submit his plan to Esquimalt, although it was expected before Thanksgiving. To neighbors mourning the loss of greenspace and views that the site now provides, he stated he was willing to sell all or a portion of the site for parkland. Fund-raising campaign anyone?

If you want to see what is about to be lost, look on Dunsmuir near Head, or walk east from West Bay Marina on the walkway. Although there is the usual broom 'n' bramble grown up under the trees, neighbors report carpets of camas and Easter lily bloom in the spring [tra-la].

98 Garry Oaks on the Island . . . Take One Down . . .

1141 Reynolds Road . . . A two-lot subdivision has received conditional approval from the Saanich Municipal Planner. Although one of the conditions is submission of a tree preservation plan, with siting of the dwelling to minimize damage to trees, a glance at the plan makes it clear that several substantial specimens will be lost. The zoning is RS-6, or approximately 6000 square feet. Big houses on small lots don't leave much room for trees.

97 Garry Oaks on the Island . . . Take One Down . . .

1151 Reynolds Road . . . On a large panhandle lot that abuts 1141, this proposed four-lot strata subdivision will decimate a grove of oaks. According to the developer's survey, 1151 and 1141 between them have 90 oaks, the majority of which are on the larger of the two existing lots.

The developer reportedly has refused to discuss any of the neighbourhood's concerns with his proposal. It should be noted that three of the four proposed lots are larger than is required under RS-6 zoning; nevertheless, construction will inevitably result in massive tree loss.

It is heartbreaking to see whole groves of oaks and associated understory destroyed when there are so few left. To see for yourself, look across the street from the Reynolds Secondary playing fields.

96 Garry Oaks on the Island . . . Take One Down . . .

Braefoot Area Planning Study . . .

The good folk who live in the Braefoot area north of Mackenzie are demanding their right to subdivide their land for maximum profit — too bad for the trees, farms, or wildlife.

Saanich decided to plan the area as a whole, and the resulting Braefoot Area Planning Study report says "The area is significant because it is a transition area between the rural Blenkinsop Valley and the more urban area of Gordon Head. It also supports important environmental features such as Garry Oak parklands and wildlife habitat."

Current zoning is two hectare minimum. As the area in question is inside the Urban Containment Boundary, it is probably impossible to hold the line on that zoning. "Approximately 45 - 55 percent of the area has mature Garry oak canopy. . . . Study area stands out as a Garry oak corridor in excellent condition. Forest along Mount Douglas Cross Road connects with the forest corridor leading to Mount Douglas Park."

The report examines planning options of varying overall density, and recommends a combination of two that would provide maximum environmental protection while allowing some development.

If adopted, it would support an additional 10 urban density [RS-8, about 8000 square feet] lots, five suburban density [RS-14, or 2020 square metres], and three lower suburban density [RS-15, or 3000 square metres].

Council has sent the report to Public Hearing. Property owners in the area who want to develop to urban densities reportedly are not happy. Those who would subdivide and damn the environment will no doubt be forceful in opposition. Those of us who like a little environment with our built landscapes need to make our views known to Saanich Council.

The Clerk has tentatively set November 2nd as the date of the Public Hear-

ing. If you care about our vanishing natural landscape, get a copy of the report [from Saanich Planning], study it, and make your views known to Council either at the Hearing or by letter beforehand.

95 Garry Oaks on the Island . . . Take One Down . . .

Hutchison Land — Development of this area of Christmas Hill is beginning with an extension of Martin Street into the western portion of the site and construction of single family housing on standard lots.

Meanwhile the clock continues to tick on the five-year reservation of four lots for purchase for conservation.

GOMPS directors try to monitor development activity in the area and bring a conservation perspective to bear on proposals that impact on oak habitat. When we are only one amid the multitude of submissions, our impact is diminished, our voice lost in the tumult. To be effective in the political process we need active support from others in the form of letters or presentations to municipal politicians and staff.

The effects of the proposals reviewed in this article will alter the landscape of the neighborhood and the region forever. Your help is especially needed with them. If you have difficulty putting your thoughts and feelings into words, the secretary would be glad to help you draft a letter that says what you want to say, and prepare it for submission.

Sharron Waite can be reached at 479-3380 or by e-mail at garryoak@yahoo.com.

Retreat Island conservation covenant signed

In the fall of 1996 GOMPS received "a general designation to hold a conservation covenant to protect, preserve and restore both Garry oak stands and their natural habitats on southeastern Vancouver Island and the Gulf Islands" from the Ministry of Environment (see *Garry Oak Leaflet*, November 1996).

The following year, Jillian and Robin Ridington, GOMPS members who own 7-acre Retreat Island off Galiano Island, asked the GOMPS board if GOMPS would co-hold a conservation covenant on part of the island along with the Trust Fund Board of Islands Trust.

The board made the decision to do so and following a long process, the covenant was finally signed this summer after a lawyer reviewed it for our board.

The Ridingtons will now donate the 4-acre covenanted parcel to the Galiano Conservancy Association.

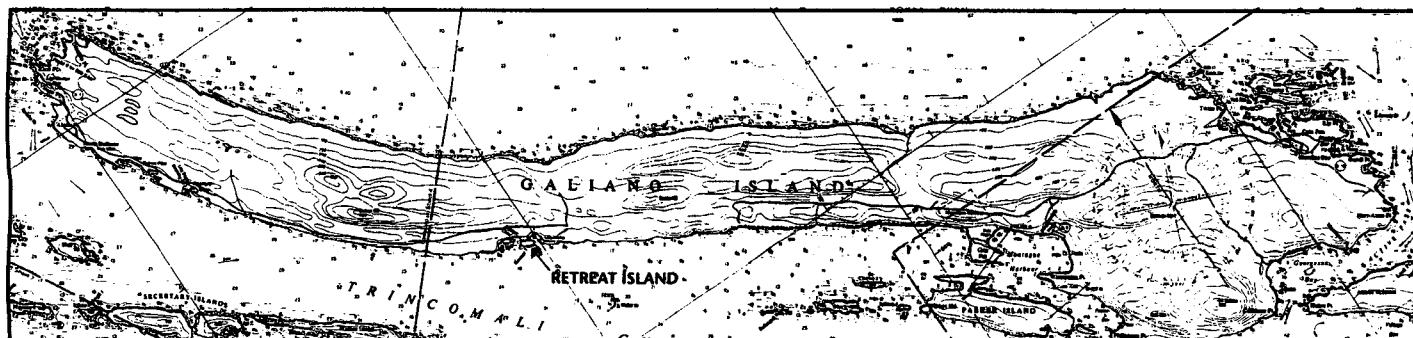
According to the baseline documentation report, "the land represents a significant island micro-environment within the Georgia Strait area. Amenities on the land include a healthy young Garry oak/arbutus meadow environment, a climax community of mature island-adapted Douglas-fir, significant eagle perch trees, an eagle's nest, dead standing trees providing woodpecker habitat, weathered sandstone shoreline features and abundant small mammal and reptile denning areas."

The Ridingtons bought the island in 1992. Its history includes goat grazing and mink raising in the 1920s and 30s but no systematic logging.

Since their purchase, the Ridingtons have been removing Scotch broom. What little remains is virtually inaccessible. The conservation covenant allows the owners to continue removing invasive plants and to put up a sign indicating the covenanted area is a protected nature reserve. They can also provide access for studies. There are a number of things not permitted, such as using pesticides and herbicides, listed in the covenant.

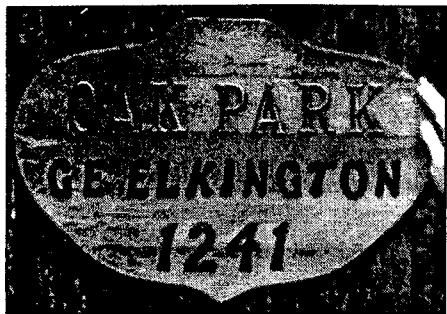
The covenant will be attached to the land title. In the event of non-compliance by the current or future owners, a mechanism called a rent charge is included in the agreement. Basically this amounts to a fine up to \$10,000 for each violation. This amount is adjusted annually according to the Consumers Price Index Statistics Canada establishes.

If GOMPS (and/or the Trust Fund Board) dissolves, the society can assign its rights and responsibilities to another organization such as TLC The Land Conservancy of B.C. which is also empowered to hold conservation covenants. This is spelled out in detail in the conservation covenant. If GOMPS were not to assign its interests, they would go automatically to TLC.



IN A NUTSHELL

by Katie Stewart



We're thrilled, of course, that the Elkington property has been bought and protected. Congratulations to Barb Stone, Cowichan Community Land Trust and the Nature Conservancy of Canada for their determined hard work and for this terrific achievement.



This *Garry Oak Leaflet* is somewhat late due to a rather hectic summer, a crashed computer, and a daughter moving out. My "office" is in total disarray since she took her computer desk with her. Files, papers and books are piled up everywhere. I need a desk and work table. By the end of October, I'll

have things in order, I hope.



The Land Conservancy of B.C.'s Giant Garage Sale held September 18 at Cedar Hill Jr. Secondary School was a success — and a lot of hard work! The net result was \$6100 towards TLC. Several GOMPS members donated household goods.

Nine GOMPS members, seven of whom are also TLC members, were involved, including myself. A special thanks to Linda Grimm, Karen Uldall-Ekman, Linda Beare, John Olafson, Pat Johnston, Tom Gillespie, Sharron Wood and Mike Meagher.

We were part of over 50 people who helped out by setting up on September 17th and/or working the day of the sale itself. Hope I didn't miss anyone, but I can't find the volunteer list at the moment. It's amazing what a group of people can do. Now, if we could use that same energy and make some real

money ...



On November 4 at 9 p.m., Knowledge Network will be showing a documentary on difficulties the Georgia Basin is facing. One segment will be on Garry oak habitat.

In early August I was interviewed and filmed on South Winchelsea Island, which The Land Conservancy has bought and for which it is still fundraising. I hope I got my plant names right! Funding for the filming did not come through until past the spring wildflower season, so the island's beauty could not be shown at its peak.



The Garry Oak Ecosystems Recovery Team held another meeting September 22. GOMPS directors Tom Gillespie and Mike Meagher were among 14 people in attendance.

Meetings are every third Wednesday of the month from 9:30-noon in the Royal British Columbia Museum's boardroom and anyone interested is welcome to attend.

GOERT is submitting a funding application to the World Wildlife Fund for \$20,000 to hire someone to write a recovery plan. WWF has encouraged this application. The Canadian Wildlife Service has committed \$5,000 and GOMPS will contribute \$1,000. Because of GOMPS' charitable status, it will also administer the funds if the proposal is accepted.

Other notes from the minutes:

One hundred and two species in the Garry oak ecosystem are included as critically imperilled, imperilled and vulnerable in the Conservation Data Centre's rare vascular plant tracking list. The federal government lists only



LINDA GRIMM prepares for the onslaught of shoppers early on the morning of September 18 at The Land Conservancy of British Columbia's Giant Garage Sale.

Photo by Karen Uldall-Ekman

12 species through COSEWIC (Committee on the Status of Endangered Wildlife in Canada) but since each species requires a prepared paper which must also be peer reviewed it takes a long time for additions to the list.

A bibliography is being compiled.

A subcommittee will look at first nations treaty negotiations, which conceivably could undermine protection efforts.

Brenda Beckwith has completed one-square metre burns at Mill Hill, Witty's Lagoon and Devonian parks.



Another email from a GOMPS member informs me that development plans are underway for a "large property immediately north of Spencer Rd, where the Payless station is, on both sides of the Trans Canada Highway in Langford. It is part of a development proposal being put to Council by the owners. The development is so far unspecified. The land extends somewhat northwest of Savory Road. The new walking bridge across the south end of Florence Lake is the east boundary.

"There are some Garry oaks on the property, near the Payless station, and up the slope from Savory Rd.

"There is much development ongoing and planned in this area and although Langford requires quite detailed environmental surveys, it remains to be seen how much land will actually be protected."



The United States Forest Services' Olympia Forestry Sciences Laboratory is looking for volunteers for its Oregon White Oak/Garry Oak Production Survey.

From the survey form, they want to determine how common are good and bad years for acorn production; if acorn production is related to certain criteria and how much variation there is from place to place in acorn crops.

This information will help them "interpret the way oaks respond to their environment and provide information important to understanding many kinds of wildlife that use acorns for food."

The survey includes questions on tree diameter, acorn visibility, crown contact, ground disturbance, ground vegetation, mistletoe, health, setting and water availability, that the forestry service thinks amateurs could gather and has other questions requiring skills and equipment for which help will be needed such as tree heights, crown width, elevation, aspect, slope, years since last fire and soil series or type.

