

# The Log

Spring 2004

FRIENDS OF ECOLOGICAL RESERVES NEWSLETTER

## President's message – the year ahead

By Don Eastman

Last year's message from our then-President, Peggy Frank, began with the words: "This year has been an exciting and interesting one for Friends of Ecological Reserves." And when I look back over 2003, the same words come to my mind: it has been a challenging and engaging year, and I hope to convey that sense in this report.

My message for this year has three parts. Firstly, I want to extend thanks to those who have contributed so much to this past year. Secondly, I want to reflect on our accomplishments over 2003. Thirdly, I want to look ahead to 2004 and set out some objectives for the Friends.

### Thanks to all

Similar to most volunteer organizations, it is the dedication of a few people that has enabled us to both maintain momentum and make significant accomplishments. Let me begin by thanking Peggy Frank, our Past-President for her unflagging dedication to the purpose of the Friends. She has worked tirelessly in many ways – writing articles, providing counsel to yours truly, helping to organize "The Gathering"

and even offering her home as a place for the Board to meet. Tom Gillespie, as Membership Secretary, has kept our list of members up-to-date, an essential task for keeping in touch and mailing out *The Log*, as well as collecting mail for our monthly meetings. Evelyn Hamilton has contributed by reviewing applications for research and providing guidance in making those difficult decisions about how best to allocate our research funds. Mary Rannie and Marilyn Lambert continue to organize field trips, a job that requires great attention to detail and planning. Our field trips are an important way of offering service to our members as well as helping to raise awareness about the purposes of ecological reserves. Lynne Milnes, our Vice-president, is our fund-raiser par excellence, and an indefatigable writer of insightful articles and sharp letters to governments when they lose sight of the reasons for Reserves. Alison Nicholson, our webmaster, has played a key role in keeping our wonderful (and very popular) website up-to-date. Nichola Walkden, works to keep our financial picture in focus, so that we make the best use of our funds to further the aims of the Friends.

The Board has been fortunate in having the support of three staff, without whom, the Friends would founder. Saila Hull, a former Director, assumed the role of our Office Manager when Daphne Munroe realized that she needed to move on to other things. Saila has really

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# The Log

Spring 2004

The LOG is published 3 times a year by the Friends of Ecological Reserves to promote the establishment, management and maintenance of Ecological Reserves in British Columbia. The LOG is distributed to members, volunteer wardens, affiliates, supporters, government, friends and the enquiring public.

The views expressed in this newsletter are not necessarily those of the Friends.

Articles for publication are invited. The deadline for submissions for the next issue of The LOG is July 1, 2004

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Memberships are based on a calendar year.  
Individual: \$20, Family/Institutions: \$25  
Students/Seniors: \$15  
Charitable BIN #118914597RR

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"President's message..." continued from page 1 helped the Board function effectively. Denise de Montreuil is the new Editor of *The Log*. Her expertise and experience has enabled us to produce a *Log* that is both informative and easy to read. And last, but certainly not least, Diane Wootton, our bookkeeper continues to keep our bills paid and books balanced.

Just as in 2002, there have been some changes in both the Board and the staff. In September, Syd Cannings, Sue Carr and their two children moved to Yukon. So, while we have lost them to the Friends, at least for the time being, we have not lost them to our cause. We know they will make their presence known in the Yukon's conservation scene. Also, Daphne Munroe, our Office Manager, had to step down due to the increasing demands of family, pursuing a Ph. D. degree and preparing for dragon boat races in South Africa in June of 2004. To all three, we wish the best of success and hope they know that they will always be welcome as Friends.

Of course, our success as an organization depends on many individuals and organizations. Ongoing support from the members of the Friends provides continuity and stability to our organization. Many other individuals make a variety of contributions, such as Vicky Husband who gives us both financial help and moral encouragement. Generous supporters and donors significantly help our research program. The Federation of BC Naturalists deserves special mention for its role in making the "Gathering" such a success, and for its ongoing assistance in heightening public awareness about environmental issues of mutual concern. The time and money provided by the provincial government for the "Gathering" also deserves mention. No doubt I have missed out thanking some people and groups, and I hope you do not take my absentmindedness as an indication of ungratefulness. Quite the contrary! Without the support from all of you,

named and unnamed, we could not exist as an organization.