For those of you on the internet, the survey is located on the lab's web site (www.fs.fed.us/pnw/olympia/silv/oak). Otherwise, contact David Peter, Olympia Forestry Sciences Laboratory, 3625 93rd Av. SW, Olympia, WA 98512-9193, phone 360-753-7654.



Friends of Summit Park will be holding a broom bash on Sunday, November 14, 10 a.m.-1 p.m. in Summit Park. Meet at the swings and bring gloves, loppers, clippers, tarps. Rain or shine.



The October 7-14 issue of *The Georgia Straight* has a comprehensive and well-written article by Victoria writer Ben Parfitt called Aliens in the Forest which is of interest to those of us concerned about Garry oak ecosystems.

He writes, "This is a story about ventures into the wilderness. It is a story that will shift between two different places, one the urban sprawl of Greater Victoria, home to one of the most endangered ecosystems in North America, the other a remote archipelago whose rugged, windswept shoreline exerts a powerful pull on our collective imagination.

"Separated by the length of Vancouver Island and the waters of Queen

Charlotte Sound, Victoria and Reef Island are so far removed from each other and so physically different that it is hard to imagine them sharing things in common. But they do.

"Both are overrun by invasive, introduced animals and plants that have utterly transformed the pre-European landscape.

"The same is true for just about every other corner of Earth, a world that American author David Quammen called the Planet of Weeds in a thought-provoking essay last year in *Harper's* magazine.

"Writer of the acclaimed *Song of the Dodo*, Quammen argues in *Harper's* that next to outright destruction of habitat and the fragmentation of wild landscapes into small, isolated patches, invasive species are perhaps the greatest threat to the world's complex and diverse web of life."

On Reef Island and almost everywhere else on the Queen Charlottes, Sitka black-tailed deer which were introduced in 1911 have created havoc with no predators to keep them at bay. Other introduced mammals include Rocky Mountain elk, raccoons, red squirrels, muskrats, rats, and house mice. All impinge heavily on the native flora, which is also the food source for native fauna.

Parfitt says the "cumulative effect" of extensive browsing has created "an open park-like forest, vastly different from what predominated 60 years ago."

The story and the effects of introduced plant species is our locale is familiar to us all. Parfitt interviewed Briony Penn, Brenda Beckwith, John Olafson and Linda Beare for this part of the story and writes about the ongoing restoration in the Government House oak woodlands.

While all the hard work of broom and ivy removal has resulted in regrowth of native plants, non-native grasses still prevent these plants from flourishing.

Parfitt emphasizes that there are no easy solutions to such restoration.

Winter moth management

By City of Victoria, Engineering & Parks

Trunk band your trees now to avoid winter moth problems in the spring! For trees such as Garry oak, fruit trees and other (particularly those in the Rosaceae family) that have had a previous problem with winter moth, this is an excellent time of year to practise a management technique and avoid the use of a pesticide.

Winter moths are the smooth green caterpillars that hang down on threads later in the spring and summer after eating blossoms, leaves and destroying fruit set.

By banding with a sticky adhesive around the trunk of the tree in the fall, you can trap the flightless females that walk up the tree to lay eggs in branches and avoid the formation of the hungry caterpillar stage.

How to place your trunk band?

Male and female winter moth adults emerge from their pupal cases in the soil beneath the tree after the first cold frost in October. Place your trunk band on the tree at about chest height.

Using a plastic cling wrap, tightly wrap the trunk of the tree three times in the same spot. keeping the plastic tight and smooth.

Seal the top and the bottom of the plastic wrap to the tree with adhesive tape (electrician's tape works well).

On top of the plastic wrap place a sticky adhesive such as "Tangle Foot" in a 15 cm (6 inch) width width around the tree. After the moths have emerged in January, the traps can be removed.

For further information on winter moth or a demonstration of trunk banding call the IPM Coordinator at 361-0621.

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

PRESERVATION/RESTORATION COMMITTEE

OPERATION CLEAN SWEEP (broom removal). Call Eric Redekop at 595-7270 for information.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you'd like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President	Pierre d'Estrubé	477-2410
Vice-President	Hal Gibbard	477-2986
Treasurer	Tom Gillespie	361-1694
Secretary	e-mail garryoak@netscape.net	
Sharron Waite	479-3380	
email garryoak@yahoo.com		
Director	Michael Meagher	727-7675
	email mmeagher@pfc.forestry.ca	
Director	Linda Grimm	995-0001
	email grimm@camosun.bc.ca	
Director and editor <i>Garry Oak Leaflet</i>	Katie Stewart	386-4792
	e-mail camassia@bc.sympatico.ca	

MEMBERSHIPS AND DONATIONS

NAME _____

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MEMBERSHIP DUES:

Donation

Individual \$15 Family \$20

Please send more information about:

Youth and Associate \$6 (no newsletter)

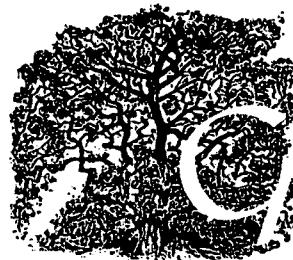
Local sources for Garry oak meadow plants

Gift memberships, send receipt to:

Garry Oak Inventory Project

Operation Clean Sweep (broom removal)

Growing, planting Garry oaks



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

November/December 1999, Vol 6, No 6

Scotch broom — and now gray squirrels

by Pierre d'Estrubé

What could be more fascinating than those cute little squirrels with their mercurial movements and agility, leaping in a flash from tree top to tree? Having the largest size brain-to-body ratio of small mammals, these intelligent critters are indeed a miracle of nature.

Not all squirrels, however, are born equal, as far as our oak meadows are concerned. Unfortunately, available information varies in reliability from scientific to anecdotal; this is what I've

gleaned so far.

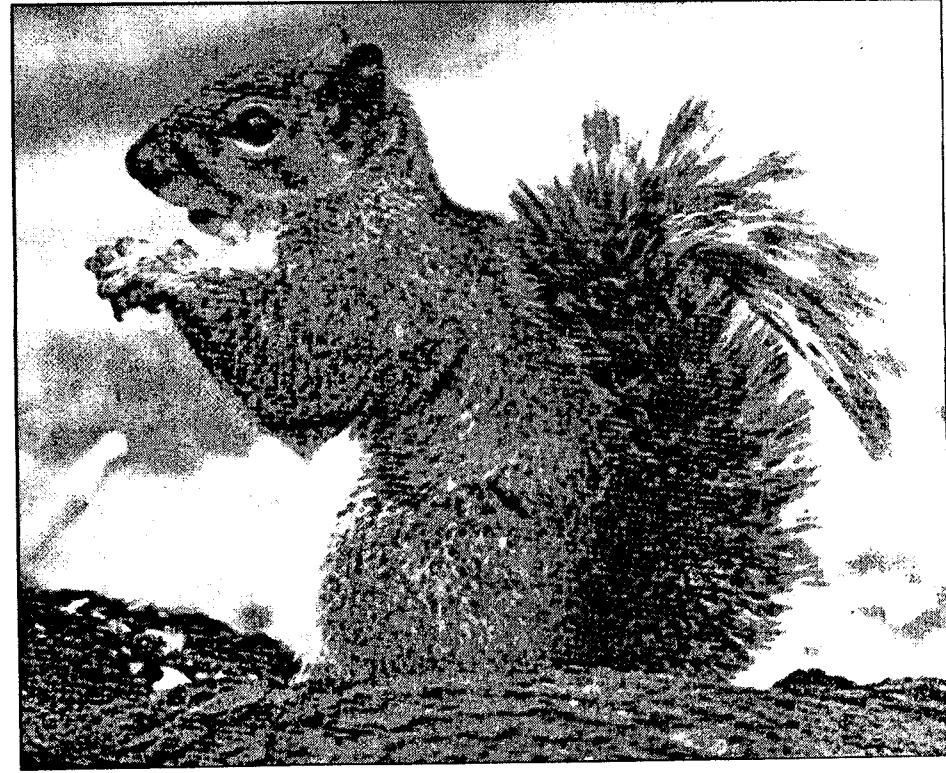
Our own Vancouver Island indigenous ("aboriginal") red squirrel (*Tamiasciurus hudsonicus*) is reported to have inhabited Lower Vancouver Island but urbanization drove them out of Victoria and that up to a decade ago, the occasional one was spotted in Saanich.

It is believed that as primarily conifer dwellers, they also favoured the border areas blending into oak meadows, presumably reaping from the best of two worlds, cones and acorns. It has

been assumed that while they carry away acorns and bury them for storage, they cache more than they retrieve, aiding the regeneration of oaklings.

While our red squirrel is eco-compatible, a recently introduced species, the Eastern gray squirrel (*Sciurus carolensis*) is not. Thanks to human ignorance and carelessness, they are descendants of escapees from a bird and small mammal park, a privately owned enclosure in Metchosin called "Orioles".

Continued on page 2



RED SQUIRREL (*Tamiasciurus hudsonicus*) (left). Photo from *The Living World of Animals*, 1970, published by The Reader's Digest Association. **WESTERN GRAY SQUIRREL** (*Sciurus carolensis*) (right). Photo from *Plants and Animals of the Pacific Northwest* by Eugene N. Kozloff, 1976.

Continued from page 1

Apparently in 1966, school children, encouraged by the owner to visit the site, allowed some to escape. Multiplying rapidly, the gray squirrels are spreading at an alarming rate, migrating northward. Authorities suspect some spotted much farther north have been deliberately brought in as household pets!

By contrast to the red squirrels, the gray are larger, brazen, aggressive, with even carnivorous tendencies, such as raiding birds' nests for eggs and fledglings. In the garden, they are given to nipping (flagging) the tender growing tips of tree branches and other endearing habits such as digging up bulbs, stripping the nut trees of the nuts, "torpedoing" through the soil in garden beds (reason not known — de-lousing or de-mitting?)

Adapting to the urban scene, they chew through soffits to build their nests in attics, between walls or chimneys, generating litters of two to six, sometimes twice a year.

There is much to be learned about these creatures. Unfortunately, recent efforts seeking funding for research on their ecological impact have not succeeded. (A second attempt with a proposal is currently before the Habitat Conservation Trust Fund.)

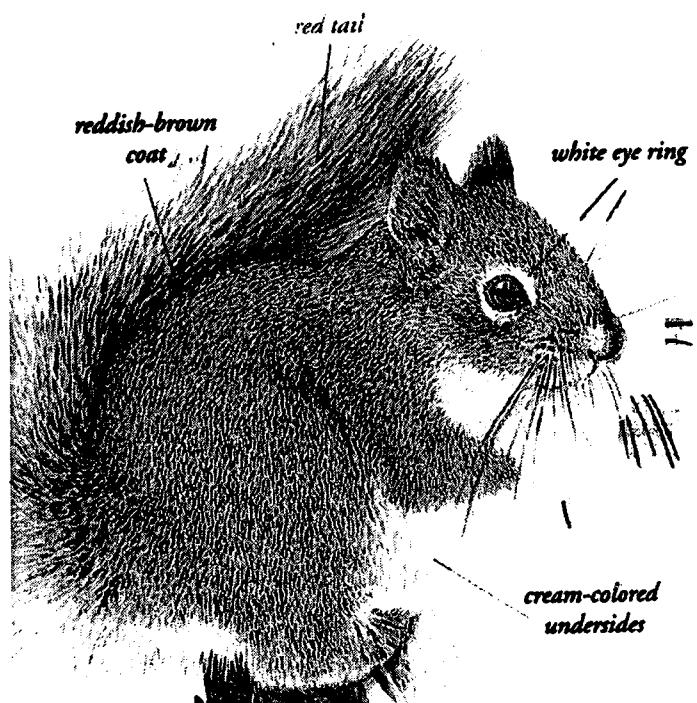
Meanwhile, their numbers are growing out of control as they have few natural predators, and humans tend to promote them by feeding or sheltering them. We need to be aware that their introduction into England has been ecologically disastrous.

How to eradicate gray squirrels humanely is a problem. The S.P.C.A.'s mandate is animal preservation and rehabilitation, therefore they cannot get involved, knowing better than to release them elsewhere!

So far as I know, no public agency has taken up the challenge, leaving the problem pretty well up to us. As a standard first step, one can try to "educate the public," and this, my contribution, is the point of this article!

Next, we can do everything to discourage their propagation by not feeding or sheltering them. As for help in disposing of them, you may turn to Pest Controllers in the yellow pages. Two names and numbers recommended to me were: Shawn Dolman, 389-6217 and Bruce Parker, 213-5424. For further information, contact 477-2410.

Pictures and descriptions from Lone Pine Field Guide: *Squirrels of the West*, by Tamara Hartson, published 1999. Drawings by Gary Ross.



Red Squirrel

Description: reddish-brown coat and creamy undersides, separated by black side stripe; red tail; white eye ring.
Size: length 11 - 15 in. (28-38 cm); weight 5 - 8-7/8 oz. (140-250 g)



Eastern Gray Squirrel

Description: medium-sized squirrel; mainly gray upperparts; pale gray undersides; bushy, flattened tail; backs of ears are light coloured; reddish-brown tail and belly is common in northern areas; black forms are common.
Size: length 17-20 in. (43-51 cm); weight 14-25 oz. (400-710 g).

IN A NUTSHELL

By Katie Stewart

I was recently given a native seed catalogue from a Vancouver Island company which I was planning to use to update GOMPS' plant/seed source list. The list includes the botanical name as well as common name, location where seeds were gathered, amount available and prices.

Of particular interest to me is that *Balsamorhiza deltoidea* (deltoid balsamroot) seeds are offered. Two of three seed collections were from Mount Tzuhalem, presumably in the ecological reserve, and the third is from the Campbell River area.

This plant is quite spectacular and I would really like to try to grow it and plant it in my native plant garden. However, it is a red-listed species in the Conservation Data Centre's tracking list of endangered and vulnerable plants. In *Rare Native Vascular Plants of British Columbia*, by George W. Douglas, Gerald B. Straley and Del V. Meidinger, published by the Ministry of Environment in 1998, it is described as rare on Vancouver Island and rated G5 S2, which means common to very common globally — it grows on the mainland south to California — but imperilled in British Columbia because of "rarity (typically 6-20 extant occurrences or few remaining individuals) or because of some factor(s) making it vulnerable to extirpation or extinction."

In the book's Appendix 1, ranking, site numbers and general locations of rare taxa are listed in a chart. Before 1950, deltoid balsamroot was known from 13 site. Since 1949, that has been reduced to 11 — at locations in the Campbell River, Duncan and Lillooet Forest Districts.

So for me there is an ethical concern. If the seeds had been collected from plants that were transplanted or about to be lost because of a development or highway widening, I would readily buy them. Otherwise, I don't agree with someone collecting seeds from this endangered plant, especially from an ecological reserve!

One could argue that by collecting seeds, the company is trying to encourage the survival of this species, i.e. "successful" growers (and that may not be a sure thing) might be able to keep this plant alive, though not in its original locations. I think it is better to allow the plant to regenerate in its natural setting and not diminish the seed bank, putting further stress on the plant's survival.

It is possible that the collector did not realize that you cannot collect seed from an ecological reserve without a written permit.

The other listed seeds collected from Mount Tzuhalem

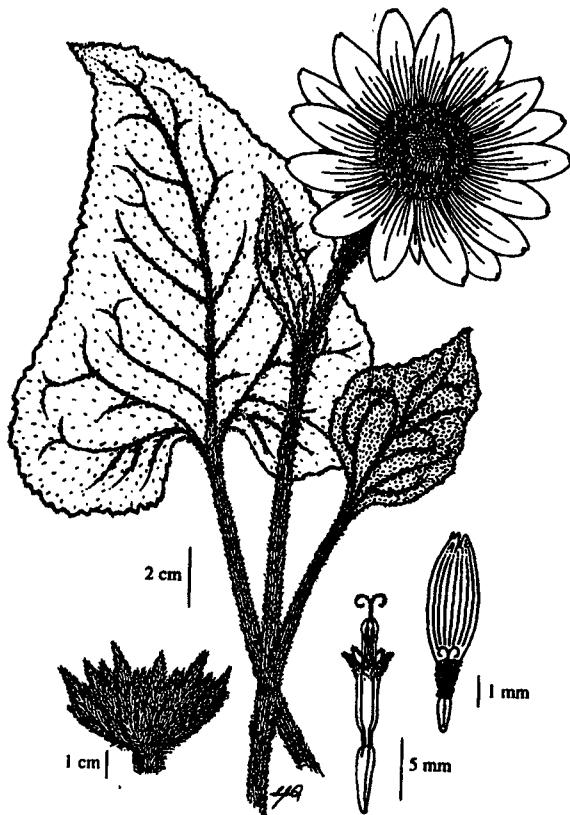


Illustration of deltoid balsamroot (*Balsamorhiza deltoidea*) from *Rare Native Vascular Plants of British Columbia*

are: *Delphinium menziesii* (Menzies' larkspur), *Dodecatheon hendersonii* (broad-leaved shooting star), *Erythronium oregonum* (fawn lily), *Fritillaria lanceolata* (chocolate lily - 2 lots), *Lomatium utriculatum* (spring-gold - 2 lots) and *Zygadenus venenosus* (death camas).

The North American Native Plant Society (formerly the Canadian Wildflower Society) periodically publishes its Gardener's Guidelines, which were reprinted in our December 1996 Leaflet. They suggest collecting no more than 10 per cent of a seed crop from the wild.

I have been regularly walking with Karen Uldall-Ekman, a fellow GOMPS member and told her my concern. She emailed me this regarding people paying attention to where the native plant seeds they purchase come from "... so that people will start to question 'the source' of native seeds and, perhaps, start questioning anyone seen collecting seeds in a park or reserve.

"If we just approach the collectors and rap their knuckles it will probably just drive them underground re: the real

seed sources. We need to alert the general public to start asking questions and to take responsibility for ethical buying --- and this should start at grass roots level spearheaded by local native plant societies.

"Not all people will be ethical buyers, but at least the red flag will be up and they can't say they didn't know. Perhaps then seed sellers will start collecting, and advertising, their seed sources from 'ethical' places as an inducement for 'ethical' buyers....

"There are not a lot of ethics in the gardening groups. Perhaps it's about time they caught up with the times... I now wince at gardeners' use of peat moss after watching a documentary on the disappearance of peat bogs due to peat 'farming' — a non-renewable resource!

"Also, I remember the Washington couple [who collect and sell native plant seed] saying they had a really big order from some Seattle architect, so this info. needs to go beyond gardeners to landscaping businesses, designers, architects, gov't. highway landscapers, etc ... they are potentially the really big buyers of this product.

"This is a good time to alert groups as spring seedpods are only a few months away.

"Perhaps we need to form an Ethical Growers' Society. I wonder if one exists."

Any thoughts, other GOMPS members? Please write or email.



Bea Robson and volunteers have begun a **Garry oak inventory on Galiano Island**, similar to what GOMPS has been doing in Victoria. They hope to get as accurate a count as possible so results can be used for comparison in another survey a few decades from now.

Retreat Island has already been inventoried. Bea hopes other Gulf Islands will follow Galiano's lead. For more information contact 250-539-2498.



Saanich has published its *Environmentally Significant Areas Atlas* this year. I saw a copy of it at the Healthy Saanich workshop on October 30. Part of it pertains to Saanich's watercourses, riparian areas and adjacent land use.

Another section (not complete) comprises a rare plant inventory table listing location, whether the plant has been field checked, ecosystem type, substrate, land use, estimated site area, photos and samples if available, red and blue-listed species and communities and other trees, shrubs, herbaceous species and invasive species. Of interest are the air photos with dots showing the location of these plants and areas of native vegetation.

The introduction states: "The need for the atlas arose from requests for detailed information on municipal and private sector development projects. It is the hope of the producers and financial supporters of this project that people will use the the information in the atlas to make sound decisions about development projects..."

"Good design takes the natural environment into consideration and results in a better place for people at the same time. One of the first steps in environmental protection is knowing where important features are. Understanding where environmentally significant areas exist in Saanich will enable us to develop strategies to protect these spaces."

The inventory will expand to include data on wildlife habitat, wildlife trees, marine areas, vegetation and urban forest.

Funding for the atlas was provided by Saanich, the province, Fisheries and Oceans Canada and the Real Estate Foundation.



I was driving around town a few days ago listening to **Mark Forsythe's** show on CBC. His guest was **Brian Minter**, who gives advice to people phoning questions. Typically his solutions involve using chemicals. The call that caught my attention was from a man in Victoria who was concerned because there was moss growing on his two large Garry oaks and wondered if the moss were damaging the oaks.

Now, I'm no expert but I wished I had had a cell phone as I listened to Mr. Minter stumble through his answer, instead of saying he didn't know. He couldn't really say and finally Mr. Forsythe said, "If it isn't broke, why fix it."

There are many species of mosses and lichens associated with the Garry oak ecosystem. In the *Garry Oak Meadow Colloquium Proceedings*, published in 1993, **Michael Ryan** prepared an article on bryophytes and lichens and included 12 common mosses and 23 lichen species and several rare species. He wrote that not enough research has been done and that possibly some species were already eliminated due to the extent that Garry oak habitat has been altered.

One rare moss species, *Syntrichia* (formerly *Tortula*) *laevipila* is found in a single location in the Queen Charlottes, and otherwise only on Garry oaks (source: 1996 Ministry of Forests working paper, *Bryophytes of British Columbia: Rare Species and Priorities for Inventory*.)



A note from the **GOMPS Board**: GOMPS members are not to represent GOMPS unless they have been authorized to do so by the Board.

Update from the Garry Oak Ecosystems Recovery Team (GOERT), October 1999

By Marilyn Fuchs

Back to the beginning...

This initiative grew out of the International Garry Oak Meadow Symposium held in May 1999 at the University of Victoria. Two resolutions were passed unanimously at that symposium:

1. The Garry oak meadow ecosystem deserves to be recognized as a nationally endangered ecosystem, as significant as the Carolinian Forest of Ontario, the native prairie grassland, and the shrub-steppe of the South Okanagan; and

2. We should develop and implement a Garry oak meadow recovery plan to provide direction for protecting, sustaining, and restoring Garry oak meadows.

Following up on the second resolution, a community meeting was held on 16 June 1999. Twenty nine people came to the meeting, representing all levels of government, a number of post-secondary institutions, many non-profit organizations, the consulting sector, and private individuals.

At that meeting, we brainstormed about what needs to be done to develop a recovery plan. We tossed around ideas about who should be involved, what the organizational structure should look like, what kind of information should be gathered, and some essential components of a recovery plan.

We also shared information about government programs and potential funding sources for our work. Michael Dunn from the Canadian Wildlife Service helped to kickstart our efforts when he announced a \$5,000 contribution from the Georgia Basin Ecosystem Initiative.

Finally, we called for volunteers for a working group to carry the initiative forward. The original list has grown by a few; the entire list is included at the end of this email.

Since then, the working group has met monthly. Here's a summary of some of our activities:

1. A name! We are calling ourselves the Garry Oak Ecosystems Recovery Team (GOERT).

2. We will be setting up a library to be housed at the library of the Royal BC Museum. The collection will cover all aspects of Garry oak ecosystems and other oak and prairie ecosystems, including flora, fauna, ecosystem processes, aboriginal land management, restoration theory and practice, conservation efforts, maps, municipal regulations, etc. etc. Details of collecting, cataloging, and access are being worked out. We will keep you posted.

3. We have established a funding committee. This committee will be submitting an application to the World Wildlife Fund. WWF is allocating Millennium funds for recovery planning for ecosystems with species listed by COSEWIC, the Committee on the Status of Endangered Wildlife in Canada. (So far, 12 species associated with Garry oak ecosystems have been listed; more than 100 species could potentially be listed upon consideration by COSEWIC). The Garry Oak Meadow Preservation Society (GOMPS) has agreed to administer our financial affairs.

4. We are applying for official recovery team status from RENEW (the federal Committee on the Recovery of Nationally Endangered Wildlife). If approved, this would be an important step; to date, no ecosystem-level recovery team has received such official recognition. In addition, RENEW status would affirm the national significance of Garry oak ecosystems.

5. We are sending letters to David Anderson and other local politicians emphasizing the BC and Canadian significance of Garry oak ecosystems and requesting support for our initiative. Briefing notes will also be sent to senior government officials by the appropriate GOERT members.

6. We are attempting to expand our network by contacting First Nations and non-profit groups throughout the BC range of Garry oak ecosystems.

We will keep you informed as our activities progress. We will also let you know how you can participate. If you are interested in helping out with any of the activities described in this or subsequent news bulletins, please get in touch at foxtree@islandnet.com. Ultimately, the success of our work will depend upon the active partnership of a broad base of individuals, organizations, and governments committed to the recovery of Garry oak ecosystems.

The Garry Oak Ecosystems Recovery Team:

Suzanne Caskenette, Greenways Inventory Committee of the Victoria Natural History Society; Brenda Costanzo, Native Plant Society of BC and University of Victoria Herbarium; Michael Dunn, Canadian Wildlife Service; Wayne Erickson, Ecologist; Dave Fraser, Wildlife Branch, BC Ministry of Environment Lands and Parks; Marilyn Fuchs, Foxtree Ecological Consulting; Tom Gillespie, Garry Oak Meadow Preservation Society; Andrew Harcombe, BC Conservation Data Centre; Richard Hebda, Royal BC Museum; Gordon Brent Ingram, Landscape ecologist and planner; Patricia Johnston, Career and employment counsellor; Andrew MacDougall, Botany Department, University of British Columbia; Mike Meagher, Garry Oak Meadow Preservation Society; John Olafson, Native Plant Society of BC and Victoria Natural History Society; Fran Spencer, Restoration of Natural Systems Program at the University of Victoria; Joel Ussery, Capital Regional District Parks.