And, of course, we thank the Wardens, those eyes and ears of the ecological reserve system that provide an invaluable service not only to the provincial government, but also to the citizens of the province.

To all of you, thank you for your work and support over the past year!!

## Accomplishments in 2003

When I look back over the past year, I like to think of our activities as consisting of two sorts: a) on-going activities in support of ER's, Wardens and the ER system, and b) special activities over and above on-going ones.

Let's look at our on-going activities over the past 12 months:

1. We produced three issues of *The Log* that were full of interesting, timely and challenging articles presented in a readable format.
2. We held two very successful field trips to Trial Island and Race Rocks. On the Trial Island trip, our guides, Adolph and Aluna Ceska, told us about the critical importance of this ecological reserve, and pointed out the wealth of flowering plants, including the tiniest species that participants might have otherwise walked right over...or on. On the Race Rocks trip, we were ably guided by Gary Fletcher and Chris Blondeau from Pearson College, and accompanied by several international students from the College.
3. We funded five research projects: Tom Reimchen, for his research on the role of salmon in coastal ecosystems; Jane Watson, for her ecological studies on sea otters and their impact on the marine ecosystem; Erica Wheeler, for her work on the rare slim-leaved onion (*Allium amplexans*); Emily Gonzales, for her investigation into the dynamics of Garry Oak ecosystems; and for Rick Searle and

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“President’s message...” continued from page 2

his students, for their projects on protected areas in the southern Okanagan (See the next issue of *The Log* for more details).

4. We continued to involve ourselves with the provincial government, in particular the Ministry of Water, Land and Air Protection. We wrote letters expressing our concern about the working forest and indications about guiding activities in Ecoreserves.

In addition to these regular, but important activities, we also completed two other important projects – the Gathering and the Retreat. The Gathering was reported in detail by Peggy in the Winter 2003 Issue of *The Log*, so I don’t need to go into detail here. It was a great success, and the Friends and the Wardens really got a lift from the meeting. The Gathering spawned some continuing activities, including a revision of the Wardens’ Handbook and the EcoReserve brochure.

Our second extracurricular project was the Board Retreat held on November 11, 2003 at Abkhazi Gardens in Victoria. Its purpose was to reflect on our past accomplishments and more especially to re-focus our activities, renew our sense of purpose, and consider future directions. We were ably facilitated by Colin Rankin, and the results of our retreat figure prominently in plans for the coming year.

## The year ahead

When needs are so varied and great, it’s often hard to choose what to do, and how much energy to put into each thing we choose to do. Fortunately, we have clear directions and guidance from our Gathering and our Retreat pointing to the need to dedicate our energies in four general categories: wardens, research, outreach and organizational renewal. I propose four major targets in each of these areas – a sixteen-point plan for 2004.



*Friends of Ecological Reserves Annual General Meeting: President Don Eastman delivers his annual report.*

### Warden Program

Wardens are critical to the continuation of ecological reserves: they are the eyes and ears on the ground and they build a strong commitment to the purpose of reserves. Strictly speaking, Wardens provide volunteer services to the provincial government and it is the government that should support Wardens in their efforts to safeguard the public interest in ecological reserves. That said, the Friends have a role to play in supporting wardens in the coming year as follows:

- Promote recruitment of individuals as wardens by posting the application process on the FER website, and by working with the wardens to update the Wardens’ Handbook and orientation package.
- Promote better communications among wardens and government by creating a Warden contact system, and by supporting annual regional and biannual provincial meetings.
- Work with the provincial government to clarify key issues, such as liability insurance for wardens,

acceptable levels of use, and the need for permits.