Support your local lily

PhD candidate Brenda Beckwith has been doing research on the cultural management of camas by aboriginal peoples. This summer she made a trip to Idaho where it had been abundant historically. She brought back this article by Bill London, published in 1985. Unfortunately, the name of the publication is unknown.

During May or June, if you visit Lieuallen Almon Asbury Park (by the watertower on the crest of the hill in north-western Moscow), look over the north side of the cultivated land snug against the border of the trailer park. That square of brilliant blue is not a carpet. It's part of Ross Watson's camas garden — some of the more than one million flowering wild lilies he has planted.

As can be surmised from his calm and deliberate air, Dr. Watson is a retired professor, a plant pathologist from the University of Idaho. He is not growing a blue-flowering camas for food as Indians have done throughout the Pacific Northwest for millennia.

His one-third acre garden in Moscow is a "gene bank," a living repository for those wild bulbs planted from seeds carefully gathered from their native habitat and nurtured to maturity, to be transplanted back to repopulate areas decimated by planting and paving.

"These small plants could help alleviate hunger around the world," Watson states, holding several of the teardrop-shaped, one-inch diameter bulbs in one palm.

"Third World farmers can grow camas in marginal soil that can grow little else." Camas are very hardy, and can withstand extremes of growing conditions — from deserts to subarctic zones. The leaves and flower stalks are excellent food for cattle or deer. And the bulbs are nutritious and delicious!

Watson is not alone in his admiration of camas. Another

plant researcher who recognized its virtues was the famous American horticulturalist, Luther Burbank.

For more than 20 years, he grew, crossed, and compared five camas species. Burbank aimed to develop both the beauty of the flower and the size and palatability of the bulb.

Under his direction, the flowers grew larger and the colours increased from the native blue to deep purple and almost white. By crossing several camas species, he increased the size of the edible bulbs' dimensions from the size of an English walnut to that of a large turnip.

In the 12-volume compendium of his life's work, Burbank noted that the camas possessed "qualities of flower-bearing of a high order, combined with the capacity to produce roots of such quality of edibility as to suggest competition with our best tuber bearers, including the potato itself."

Unfortunately, his experiments remained uncompleted at his death and very few have continued his work with the versatile plant.

One of those is Ross Watson. In 1977, Watson and several other retired professors formed the Mariposa Foundation for Conservation, a non-profit corporation based in Moscow which is primarily dedicated to the preservation and revival of two of North America's most important native plants — the camas and its cousin, the

segolily.

The 57 species of segolily and half-dozen species of camas were once widespread; now, because of grazing and cultivation, their numbers have dwindled, their range has become restricted to isolated pockets, and some strains are lost forever.

Watson has been duplicating some of Luther Burbank's



hybridization experiments. Of the half dozen camas species, most have small edible bulbs. The common camas (its scientific name is *Camassia quamash*), that was originally found in profusion through the Pacific Northwest, has a delicious walnut-sized bulb: starchy, nutritious and potato-like in flavour. Another species with a larger bulb, *Camassia cusickii*, grows naturally to several times the size of *C. quamash*. Unfortunately, the bulb is foul-smelling and inedible.

What Burbank began, and Watson is continuing, is a hybridization process wherein the best qualities of both would be combined, resulting in a large edible bulb.

The camas bulb has a long history of use as human food in North America. Trappers and homesteaders were taught by the Indians to dig and eat the bulbs of camas and sego lilies.

Nez Perce, Palouse, Walla Walla and other tribes relied on camas bulbs for carbohydrates. Battles over camas areas occurred when the Nez Perce left their reservation for their traditional camas gathering.

The conflict with settlers who wanted the Indians to stay on their reservation provided the impetus for the long and bloody Chief Joseph War. For many native people, the camas was "the dietary equivalent of all of our grains, breads and potatoes," Watson explains.

The camas bulb was generally gathered and stored because it retains its flavour and freshness for at least six

months. The bulbs were then usually baked or cooked slowly in stews. The long, slow cooking improved the texture and changed the complex carbohydrates of the bulb to sugars, resulting in a yam-like flavour.

The bulbs were also eaten raw or dried or were powdered, added to pemmican or other food, or boiled to a molasses syrup.

Those interested in identifying or gathering camas or sego lilies in the wild should be aware of a similar looking but poisonous plant known as the "death camas," member of the genus *Zygadenus*.

The death camas is widespread throughout temperate North America. Its flowers are white or off-white and less showy than those of the true camas, which are always bluish in colour. The *Zygadenus* plant is smaller, its bulb has a papery onion-like skin, and it has no smell.

Watson and many others believe that camas bulbs should never be taken from wild areas. "We should all try to increase, not deplete, natural stands," he explains. "So if you want to grow camas, you should start with seeds or bulbs from commercial nurseries."

Perhaps, as prophesized by both Burbank and Watson, the camas will someday be cultivated worldwide — prized by gardeners as edible landscaping and by farmers as a valuable crop for marginal ground. And if so, one of the reasons will be the work of a retired professor from Moscow, brushing dirt off the grisly little bulbs in his garden.

Camas on the Internet

by Katie Stewart

I tried searching for Mariposa Foundation for Conservation and Dr. Ross Watson on the Internet. No luck. I found quite a few sites documenting historical aboriginal camas harvesting, cooking and trading practices; a number of sites with superb photography taken by a teacher who uses them to quiz his students and to record wildflowers as they bloom along the Columbia Gorge and one looking for people to collect seed for a reclamation project.

Archeologist Tony Farque has a site explaining the Camas Prairie Restoration Project near Sweet Home, Oregon involving the Grande Ronde and Siletz Nations, the local community college and the Bureau of Land Management.

There's also Camas Winery in Moscow, Idaho, with an appropriate label. This company has several sites. Brenda Beckwith convinced the owners to give her a label when she visited the winery.

The libraries of Idaho picked camas as their symbol. Their web site says, "Camas is a wildflower found as far north as

southern British Columbia and as far south as California. It is found in the coastal regions of the West stretching inland to Alberta in the north, through Montana, and as far south as Wyoming and Utah.

Background Information:

The camas lily was chosen as the symbol for the Libraries Linking Idaho (LiLI) project for two reasons:

1. the acronym "LiLI" is pronounced the same as the flower

1. the camas lily grows wild throughout the state of Idaho

As evidence of its abundance in our state, Camas is a well-used place name in Idaho. There are at least five different streams named Camas Creek, not to mention a Camas Slough. Grasslands are known as Camas Prairie in at least three places, Camas Meadows in two other and there's a Camas Flats, too. Idaho is also home to Camas Butte, Camas County and Camas National Wildlife Refuge. On the Little Camas Prairie, Little Camas Dam backs up Little Camas

Continued on page 8

Continued from page 7

Creek to form Little Camas Reservoir.

The round bulbs of the camas have long constituted a staple food for Indians of the northwestern states. Lab analysis of the bulb has shown it is rich in protein and also a good source of fiber, calcium, phosphorus and iron. (1)

The camas fields were tribal property and were jealously guarded against the trespasses of rival clans. The Nez Perce War under the leadership of Chief Joseph was in part a protest against the destruction of these fields.(2)

Early Pacific explorers have recorded how the camas saved them from extreme hunger or from starvation. Members of the Lewis & Clark Expedition were fed camas roots first at Weippe, Idaho. This is recorded in Gass's Journal of the Lewis and Clark expedition as follows:

"The provisions which we got consisted of roots which they call cams, and which resemble onions in shape, but are of a sweet taste. This bread is manufactured by steaming, pounding, and baking the roots on a kiln they have for the purpose." (2)

Preparation of the camas for eating was very involved. The young bulbs of the plants were commonly harvested in mid-July through September. The men harvested the bulbs; the women prepared them for eating. In a pit, flat stones were heated, then covered with a layer of grass, the camas bulbs, then another layer of grass, then a covering of dirt. A fire was kept going over the pit to cook the bulbs for up to three days. The camas could then be eaten or preserved by drying." (1)

(1) Scrimsher, Leda Scott. *Native Foods Used by the Nez Perce Indians of Idaho*. Master's thesis. Home Economics, University of Idaho, 1967.

(2) Elsensohn, M. Alfreda, Sister. *A Flora of the Camas Prairie Region in the Vicinity of Cottonwood, Idaho*, Designed for the Use of High School Students. Master's Thesis. Education, University of Idaho, 1939.

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations.

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you'd like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President	Pierre d'Estrubé	477-2410
Vice-President	Hal Gibbard	477-2986
Treasurer	Tom Gillespie	361-1694
	e-mail garryoak@netscape.net	
Secretary	Sharron Waite	479-3380
	email garryoak@yahoo.com	
Director	Michael Meagher	727-7675
	email mmeagher@pfc.forestry.ca	
Director	Linda Grimm	995-0001
	email grimm@camosun.bc.ca	
Director and editor <i>Garry Oak Leaflet</i>	Katie Stewart	386-4792
	e-mail camassia@bc.sympatico.ca	

MEMBERSHIPS AND DONATIONS

NAME _____

ADDRESS _____

MEMBERSHIP DUES: Donation

Individual \$15 Family \$20 Please send more information about:
 Youth and Associate \$6 (no newsletter) Local sources for Garry oak meadow plants
 Gift memberships, send receipt to: Garry Oak Inventory Project

 Operation Clean Sweep (broom removal)
 Growing, planting Garry oaks



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society JANUARY/FEBRUARY 2000, Vol. 7, No. 1

Victoria finally gets a tree protection bylaw

by Katie Stewart

The final council meeting of the previous Victoria City Council was held November 25, 1999. And one of its final items was the tree protection bylaw, which councillors approved.

It had been a long time coming — at least six years.

Victoria now becomes the seventh municipality in the Capital Regional

District with a tree preservation bylaw and the sixth to specifically protect Garry oaks, among other species.

Although similar to several of the other tree preservation bylaws, Victoria is unusual in its protection of smaller Garry oaks and Pacific dogwoods, called "tree seedlings". A seedling is defined as "any young, in-

dependent living, erect woody plant that is greater than .5 m (~20") and less than 5 m in height located on private property." As in other municipalities, the bylaw applies outside the building envelope.

GOMPS was among several advisors to a sub-committee of the Advisory

Tree bylaw cont. on page 2



CHARACTER GARRY OAK in Hornby Island's Thousand Oaks Grove. Photo by Katie Stewart

Tree bylaw cont. from page 1

Parks and Shoreline Development Committee, chaired by Andrew Laks, which produced a report on a Tree Protection Program.

GOMPS suggested that the tree preservation bylaw protect smaller trees instead of the prevalent 5 m (16.5 ft.) in other bylaws because we were concerned about both the lack of regeneration of Garry oaks and the lack of protection for young seedlings.

The committee had hoped that the city would set up a "tree conservation fund so the people will be able to apply for assistance to preserve special trees".

□

At our last GOMPS board meeting, Saanich Parks manager Dave De Shane and Coordinator of Horticultural Service Ron Carter attended to respond to the board's proposal to ask Saanich to amend its tree protection bylaw to include smaller oak seedlings, as Victoria has just done.

Although they were sympathetic, the answer was no. Dave De Shane thought relying on natural area covenants was the way to go and that enforcing the current bylaw was difficult enough. He also thought public education was the other route.

Our viewpoint was that having smaller seedlings protected also served as public education, because people might then realize that the Garry oaks were not reproducing in sufficient numbers. Our concern was future generations and what the urban forest would be like a hundred years from now.

□

In my "Tree Preservation Bylaws" file, I have an newspaper clipping dating to February 1993 which mentions then-Victoria councillor Alistair Craighead speaking at the symposium on Garry oak meadows, which resulted in our published Proceedings. He was quoted as suggesting Victoria needed

a tree preservation bylaw but that public education was needed so people would understand the need for such a bylaw.

1993 was also the year owner-developer Jack Barbon was fined \$10,000 for cutting down 20 protected trees in a 2-1/2-ha subdivision on Cordova Bay Ridge in Saanich.

□

"Cut Down" is defined in several tree preservation bylaws as "to cut down, kill or remove a tree by any means and includes the topping of a tree and the removal of any branch or trunk of a tree having a diameter of more than 10 centimetres (3.9 inches.)"

□

The Capital Regional District does not have any bylaws pertaining to tree cutting or preservation. Property owners in areas such as Sooke can freely cut down the trees on their land.

An employee at the CRD office on Yates Street told me such an initiative would have to come from the CRD Board, who are either elected representatives of an electoral area or municipal councillors. Considering the hodge podge of current tree preservation bylaws and the fact that a number of municipalities still don't have one, a CRD bylaw is highly unlikely.

The woman said all the municipalities have their own ideas of how things should be run. She also said it was a miracle that we ever got the universal 911 emergency system. In any case, if the CRD were to pass a tree preservation bylaw, it would only apply to electoral areas and not supersede municipal bylaws, she said.

□

The City of Vancouver passed a very comprehensive tree preservation bylaw which was amended in 1996 and 1997. The bylaw requires a permit for cutting trees with a trunk greater than 10 cm. However, there was such an uproar protesting this, council amended

the bylaw to allow one tree of that size to be cut without a permit each calendar year, which defeats the intent of the bylaw.

Replacement trees, including selected natives, have to be planted and are chosen from several lists which are appendices in the bylaw.

Maximum fine is \$20,000 and the minimum \$500 per offense or two months in jail.

□

In 1996, at the time of the Vancouver debate, several articles were published in the *Vancouver Sun* concerning this controversy. Religion and ethics columnist Douglas Todd wrote a column published August 31, 1996, headlined "The tree debate is about far more than esthetics."

It touched on immigrants whose cultures don't value trees, feng shui ("a system of geomancy which says, for example, an improperly placed tree could bring bad luck"), private property rights and the value of trees to a community.

Mr. Todd interviewed UBC Director of the School of Regional and Urban Planning Bill Reese, who says "private property rights are anything but inalienable in Canada.

"Private property is a gift from society. In the West, it's a social contract and as such can be negotiated." The state, he says, has every right to intervene in private property and, where necessary, compensate landowners.

"The tree debate is about protecting a sense of place, community tradition and shared values, Reese says. It's also about how trees, by producing oxygen (not to mention reducing noise and offering shade) are beneficial to everyone's health."

Mr. Todd summarized some of Mr. Reese, Simon Fraser University professor Steven Duguid and UBC planning

professor Nichael Seeligs' ideas:

- ◆ Designating and protecting 'heritage' trees like we preserve heritage buildings;
- ◆ Requiring people who move into an existing neighbourhood to adhere to its customs towards trees;
- ◆ Instituting ward systems so each neighbourhood has a direct voice on council and can efficiently determine its unique approach to trees;
- ◆ Polling neighbourhood residents to see which trees on private property they want saved;
- ◆ Getting residents of a neighbourhood to pay into a fund that would subsidize property owners who are not allowed to cut their trees.

"(This plan has far-reaching international applications. Since a tropical forest is worth far more economically to the world if it's left standing — because of the contribution it makes to global oxygen supplies and climate stability — Rees suggests setting up an international tax through which wealthy northern countries could pay to preserve tropical forests.)"



What powers does the *Municipal Act* give municipalities regarding tree protection?

The *Municipal Act* allows municipalities to regulate the protection of trees, including significant trees; their cutting and removal, including hazardous trees and shrubs; removal or replacement of trees at owner's expense; assessment and inspection of trees and specifies what exceptions there are such as modification of protection to allow a property to be built to its zoned density.

Alternately, in the latter example, a municipality could compensate an owner if that provision is included in its tree preservation bylaw.

A bylaw can prohibit the cutting and removal of trees; regulate the cutting

and removal of trees; prohibit the damaging of trees; regulate activities that may damage trees; require the replacement of trees; require the maintenance of replacement trees; require specified amounts of security for replacement of trees; specify circumstances in which assessments or inspections of trees or sites may be undertaken by the municipality and establish exemptions.

A bylaw can also differ in different areas of a municipality, for example Saanich with its rural and urban containment boundary distinctions, and different species, classes, sizes and significant trees.

Significant trees are those considered important to the community for heritage or landmark value or wildlife habitat.



The City of Vancouver has established a tree trust to encourage the planting and conservation of trees. Four pilot programs have been developed:

- ◆ "Right Tree, Right Place" booklet. BC Hydro donated \$10,000 towards

the production of a booklet on selecting, planting and caring for trees suited for Vancouver's climate and lot sizes which will be sold to the public;

- ◆ Tree Vouchers: residents can purchase low-cost trees. A previous tree voucher program provided 3000 trees over two years for planting on private property;
- ◆ Tree Stewardship: to provide funds for the retention of significant trees, the relocation of trees on and off development sites;
- ◆ Tree Walks: informative and interesting walking tours of notably treed Vancouver neighbourhoods, focusing on the contribution of trees to the health of the city;
- ◆ Partnership Opportunities: Gold Leaf (Annual contribution \$10,000+); Silver Leaf (\$5,000+); Bronze Leaf (other contributions).

(HTTP:WWW.CITYVANCOUVER.BC.CA/COMMSVCS/PLANNING/TREEBYLAW/TREEBYL.HTM)

Christmas Hill update

by Katie Stewart

GOMPS members may recall that in the summer of 1997 the board set up a **Hawk Home Fund** for the purpose of buying land on Christmas Hill. Several generous members contributed money and since that time the money has been sitting in its own account waiting for the day fundraising would begin in earnest. We hope that time will be soon.

GOMPS has never been a fund-raising organization in the business of buying land. That is not our expertise. Instead TLC The Land Conservancy of British Columbia, which has become the leading land trust in the province, will be taking on that role.

Some time ago, Saanich had agreed to buy Lots 75 and 74, which lie between Rogers School and the portion

of Rogers Farm that the Rogers Farm is donating to Saanich in partnership with TLC. Now TLC Vice-president Vic Derman will negotiate with Saanich to partner with TLC for lots 63-64. If Saanich is co-operative and TLC successful in its fundraising campaign, the wooded portion of Rogers Farm will make a good buffer for the sanctuary.

I spent a considerable amount of time this summer preparing a prospectus for TLC on Christmas Hill. It was very interesting research.

BACKGROUND

In the 1960s, Saanich began preparing a submission to the provincial government for funding through its Greenbelt Protection Fund Act, which

C. Hill Continued on page 6

Municipality	Year	Tree Preservation Bylaw	Other Significant/ Heritage	Size	Permit required for cutting	Restricted activities listed					
Central Saanich											
Colwood											
Esquimalt	✓	1992	✓	✓	✓	✓					
					Trees with trunk diameters = or > 12"	> 5 m (16.3') in height and 10 cm (3.9") or in diameter					
Highlands	✓	1994	✓	✓	✓ Diam. > 60 cm (24")	✓	✓	Pacific Yew (<i>Taxus brevifolia</i>), Cascara (<i>Rhamnus Purshiana</i>), Manzanita (<i>Arctostaphylos columbiana</i>); any tree with trunk diameter > 80 cm (31.5")	> 5 m (16.3') in height or 10 cm (3.9") in diameter	✓	✓
Langford											
Metchosin											
North Saanich	✓	1994								✓	
Oak Bay	✓	1995	✓						> 25 cm (24") diameter at 1.4 m (4.5') above ground	✓	✓
Saanich	✓	1993	✓	✓	✓ Diam. > 60 cm (24")		✓	Any tree with a diameter > 80 cm (31.5")	> 5 m (16.3') in height or 10 cm (3.9") or in diameter	✓	✓
Sidney	✓	1997	✓	✓		✓			Diameter > 30 cm (12")	✓	✓
Victoria		1998	✓ > 5 m in height	✓ > 10 cm diam.	✓ > 5m in height		✓				✓
View Royal	✓	1994	✓	✓	✓	✓	✓	Pacific Yew (<i>Taxus brevifolia</i>); any tree with a trunk > 30.5 cm (12.2")	> 5 m (16.3') in height	✓	✓

Fine	Replacement tree(s) for removal listed cut illegally * cut illegally **	Exceptions permitted for removal listed	Development Permit Area restrictions	Watercourses/Lakes	Steep Slopes	Comments
						An Erosion District and Tree Cutting Permit was passed in 1990, amended 1997. Areas designated within the Erosion District require tree cutting permits.
						Attempts have been made to pass a Tree Preservation Bylaw but nothing is happening at the moment.
\$10,000 max.	✓ **					
Min \$500/tree first offence, \$1000/tree subsequent offence	✓ **	✓	✓	✓	✓	Trees growing on lands designated within Environmental Protection Area require tree cutting permits; wildlife habitat trees are protected; any logging has to be done sustainably with practices suitable to area and local ecosystem; no trees can be cut in designated buffer areas without permits.
						Langford has no restrictions whatsoever on tree removal and a Tree Preservation Bylaw is not planned or being worked on.
						Tree cutting permits are required for areas designated in Tree Cutting Permit Areas to control slope erosion; no trees can be cut within 15 m of a watercourse. Certain designated "significant tree" are protected.
\$100 per offence		✓				North Saanich passed a Tree Preservation Bylaw that does not apply to trees on land within the Agricultural Land Reserve and allows up to 30 trees per year to be cut on a lot, depending on the diameter of the trees. However, the bylaw's definition of a tree is quite different than other municipalities: "A woody perennial plant having a single stem with a diam. of at least 10 cm (4") when measured from a height of 15 cm (6") above natural grade of the land."
\$2000 max. per tree	✓ **	✓	✓			
Min \$500/tree first offence, \$1000/tree subsequent offence	✓ **	✓	✓	✓	✓	Tree Preservation Bylaw applies to land within the urban containment boundary. This is the most comprehensive bylaw of urban municipalities. Landowners in rural areas, except in the ALR which is exempt with permission, can cut down three trees in a calendar year. Trees in floodplains also require permits before cutting.
✓ Not specified	✓ * See com- ments	✓	✓			When this bylaw was passed last fall, Garry oaks were not included. However, at this insistence of Jonathon Kelly, Manager of Parks, it was amended to include Garry oaks. When a replacement tree is required by permit, applicants can either plant a replacement tree of the same species or give the Parks Dept. \$300 to plant a replacement tree of the same species on public lands. Trees removed from within the building envelope are to be replaced with two trees of the same species or \$300 per tree given to the Parks Dept, so trees native to this area can be planted on public land.
Min. \$500/tree first offence. min. \$300/tree subsequent offence	✓ *	✓				
Min \$2000/ tree	✓ **					

allocated \$25 million for greenbelts in urban areas. Saanich hoped to acquire 1865 acres for \$6.2 million as part of an ambitious and future-thinking plan that would have seen 21 per cent of the municipality as green space — 5390 acres.

In its 1972 document, the planners wrote: "Suburban Saanich is still in a position to establish a broad greenbelt capable of providing a permanent frame to the main urban area of the Capital Region.

"However, it cannot be overemphasized that the time for action is now before development pressures push raw land values beyond the realm of feasibility."

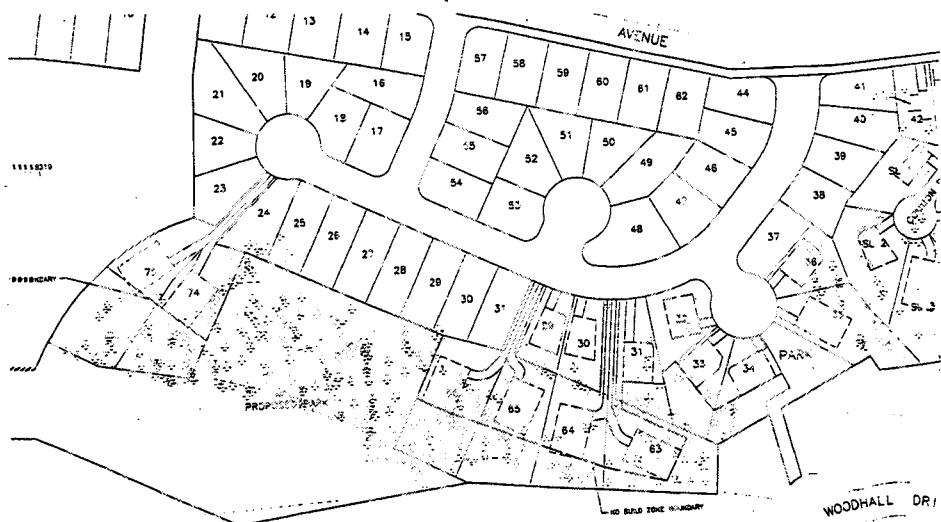
Also during the 1960s Saanich recognized that the area around Swan Lake and some of Christmas Hill area should be protected, but originally there was no thought of making a combined protected area.

In 1973 the Planning Department prepared a plan for the "Proposed Nature Centre of Swan-Lake Christmas Hill" in order to apply for funding from the National Second Century Fund of B.C. a \$4.5 million federal fund available for acquiring parks and conservation areas of at least 100 acres.

Included in the proposal was a description and map of various parcels of land desired for acquisition, the actual layout of the centre, including two areas on Christmas Hill designated as ecological reserves and a map showing the areas which the Municipality of Saanich had designated as greenbelt in 1972.