- Continue to keep a watchful eye on governmental policies, plans and programs that may adversely affect ecological reserves, and communicate our concerns by effective means.

### Research

Historically, the Friends have dedicated a lot of effort in raising funds to support research in ecological reserves, in other words, to support one of the primary reasons for having reserves. The need for research has never been greater, with growing questions about the impact of climate change, the viability of an ecological reserve system, the impact of land use activities on lands neighbouring reserves. In the coming year, we need to dedicate our efforts in four main areas:

- An assessment of the state of ecological reserves: A “**State of ER Report**” will provide a long overdue review of ecological reserves, and

*continued on page 4*

help both the Friends and government focus efforts and energies. Themes for the report include: threats facing reserves, current condition of reserves, and adequacy of the current systems. Work is already underway through the efforts of Katie Christie, a master's degree student in Biology at the University of Victoria who has received funding from the Friends.

- Expand our way of selecting research, by being more pro-active. In other words, we need to ask for research proposals on topics we feel need attention, as well as evaluate topics submitted by researchers.
- To develop a more complete awareness of researchers who are interested in working in ecological reserves, so that we can approach appropriate researchers directly about topics of concern to the Friends.
- To explore additional funding to advance our research program:

#### Outreach/Member Services

The organization known as the Friends of Ecological Reserves consists of individuals across the province who know that ecological reserves are important. They demonstrate their commitment to ER's by joining the Friends, by making donations, and supporting the work of the Board in other ways. In 2004, I suggest that the Board support its membership in the following ways:

- Develop a communications strategy to increase public awareness and appreciation of ecological reserves; this includes cooperation with the Cowichan Valley Wardens to produce educational material.
- Continue to organize field trips, with at least two in the Greater Victoria area (Trial Island and Race Rocks), and at least two elsewhere in the province.
- Produce three issues of *The Log*, and explore the value of distributing it electronically.



*Friends of Ecological Reserves Annual General Meeting: Katie Christie speaks to the Friends on her research project.*

- Explore opportunities for joint membership in like-minded organizations such as the Federation of BC Naturalists, the Canadian Parks and Wilderness Society and various land trusts.

#### Organizational Renewal

At the Retreat last November, the Board spent a lot of time exploring why we belong to the Friends, what we enjoy the most about the Friends, and what bothers us most. Out of this introspection we realized that we need to make some changes, and the main challenges in the year ahead are as follows:

- Recruit new Board members. Presently, the Board is short three members of its 12-member complement. We need to recruit new Board members, considering skill sets, time available and regional representation (Note: at this Annual General Meeting, we recruited two new members for the Board, Mike Fenger and Stephen Ruttan. Welcome!).
- Consider having another Warden on the Board to improve liaison



*Friends of Ecological Reserves Annual General Meeting: Don Eastman chats with new board member, Mike Fenger.*

with the Friends (Board member Marilyn Lambert is a warden for the Trial Island Ecological Reserve).

- Use a committee structure to more effectively draw upon the interest and expertise of Board members and share the workload of the Board. We propose to establish the following subcommittees: Outreach/Communications, Research, Fundraising, Warden Liaison, and the Executive.
- Explore additional sources of funding, especially for the State of ER report, and ways of building effective relationships with donors.

The above list of tasks is challenging for the Friends, but I feel it is possible and necessary to safeguard ecological reserves. In closing my report, I want to once again thank all of those individuals who contributed to making 2003 year a year to remember. ■

Visit [www.ecoreserves.bc.ca](http://www.ecoreserves.bc.ca)



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# The Gathering – An Update

By Peggy Frank

Remember the Gathering... a simple, short interactive meeting of ecological reserve wardens, potential wardens and government personnel responsible for ecological reserves? There was an action plan (see *The Log* – Winter 03 edition). Where are we on carrying out the actions?