Had this proposal become reality as envisioned, Swan Lake/Christmas Hill would have been connected to Mount Doug Park and Elk Lake as well as to Francis King Park and Thetis Lake Park and on past Durrance Road.

Some of the Greenbelt Funding was used to acquire land around Swan



Lake, according to Anne Topp, a Saanich planner.

Archival records indicate that two of the prominent property owners on Christmas Hill, the Rogers and Bridgmans, were interested in selling land to Saanich for the nature centre, but not necessarily when funding was in place. Negotiations dragged on for a number of years. Unfortunately, not all of the land shown in the 1973 plan was acquired.

In 1976, the Rogers family sold 8.73 ac (3.2 ha) of their land to Saanich for the Nature Sanctuary for \$120,000.

In late 1985 the Bridgman family offered to sell all of their 19.8 ac to Saanich for \$1.2 million but was turned down in January 1986. In November 1986, a \$6.9 million Parks Acquisition Referendum was passed by voters, with some of the money designated for land acquisition on Christmas Hill.

In 1987 Henderson Realty bought the Bridgman property and subdivided it: approximately 5 acres became a 29-unit townhouse development in an area designated as ecological reserve in the 1973 proposal.

According to Dr. Hans Roemer, "the area where the pink houses are now was the most ecologically valuable part on the hill at that time, probably also the most species-rich one." Also

that year, Saanich bought 11.1 acres (4.5 ha) of the Bridgman property from Henderson Realty for \$853,675 as an addition to the sanctuary.

1965 — Municipal Planning Department prepared "Swan Lake Development Study" and recommended that 30 acres be purchased for public ownership.

1966 — Public referendum approved \$100,000 towards acquisition purchases around Swan Lake; several properties purchased.

1968 — Saanich council declined to buy approx. five ac of Rosa Ethel Rogers' estate at 4116 Quadra Street for \$1500/ac, which had been offered for park purposes by Ms Rogers before her death. The municipal planner wrote to then-reeve Hugh Curtis, "I think the best park areas are toward the top of the hill and not in this area." Ironically, some of this area was later identified for acquisition in the 1973 plan as part of an ecological reserve.

By 1972 — 52 acres around Swan Lake acquired (excluding 8-acre administration centre) for approx. \$230,000; balance of land needed to cost approx. \$182,000.

31 acres identified for acquisition on Christmas Hill, est. cost \$232,500 (\$7500/ac).

Municipal staff began to prepare a plan

for the "Proposed Nature Centre of Swan Lake-Christmas Hill."

1973 — Proposal prepared, with various funding partners and areas desired identified. Approximately 52 acres were to form the Christmas Hill portion of the sanctuary, not including access property along Nelthorpe Street. Funding partners were to be Nature Conservancy of Canada, District of Saanich, School Board, Greenbelt Fund, and National Second Century Fund.

1974 — Appraisal of Bridgman land was valued: 9.92-ac parcel at \$79,360 and 1.4 ac at \$35,000, total: \$114,360.

January — F. Morse, 4060 Saanich Road, offered to sell Lot 2, Plan 3548 to Saanich; some of this land was designated for acquisition on the 1973 plan, the rest could have been subdivided and sold off.

June 1 — School District #61 Board of School Trustees "reaffirms its support for the Christmas Hill Nature Preserve, including the use of the Board's Rogers Avenue school site [8 acres]."

1975 — Nature Conservancy of Canada withdrew its offer to raise \$80,000 to buy Bridgman property because of negotiation difficulties.

On September 17, George Rogers agreed to sell 2 lots to Saanich for Nature Sanctuary: a 8.9-acre parcel (Lot A, Section 65, Plan 2611) for \$120,000 with sale to be completed by December that year and a 4.5-acre parcel (Lot 2, Section 65, Plan 15319) for \$90,000 with a March 31, 1976 completion date.

In September, Mrs. Bridgman offered council First Right of Refusal on approximately 11 ac (4.5 ha) but council declined.

1976 — Rogers Farm sold 8.73 ac (3.6 ha) parcel for \$120,000 which formed the nucleus of current Christmas Hill Sanctuary.

1978 — .8 ac on Woodhall Drive (Lot A, Plan 31434) acquired for \$58,500.

1982 — North Quadra neighbourhood plan modified amount of land to be acquired for sanctuary to total approx. 30 acres.

1986 — January: Bridgman family's 1985 offer of 19.8 ac to Saanich for \$1.2 million turned down by Saanich.

November: \$6.9 million parks referendum passed; 20.3 ac was supposed to be added to Christmas Hill as a result, according to a newspaper article (*Times-Colonist*, November 14).

1987 — 29-unit townhouse approved on approx. 5 ac of Bridgman property.

11.1 ac (4.5 ha) Bridgman property added to Sanctuary, bringing the total Christmas Hill area to 27.25 ac (11 ha). Cost \$853,675.

1988 — 3.53 ac on Rainbow Road (Lot A, Plan 8402) acquired for \$175,000.

1989 — First of many SIDC proposals (30.23 ac) on southwest slopes of Christmas Hill.

1994 — Saanich created Christmas Hill Slopes Advisory Group.

1995 — Saanich adopted Christmas Hill Slopes Action Area Plan as "Schedule A" to the North Quadra Local Area Plan. Plan recommended 7.9 acres of Rogers Farm oak woodlands be acquired and the approx. 2-ac. Robertson property.

SIDC Plan H proposal approved; 4.54 ac set aside as public land at Douglas

Street and Pat Bay Highway.

1996 — According to Wayne Randall, Saanich's Land Commissioner, Lot A, Plan 10398, appox. 14,000 s.f. in the Northeast corner of the former Penn property was identified as future park.

1997 — Saanich Council approved Rogers Farm subdivision and committed to acquire 3.52 acres of oak woodlands for \$1.2 million, including a \$400,000 donation of property from family. Turned proposal down at Fourth Reading because no agreement with Rogers family on public trail.

1998 — Hutchison family received approval for its subdivision plan which will protect some of the Garry oak woodlands with the potential of more being protected if four lots can be bought by Saanich and/or conservation organizations.

1999 — Rogers Farm received final zoning approval.

TLC agrees to buy lots 74 and 75 on Rogers Farm with Saanich.

There in a nutshell, is the history of how Christmas Hill Nature Sanctuary was put together, as near as I can find out.

If you would like to donate to this campaign, please send a cheque made out to The Land Conservancy and designated Christmas Hill, to 5793 Old West Saanich Road, Victoria, BC, V8X 3X3. Donations are tax-deductible.

IN A NUTSHELL

by Katie Stewart

GOMPS' Annual General Meeting will be held on Thursday, March 23 at 7:30 p.m. at Swan Lake Nature House.

I would like to notify the membership that I will not be seeking re-election. Linda Grimm will also not be seeking re-election, so people are

urged to come forward to take their turn as directors if they wish GOMPS to continue functioning.

I have learned much during my terms as director and the four years I served as president. My active involvement as a director led me towards TLC and

Continued on page 8

Continued from page 7

its first acquisition project, South Winchelsea Island.

I also will no longer produce the GOMPS newsletter, so here is an opportunity for someone else to jump in. You do not have to serve as director to do this. It came to me by default, I think, because of my background in the printing end of newspapers.


GOMPS director Hal Gibbard has been sitting on a committee which has been investigating sites in Saanich for Garry oak meadow restoration. They've narrowed their selection to over eight sites. Contact him if you'd like more information.


The Swan Lake Nature Sanctuary will be holding its 5th Annual "Gardening for Wildlife" native plant gardening sale and demonstration on Saturday and Sunday, April 15 and 16, from 10:00 a.m. to 3:00 p.m.

There will be over 100 species of native plants, seeds, books, bird feeders and nesting boxes for sale and presentations on gardening with native plants. Admission: \$3/day, \$5/weekend pass.


Dr. Erich Haber is distributing an "Alien Plant Project Information Survey". He wants to prepare a listing of individuals and agencies who are engaged in some aspect of the management, monitoring or study of the biology, phytogeography, or testing methods of control for invasive or potentially invasive plants.

If you're interested contact Erich at National Botanical Services 604 Wavell Ave., Ottawa, ON, Canada K2A3A8 Tel: 613-722-5523, Fax: 613-722-6291 email: ehaber@magi.com Invasive Plants of Canada (<http://infoweb.magis.com/~ehaber/ipcan.html>)

ONGOING

PUBLIC RELATIONS

GOMPS DISPLAYS: Phone 386-4792 for possible locations.

FUND-RAISING COMMITTEE

As our main fund-raiser, GOMPS has for sale full colour posters of a Garry oak and a meadow of camas/buttercups under a bright spring sky. We also have wildflower placemats, wildflower posters and the *Garry Oak Meadow Colloquium Proceedings* for sale. Call Tom Gillespie at 361-1694.

RESEARCH COMMITTEE

PUBLIC CONSERVATION ASSISTANCE FUND GARRY OAK INVENTORY PROJECT. Project coordinator is Paul Gareau, 592-9089.

NEWSLETTER

If you have any contributions — photos, art work, articles, letters of agreement or disagreement or anything else you'd like to contribute, contact Katie Stewart at 386-4792 or mail to address below.

GARRY OAK MEADOW PRESERVATION SOCIETY
c/o A-954 QUEENS AVENUE, VICTORIA, B.C. V8T 1M6

DIRECTORS AND OFFICERS OF THE SOCIETY

President	Pierre d'Estrubé	477-2410
Vice-President	Hal Gibbard	477-2986
Treasurer	Tom Gillespie	361-1694 e-mail garryoak@netscape.net
Secretary	Sharron Waite	479-3380 email garryoak@yahoo.com
Director	Michael Meagher	727-7675 email mmeagher@pfc.forestry.ca
Director	Linda Grimm	995-0001 email grimm@camosun.bc.ca
Director and editor <i>Garry Oak Leaflet</i>	Katie Stewart	386-4792 e-mail camassia@bc.sympatico.ca

MEMBERSHIPS AND DONATIONS

NAME _____	
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MEMBERSHIP DUES:	<input type="checkbox"/> Donation
<input type="checkbox"/> Individual \$15 <input type="checkbox"/> Family \$20	Please send more information about:
<input type="checkbox"/> Youth and Associate \$6 (no newsletter)	<input type="checkbox"/> Local sources for Garry oak meadow plants
<input type="checkbox"/> Gift memberships, send receipt to: _____ _____	<input type="checkbox"/> Garry Oak Inventory Project <input type="checkbox"/> Operation Clean Sweep (broom removal) <input type="checkbox"/> Growing, planting Garry oaks

GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

MARCH/APRIL 2000

Vol 7, No 2

The Secret Life of Garry Oaks

Ever wonder what's happening underground with your oaks? Did you know that nearly half of an oak tree's mass lies in its root system, hidden from view? We see leaves bud, expand, mature and drop each year. What's going on in the roots and in the surrounding soil as these events take place in the air? Come to the **GOMPS' Annual General Meeting** and hear the informative and entertaining Dr. Adolf Ceska discuss these and other aspects of *The Secret Life of Garry Oaks*.

The **AGM** will be held **Thursday, March 23 at 7:30 p.m.** at **Swan Lake Nature House**.

Business will include the election of new Directors. Two Directors are retiring, so if you have been wanting to become more involved in the fight to save what's left of Victoria's Heritage Landscape, this is your chance. Directors are elected to two-year terms and oversee the affairs of the Society.

GORP...

... is not, in this case, something you take with you on a hike. The letters stand for Garry Oak Restoration Project, a Saanich-led initiative to rehabilitate remnant Garry oak meadow sites around the municipality.

GORP is a demonstration project intended to encourage individuals and organizations to undertake similar restoration in privately owned oak woodland remnants.

Cars 1, Oaks 0

A 500-year-old oak stands on the site chosen for the parking garage at the Royal Jubilee Hospital, so the Capital Health Region has decreed it will be sacrificed. The magnificent specimen is four feet in diameter and stands about 80 feet tall, with an equally massive spread. Some observers believe it is the largest oak left in the Victoria area. Other oaks will be casualties of road widening along Richmond Street.

The site for the parking garage is between Richmond and the Memorial Pavilion, at Bay Street. The location was chosen despite other suitable sites on the Jubilee Hospital campus. It will be used primarily by hospital employees.

Funds have been committed to the construction of the garage despite severe financial constraints in the design of the new cancer centre which required the elimination of one floor of the building. Physicians have protested the design as inadequate and dangerous to patients because there will be no intensive care unit near the operating theatres meaning patients will have to be transported long distances at a time when they are medically unstable.

Protests to various levels of government over the loss of the oak have been unavailing. Tree removal along Richmond is reported to be scheduled for this week, and it is likely the specimen oak will be felled at the same time.

The arborist contracted by the Health Board to oversee the project, Jeremy Gye, noted

The committee formed by Saanich to oversee the project has settled on eight sites around the municipality in which to work. They include a municipally-owned parcel on the north side of McKenzie at Arrow and the Victoria Association for Community Living grounds on Cedar Hill Cross Road. The other six sites are all in parks: Playfair, Mt. Tolmie, Colquitz, Weatherby, and two on Mt. Doug, at the summit and on the west side.

In most of the eight areas, plans call for broom-bashing and removal of other invasive species, such as ivy and spurge laurel followed by planting of oak woodland understory species. At Playfair and Weatherby Parks and Association for Community Living grounds, mowing schedules will also be changed.

A radical "new" management technique is proposed in four parks. In those areas late-summer burning will be used to help control invasives. It is new only to modern-day Victorians; this was the traditional method used by native peoples to manage their camas fields.

Saanich is partnering with a number of community and commercial groups on this project. University of Victoria experts provide scientific oversight. Environment Canada and the Canadian Wildlife Service are also involved. Hal Gibbard represents GOMPS on the steering committee.

The project received a small grant from BC Hydro to purchase plant materials. Local citizens will be providing many hours of sweat equity.

GOMPS members who are interested in becoming involved can contact Hal or Ron Carter at Saanich Parks [744-5341].

in his report that the tree's roots have suffered previous injury from construction of a parking lot around part of its base, and the planting of lawn around the rest. He hopes to squeeze some native plantings and a therapeutic garden for Memorial Pavilion residents around the base of the garage.

Help, I'm Drowning . . .

Notice the new look to the *Leaflet*? It's purely accidental folks. Your editor *pro tem* can barely boot her computer, never mind format! The *Leaflet* deserves better. Here's an opportunity for those of you out there with journalistic skills to exercise them and do some good for our favorite tree by accepting the job of editor. Pay? Satisfaction. But we promise, you don't have to be a Director or attend Board meetings [unless you want to].

IN A NUTSHELL

In my garden, the camas are pushing skyward, Easter lilies are showing buds, and my white red-flowering currant is beckoning the hummingbirds. It's nearly here, that most joyful time of the year, planting time! A reminder to all whose thoughts turn in the same direction as mine in the spring: **Swan Lake-Christmas Hill Nature Sanctuary** will be holding its 5th Annual **Gardening for Wildlife native plant gardening sale and demonstration** on Saturday and Sunday, **April 15 and 16**, from 10 - 3. There will be over 100 species of native plants, seeds, books, bird feeders and nesting boxes for sale, as well as presentations on gardening with native plants. Admission is \$3 per day or \$5 per weekend pass.



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

JUNE 2000

Vol 7, No. 3

Katie Stewart Honored

Katie Stewart, devoted environmentalist and former long-serving GOMPS President and *Leaflet* editor, received the Individual/Group Effort Biodiversity Award from Saanich at a ceremony June 12 in Council chambers. Katie and other winners also were honored at the Eco-Star Community Environmental Awards dinner June 13.

Katie currently serves on the Board of The Land Conservancy of B.C. She organized TLC's successful community garage sale last fall. She is also active in the Native Plant Society of B.C., and in the Native Plant Study Group of the Victoria Horticultural Society.

Katie is the mother of grown twin daughters, one of whom is following in her environmental footsteps. She works in the production department of the *Times-Colonist*. Originally from Ottawa, she moved to British Columbia as a young woman and lived on the Lower Mainland and in Nanaimo for several years before coming to Victoria.

GOMPS Gets New Board

Two new members of the Board of Directors were acclaimed at the March 23 Annual General Meeting. Pat Johnston and Cornelia Lange join five veterans. The AGM also ratified the Board's decision to award a *Certificate of Appreciation* to Katie Stewart, who served in the demanding dual roles of President and *Leaflet* editor for four years. She is missed: it requires two people to replace her.

GOERT a Go!

Garry Oak Ecosystem Recovery Team [GOERT] has secured funding to produce a Recovery Strategy for the endangered Garry oak habitat of southeastern Vancouver Island. GOERT is an initiative which grew out of the First International Garry Oak Symposium held in Victoria in May 1999. Since that time GOERT members, most of whom are scientists with a professional interest in Garry oaks and their ecosystem, have been working on a voluntary basis to produce a Recovery Strategy. Its purpose is to promote the protection and recovery of Garry oak habitat to all levels of government, and it will act as a guide for recovery efforts.

The funds will permit the hiring of a full-time researcher and will reduce the completion of the Strategy from years to months. Nearly half the funding comes from the World Wildlife Fund, with most of the remainder coming from the Canadian Wildlife Service. GOMPS has also provided some money. GOERT will contract Marilyn Fuchs, who has been acting as volunteer chair and secretary, to write the document based upon its deliberations.

The Recovery Strategy will follow national guidelines for such plans. An initial draft will be open for public comment before a final draft is approved and published. GOERT anticipates holding a public open house to review the draft Strategy in February 2001. The final document is due May 31, 2001.

They Paved Paradise and Put in a Parking Lot. . .



The late Tree #19



How Old Was That Oak?

Dr. Michael Meagher, a research forester who has studied Garry oaks for many years, counted Tree #19's rings and made some surprising discoveries. GOMPS obtained a piece of the trunk [see photo] sliced approximately six inches or 15 centimetres above ground. He counted only 116 to 118 rings in that slice. Estimates of age of up to 500 years proved wildly inaccurate in this case. Nevertheless, Tree 19's diameter was about four feet [1.3 metres]. The discrepancy between actual age and predicted age based on size led to the second discover: Some of the individual rings in Tree 19 were as much as two centimetres [3/4 inch] in diameter. As each tree ring represents a year's growth, it is clear that Tree 19 enjoyed extraordinarily favorable growing conditions over the course of its life. There was no sign of rot or disease, or any other of evidence of "overmaturity", that favorite phrase of consultants trying to justify a client's wish to chop down a tree. In hindsight, perhaps these findings should not be so surprising. Tree 19's crown was broad and symmetrical, but lacked the rugged character that makes leafless Garry oaks so distinctive against the sky.

Tree 19 wasn't the only tree from the Jubilee site whose rings Dr. Meagher counted.

R.I.P., Tree #19

Despite heroic last minute efforts by some GOMPS members, chainsaws ripped into the still-sound flesh of the magnificent oak that stood in the way of the Jubilee Hospital parking garage at dawn April 7. The only consequence of the community's revulsion at the values reflected in the famous Joni Mitchell line was an early morning start to the destruction in order to minimize protest.

Royal Jubilee Hospital physicians, meanwhile, were protesting the cost-cutting measure which left the new Diagnostic and Treatment Unit without its planned fourth-floor Intensive Care Unit.

A second tree much smaller in diameter than Tree 19 contained 337. It started its life's journey before 1673. At the time of its birth, the *Company of Adventurer's Trading into Hudson's Bay* received its charter from the English king, Montreal was less than 30 years old, and Nieuw Amsterdam became New York.

The surprises of Tree 19 and its neighbors demonstrate how malleable *Quercus garryana* is, and how responsive to the particular growing conditions it experiences over its lifetime, said Dr. Meagher.

Democracy in Action

It took two tries, but GOMPS will be represented on the Braefoot Area Action Plan Advisory Committee. The area in question is a small pocket of large lot properties between Simon Road [off Mackenzie] and Mt. Douglas Crossroad, from the east side of Braefoot to the west side of Malton [see map]. Because the land is still in large lots, many Garry oaks survive, although some groves are thought to be in decline thanks to invasive exotics such as ivy.

The Issues

The development of this area potentially impacts two of Saanich's treasures, Mount Douglas Park and the Blenkinsop Valley. Saanich Planning, in a report dated September 14, 1999 states that it regards the area as a transition zone between rural and urban Saanich. The report describes the area as "dominated by Garry oak parklands in various forms." It assesses 45 to 55 percent of the area is under mature Garry oak canopy, and says "[the] study area stands out as a Garry oak corridor in excellent condition." It also notes the area contains "good biodiversity for [its] size."

History of the Area

After World War II, many returning veterans were given two acres of land by a grateful nation to help them return to civilian life. Some of these properties were among them. At the time the area was rural, but when a growing Saanich established an Urban Containment Boundary, this land was inside it. Sewers were extended into the area several years ago to deal with health risks associated with failing septic systems in the low-lying area.

Saanich Council of the day went on record stating that construction of sewers was not

meant to imply that the area would be approved for urban-density development.

Now many of the aging residents of the area wish to realize the profits to be made from subdivision of large properties that are no longer functional for them. Saanich Council and Saanich Planning, as they have done in other areas, notably Christmas Hill, want to plan for the area as a whole, rather than on a piecemeal basis as individual properties apply for subdivision and redevelopment.

Democracy Carries the Day

Planning's report, originally commissioned by Council to address the issues and serve as a basis for decisions about development applications, was presented in November 1999. It was panned by most of the property owners present, who complained the report was environmentally biased and that they had too little input into it. Council agreed, and returned the matter to Planning to draft a proposal to increase public participation. GOMPS requested representation, as did the Friends of Mt. Doug. When Planning returned to Council it proposed that the Gordon Head Residents' Association would represent all community stakeholders aside from the property owners. Council agreed with GOMPS' and others' calls for broader representation, and directed Planning to modify its proposal. Planning next suggested that other community groups be permitted to make a presentation to the Committee, and to sit as observers, but not be allowed to join deliberations. Council accepted this proposal. An appeal of Council's decision by Friends of Mt. Doug, with the support of GOMPS and Quadra Ratepayers' Association, finally won the point: all will now be included as full committee members.

The Committee is expected to begin its work in September. GOMPS will be represented by Hal Gibbard. Call him for more information about the Committee's work.

In A Nutshell

Everyone been out and enjoying the blossoming of our native plants? Have you given a thought of gratitude to the many volunteers who have devoted thousands of hours in recent years to broom-bashing? I decided to photograph some camas for GOMPS and headed for the slopes of Mt. Tolmie, where I found dazzling lakes and ponds and trickles of blue. Ten years ago when I moved to Victoria, Mt. Tolmie was covered in broom. It is a testament to the regenerative powers of our native plants that when humans remove the suppressing species, the natives have survived however many years and quickly return.

Nobody planted those camas on Mt. Tolmie; in fact human attempts to revegetate those slopes have been an exercise in futility, with virtually all shrub and tree plantings disappearing within a year. But the camas survived years or decades under the broom to flourish again and delight the eye.



Braefoot Planning Area

HOW TO CONTACT GOMPS

Board of Directors

Pierre d'Estrube [President]

Phone

477-2410

E-Mail

swdestrube@pacificcoast.net

Hal Gibbard [Vice-President]

477-2986

thomasw_gillespie@telus.net

Tom Gillespie [Treasurer]

381-1694

mmeagher@pfc.forestry.ca

Mike Meagher [Secretary]

727-7675

Cornelia Lange

920-3556

Pat Johnston

595-5600

patj@tnet.net

Sharron Waite [Editor]

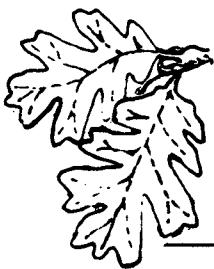
479-3380

garryoak@yahoo.com

Mailing Address: 954 - A Queens Avenue, Victoria V8T 1M6

E-Mail Address: garryoak@netscape.net

Membership Information: Annual membership is \$15 Individual or \$20 Family. Annual rate includes *Garry Oak Leaflet*, published 6 times a year. Make cheque payable to GOMPS at the above address. Be sure to include your name, address, phone, and e-mail address [if any].



GARRY OAK LEAFLET

Newsletter of the Garry Oak Meadow Preservation Society

December 2000

Vol. 7, No. 4

Red-Tailed Hawks Won't Lose Their Home Christmas Hill Nature Sanctuary Completed on the North

After 25 years and dogged effort by citizens, the plan for the northern boundary of the Swan Lake-Christmas Hill Nature Sanctuary has been completed as envisioned. In a complex deal between Rogers Family heirs, The Land Conservancy of BC, and Saanich, the final portion of the heavily oak-treeed area of the Rogers Farm next to the Sanctuary has been acquired. The developers' plan had projected four residential lots for that land. Saanich has granted TLC a five-year interest-free loan for the purchase of the lots, which the Rogers Family has agreed to sell on the condition that title pass immediately to the Nature Sanctuary. A pair of red-tailed hawks annually nests in one of the trees on the site.

In earlier negotiations, the Rogers Family donated a rock outcrop, Saanich agreed to purchase two lots, and TLC and Saanich formed a partnership to purchase two more lots immediately east of Rogers School for addition to the Sanctuary. The last four lots being purchased lie between the area acquired earlier and the eastern boundary of the farm. [See map.] The total area includes most of the oak lands remaining on the Rogers Farm, and follows the plans drawn up 25 years ago when the Nature Sanctuary was founded.