Several things are happening. We have some informed new wardens in the system. It will be interesting to profile some of these wardens in upcoming issues of *The Log*. The Ministry has, to the best of their ability, embraced ecological reserves. Regional staff was informed about the Gathering and their responsibilities around ecological reserves, and is aware that a dedicated team of wardens is watching the reserves. The importance of “gatherings” was apparent and regional meetings should be happening annually.

While several awards were made recognizing those wardens with a volunteer history greater than 10 years, it was obvious that many long-term wardens needed to be added to this list. A call to “identify yourselves” was

put into the last newsletter, but there was very little response. While many wardens choose to be unsung heroes, one of the strengths of the system is the long-term dedication of ecological reserve wardens and the Minister should be aware of this. One way of informing the Minister is to ask them to sign recognition awards. We have a new Minister and we would like to let him know about your years of continued efforts. Please e-mail or snail mail us your years of experience as a warden.

Eva Durrance and a team of volunteers have been working on revising the Warden Handbook. Initial revisions have been reviewed by central government staff. Revisions are ongoing with a goal to completing a revised handbook this year.

Wardens in the Cowichan area have begun working on a general information/ education brochure for ecological reserves – something wardens can distribute to the public. So far there is nothing prepared in writing but ideas that have been circulating

suggest that some good preliminary drafts will be coming out this summer.

The Gathering alerted us to the need to have, at the very least, a central registry of wardens. This communication tool has been facilitated by information gathered in September. While government needs to keep current records, the wardens themselves need to supply current contact information to their area supervisor (see *The Log* – Winter 2003 for information on using the Provincial government website to find area supervisor contact information).

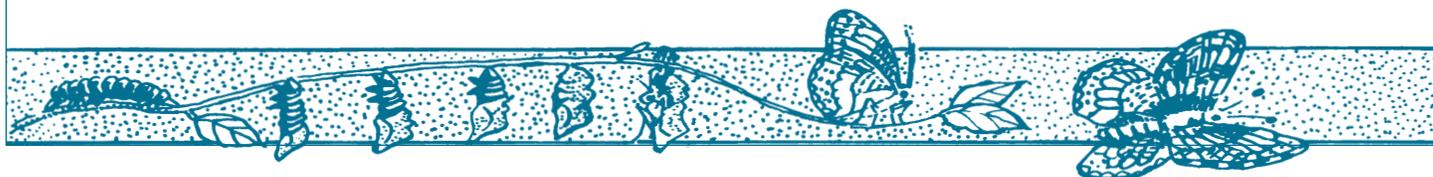
This is a great time to reiterate our thanks to other funders: the Ministry of Water, Land and Air Protection, the Endswell Fund of Tides Canada Foundation and the BC Grasslands Council. Without their help this event would not have happened. We are especially grateful to the financial help and our close relationship with the Federation of BC Naturalists, a direct result of this event. ■

## Obituary

By Vivienne Calder

Long time naturalist Joan King died Dec. 20, 2003 at her home in Oliver. Joan was married for 52 years to Harold King and provided unflinching support to him at all times, most especially in the long years of his work on the Land and Resource Management Plan for the FBCN. Joan was devoted to tending her family and her garden on the farm in Oliver. She was an active member of the Oliver-Osoyoos Naturalist Club and warden of Hayne's Lease and Field's Lease ecological reserves for 23 years. Joan was a knowledgeable birder who organized the Christmas Bird Count in Oliver and Osoyoos for 20 years and taught birding and botany to Elderhostellers for 10 years.

Joan was a founding member of the Osoyoos Desert Society and volunteered as receptionist at the Centre the last two summers. She was active in the Osoyoos Anglican Church, the Oliver Heritage Society, the Oliver Garden Club, the South Okanagan Hospital Auxiliary and Girl Guides. Her gifts of flowers, produce, friendship, and community involvement will be sorely missed.



**A letter from Friends of the Stikine Society:**

Dear F.O.E.R. Folks,

Please sign up FOSS. Some of the larger ER's in BC are in the Stikine watershed. We'd like to participate more with F.O.E.R. with this membership for starters.