Money Makes the World Go Around . . .

Many of you may recall that it was battles over the future of Christmas Hill which led to the founding of GOMPS. TLC is undertaking to raise \$385,000 over five years for this purchase alone. Now is the time for those of us who care about preserving what's left of the native landscape of the place we call home to tangibly support our values with a donation. Best of all would be a pledge of annual support for five years. Remember the power of a charitable donation is compounded by a 17 percent income tax credit.

. . . No, the Levy Won't Help

Since we all voted ourselves a \$10 per year additional tax for the purchase of parkland in the Capital Regional District, an often-asked question is whether those funds can go toward the purchase of land for the Nature Sanctuary. The answer is no. That money is earmarked for CRD parkland, where title resides in the CRD, and the park to be established is a regional

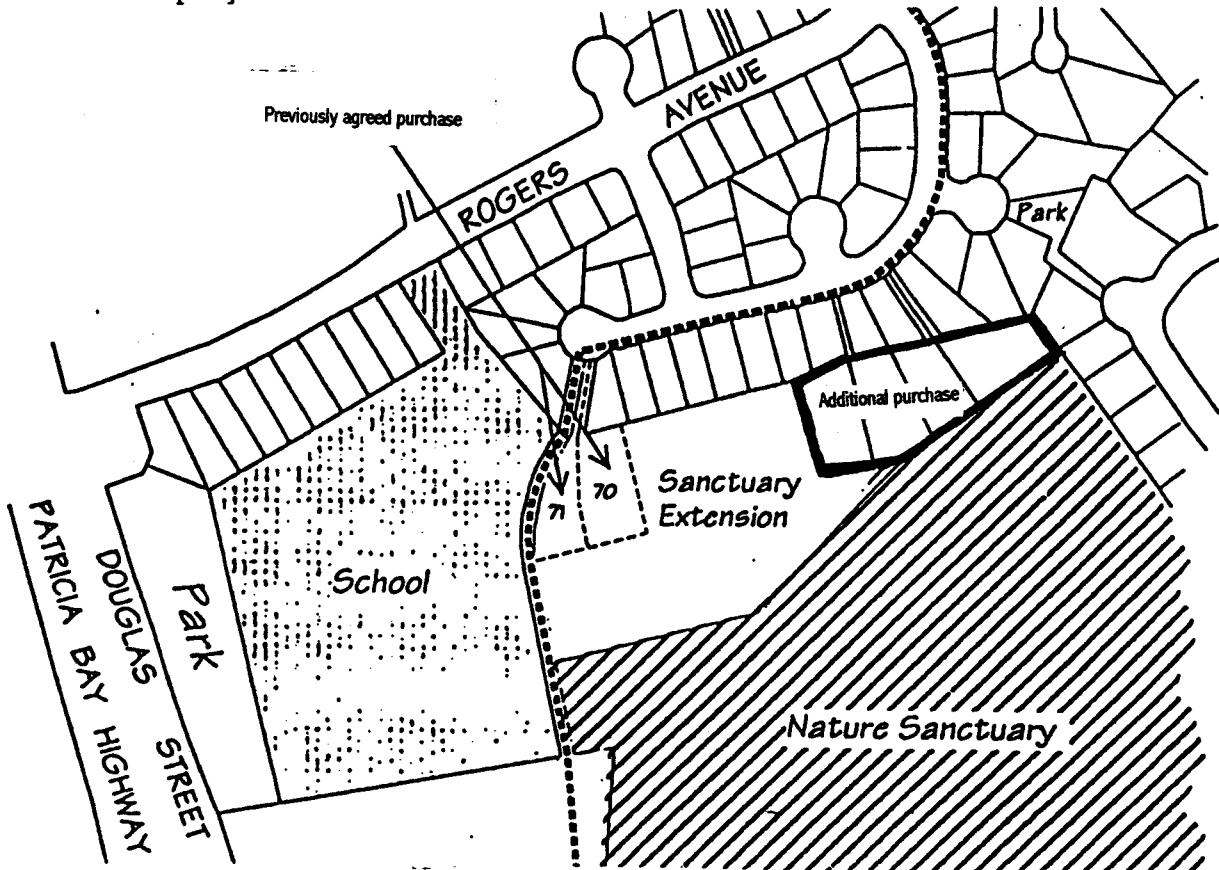
www.garryoak.bc.ca

That's right! GOMPS finally has its very own website! You'll find Garry oak facts, links to other sites, back issues of the *Leaflet*, and other features. It's all thanks to our volunteer Webmaster, Cornelia Lange. Visit, then give us your suggestions for additional content.

one [for example, Thetis Lake]. The Nature Sanctuary belongs to the municipality, and is a municipal park. While it may seem like conceptual hair-splitting, the distinction has a practical consequence in this case: no CRD money. Ditto for Provincial Capital Commission Greenways money: The PCC is buying Rogers Farm land along Douglas Street [next to the Pat Bay Highway south of the pedestrian overpass].

Hawk Home Fund

Four years ago, when the question of Rogers Farm subdivision first arose, GOMPS established the Hawk Home Fund for purchase of these oak lands. It was named in honor of the red-tailed hawks. Its objective achieved, the money in the Fund can now be directed toward retirement of the purchase loan.



How to Contact GOMPS

Board of Directors

Pierre d'Estrube [President]
 Hal Gibbard [Vice-President]
 Tom Gillespie [Treasurer]
 Mike Meagher [Secretary]
 Cornelia Lange [Webmaster]
 Sharron Waite [Editor]

Phone

477-2410
 477-2986
 3' 1-1694
 727-7675
 920-3556
 479-3380

E-Mail

swdestrube@pacificcoast.net
hagibbard@home.com
thomasw_gillespie@telus.net
mmeagher@pfc.forestry.ca
kacy@islandnet.com
garryoak@yahoo.com

Mailing Address: 954 - A Queens Avenue, Victoria V8T 1M6

E-Mail Address: garryoak@netscape.net

Website: www.garryoak.bc.ca

Membership Information: Annual membership is \$15 Individual or \$20 Family. Annual rate includes *Garry Oak Leaflet*. Make cheque payable to GOMPS at the above address. Be sure to include your name, address, phone, and e-mail address [if any].

Management Plan Coming for New Sanctuary Land

Rehabilitation work will be required in the Christmas Hill Sanctuary extension. Swan Lake staff intend to observe the site over the next year while developing a management plan, according to Willie MacGillivray, site manager. What emerges in the spring will be especially interesting.

Although the soil has never been broken by a plough, cattle grazed under the trees for over a century, thoroughly trampling understory vegetation and damaging the structure of upper soil horizons. Amazingly, a few native bulbs have managed to persist, along with the occasional Nootka rose, snowberry, and Indian plum, but mostly the land under the oaks is colonized by thistle, mustard, invasive grasses, and other exotics.

Restoration possibilities include gathering wildflower seed from elsewhere on the Hill and sowing it by handcasting. Such a technique would maintain the integrity of local genetic variation and distribute genetic material which is particularly suited to the local microclimate.

Any spread of broom from other areas of Christmas Hill into the Rogers Farm extension will be closely observed. For 18 years a broom-free buffer was maintained by Phyllis and Richard Fatt along the fence line by vigilant hand-pulling, creating a natural experiment which should yield some interesting data. A novel idea which may be considered is to control *native* shrubs may be controlled in order to maintain populations of wildflowers. Increasing scientific evidence suggests First Nations residents practiced a form of farming by actively suppressing

shrubs to promote production of camas. Although they are thought to have used fire to suppress shrub growth, the proximity of housing probably would prevent such a technique from being used on this site.

A long-planned trail being developed around the lower slope of the Christmas Hill sanctuary will be completed in the spring. Willie MacGillivray reports that extreme care has been taken to minimize disturbance with its construction. Bulbs that are unearthed are replanted, no roots are cut, the trail is being surfaced with laid stone, and it is sited to discourage people from wandering off it. He envisions that a satellite trail will eventually be built which will branch off, loop around the rock outcrop in the Rogers Farm extension, and return to the main trail.

No through pedestrian trail will be created across Sanctuary land. Instead, footpaths will skirt Sanctuary and school and connect through old and new residential areas to Rainbow Street, Rogers Avenue, and Quadra Street.

GOMPS Director Resigns

It is with regret that the Board of Directors of the Garry Oak Meadow Preservation Society announces the resignation of director Pat Johnston. Although she served less than one term, her fresh perspective was appreciated by her fellow directors.

Notice of Annual General Meeting

**All members are invited to our annual general meeting to be held at Swan Lake
Nature Centre—3873 Swan Lake Road on Tuesday March 27 at 7:30 pm**

**After a short business meeting there will be a presentation by Marilyn Fuchs on the
development of a recovery plan for the Garry Oak ecosystem. This recovery plan has
been under intensive development during the past year.**

Another Award for Community Garden

GOMPS member Pat Johnston has been recognized by the BC Landscape and Nursery Association with first prize in the Individual Garden category. Four years ago Pat developed a plan to transform her typical small urban garden of flowerbeds and grass into a native plant demonstration garden. The most innovative part of her idea was to invite the public in to see the possibilities of native plant gardening even on an ordinary subdivision lot. A sign describes the garden and a brochure is free. Many passersby have accepted the invitation to tour the garden.

Exotic grass, groundcovers, and shrubs have been replaced by native plants ranging alphabetically from *Allium acuminatum* [Hooker's onion] to *Symporicarpos albus* [snowberry]. About half were rescued from construction sites. Six hundred camas [*Camassia spp.*] bulbs alone were transplanted. The backbone of the garden is the stand of mature Garry oaks under which the new plants grow. The garden is subdivided into thicket, woodland, rock garden, and meadow zones. In the latter space, two native grasses, *Elymus glaucus* and *Festuca idahoensis* var. *memori* have been seeded along with the flowering plants. The success of the restoration is evidenced by the 250 or so oak seedlings which have found conditions in the revised garden congenial and are persisting.

An Honored Garden

This award is not the first accorded to Pat's garden. It received recognition through the "Golden Gardens" joint project of the Canadian Wildlife Federation and the federal government. More recently it was

designated by the CRD as a "WaterWise Demonstration Garden".

Pat insists her garden is a collective effort whose other authors deserve equal credit. Carrina Maslovat of Woodland Native Plant Nursery assisted with planning. The work of shaping the garden has been done by the Ecological Youth Alliance; and six dedicated friends who call themselves the Backyard Gardening Committee [Linda Beare, Jean Forrest, Lynda Grant, Ruth Keogh, John Olafson, and Pam Sinclair].

GOMPS provided a small grant for the sign and brochures.

Do Covenants Work?

The true power of covenants to protect sensitive habitat was demonstrated recently before Saanich Council. The developer of Hidden Oaks Place, [property previously known as 1600 Arrow Road] promised the community he would take out only 20 oaks on the site in order to create his subdivision. The rest would be protected by a covenant. Forty fallen oaks later, Brad Cunin was back asking Council to approve the removal of eight more. He blamed a contractor for building the subdivision road a meter too high, thereby making the driveways too steep for vehicles to back out and requiring space on each lot to permit cars to turn around. Council reluctantly granted permission to cut three more. The incident shows what a weak tool for conservation ordinary covenants really are. They are easily changed on a property owner's application, and their fate is subject to shifting political winds.

Oaklands Neighbors Organize to Beautify Their Neighborhood

Join the neighbors of the Oaklands community in a planning/working party to plant trees, bulbs, and seedlings at Holly Green Park [Belmont and Hamilton Streets]. The Oaklands Greenspace Project hopes to begin planting in February. The Project is supported by grants.

If you are a neighbor in the area, or are interested in neighborhood "naturescaping" on public land, please call for more information: 595-5600 or 592-9340.

A workshop on chemical-free, low-maintenance gardening will be held **January 27** at Oaklands Community Centre [1 – 2827 Belmont Avenue] from 10 a.m. to noon.

Active neighborhood gardeners are organizing a seed exchange to trade extra vegetable, flower, and other seeds. It is also based in the Oaklands Community Centre. If you are interested in participating, please call 370-9109 or 592-9340.

HAWK HOME FUND

I want to help purchase the Rogers Farm addition to the Christmas Hill nature sanctuary. I will

donate \$_____ . My cheque is enclosed.

pledge an annual donation of \$_____ for five years. My first cheque is enclosed.

Name _____

Address _____

City _____ **Postal Code** _____

Telephone _____

Mail your pledge or donation today to

**Hawk Home Fund
Garry Oak Meadow Preservation Society
954 – A Queens Ave.
Victoria, B.C. V8T 1M6**

[Donations may also be made to TLC, 5793 Old West Saanich Road, Victoria V9E 2H2]

Thank you, on behalf of the Red-tailed Hawks, and other creatures whose homes are being saved.