For all rivers that flow everywhere in our hearts,

Stan Tomandl, Chair  
Ann Jacob, Treasurer

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## New Minister Appointed

On January 26, 2004, Bill Barisoff was appointed Minister of Water Land and Air Protection replacing Joyce Murray. Mr. Barisoff is MLA for the riding of Penticton-Okanagan Valley and was born and raised in Oliver, BC. Before coming to the MWLAP portfolio, Mr. Barisoff served as a committee member and was a critic in the Official Opposition. Mr. Barisoff can be contacted by phone at 250 387-1187, by fax at 250 387-1365 or by mail at PO Box 9047, STN PROV GOVT, Victoria, BC V8W 9E2.

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## Book Review

By Peggy Frank

### **The Last Island – A Naturalist's Sojourn on Triangle Island**

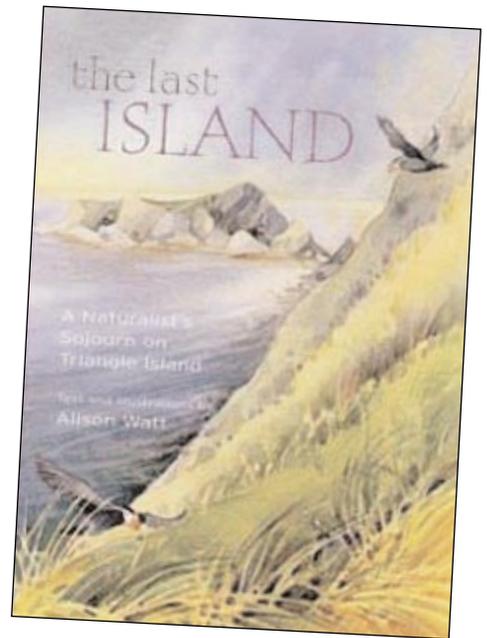
Written and illustrated by Alison Watt  
Harbour Publishing  
192 pages – 49 colour illustrations  
Hardback – \$34.95

Finally, a book about an ecological reserve! Alison Watt writes about an amazing bird sanctuary, located off the northern tip of Vancouver Island. Triangle Island, the Anne Vallee Ecological Reserve, is number 13 in the

ER System. It is accessible only by boat or helicopter in good weather. Alison spent four months on this reserve in 1980 and made a return visit in August of 1996.

I don't know how anyone could help but love this book – especially if that person has an interest in natural history and art. Many times, as I read this book I felt like I was peeking into Alison's personal diary. She shared the anxiety of being young and isolated on a rock with only one other person. She let us feel the excitement of returning nesting birds and she let us bear the shame for the death of a young puffin. It is that intimacy which allows us to understand the deep feelings that Alison had for Anne Vallee, the feelings that separated her from the other researchers who came, after Anne's death, to carry out research on the island. While the relationship between the two women is pivotal to the story, the bursts of natural history information are as exciting as the daily life of the researchers. Alison talks about ocean salinity, early explorers and the adaptations plants and animals make to live in a salt rich environment with such enthusiasm that the reader, too, is filled with a sense of awe.

That awe is enhanced by the watercolour images which dot the pages. Like the chocolate lily on page 94 and the courting pigeon guillemots on page 79, all illustrations are great additions to this book. Is this a story or a tribute? Personally, I think the book is a tribute woven into a tale. But not just a tribute to Anne Vallee and her puffin research but also a tribute to all the natural world that is so important to Alison Watt – and all of us. (See a description and photo of Anne Vallee Ecological Reserve on Page 8 of this issue) ■



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## Vicky Husband Scholarship Awarded

The 2003 Vicky Husband Scholarship has been awarded to Andre Vallillee. Andre is pursuing a double major in Political Science and Environment Studies and is a strong academic student. He is active in a number of on- and off-campus organizations including the UVic Substantiality Project, Vancouver Island Public Interest Research Group, the Student Senate of UVic, and the Campus Development Committee. Congratulations Andre and best of luck in your studies. ■

Dear Friends,

We read with horror *The Log* article about Commercial Guiding in Gladys Lake ER. As Reserve Wardens, we have always understood that commercial activity in ERs was forbidden. Indeed we have always felt that the Educational component of ERs should be reserved for serious undertakings that cannot be provided elsewhere in the province. This should be because of the unique characteristics of the particular ER that are unavailable elsewhere, for instance the study of a local endemic species. Or because nowhere else provides the pristine conditions that ERs can provide. And it is just this latter that will be eroded if ERs are used for recreational "Education" as is likely to happen with commercial guiding situations.

We have a particular interest in Gladys Lake ER, as we have served as the Spatsizi volunteer hosts at Coldfish Lake camp twice. And we have had extensive discussions with the BC Parks staff in Smithers about past abuses of this ER, by them and others. The feeling seems to have been that because of the large size and low numbers of visitors, there would be little impact. But because human impacts are not officially studied at any ERs that we are aware of, no one knows what will be missing if Gladys Lake is once again the site for a follow-up study of the goats and sheep. The introduction of sanctioned commercial use, as opposed to the officially ignored use that has been happening for years, will only compound the problems.

As ER wardens, we are also very concerned for the ER that we look after. To our knowledge, there has been very little human activity in the Tsitika Mt ER. But if this goes forward in Gladys Lake, there could be an entrepreneur who would want to guide into our area. It is made up of, and was set aside for, a fragile wetland. It would not stand much abuse without being altered and losing its significance for future study.

Because of our concerns, we would like to support the effort to prevent commercial use at Gladys Lake. We are enclosing a cheque for the legal fund. Please keep us informed of what is happening, and let us know if more is needed.

Sincerely,

David & Claire Oppenheim

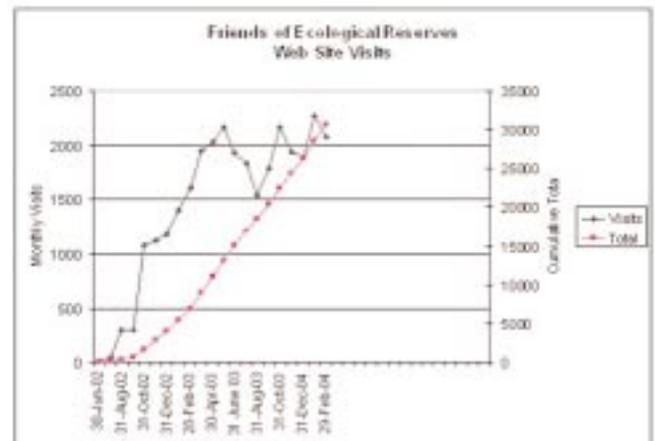
## Memberships Due

Just a reminder for those of you who haven't paid up yet that membership dues for this year are payable now. Your dues may not seem like much in the scheme of things yet they represent a major source of funds for the activities of The Friends and a bargain in terms of what gets accomplished with them. The membership form can be found on page 15 of this issue. Order a set of our beautiful placemats while you're at it! ■



[www.ecoreserves.bc.ca](http://www.ecoreserves.bc.ca)

The website has been up a running for almost two years! If you haven't visited us please do. We average about 2000 visitors a month from all over the world. Many people seem to come to our site searching for information about specific plant species. Usage is always highest on weekdays. ■



# Ecological Reserves of Northern Vancouver Island

## PART I – the bird islands



### ER 11 – Sartine Island

- Located 33 km WNW of Cape Scott on the Cook Bank between Beresford and Triangle Islands in the Scott Islands
- 13 ha
- A rugged island, Sartine rises steeply from a rocky shoreline to several pinnacles and humps. Although steep, the upper slopes have deep soil favorable for plant growth. There are no trees and few shrubs but twenty three species of interesting plants have been observed. Seabirds nesting in the reserve include Cassin's auklet, tufted puffin, common murre, glaucous-winged gull, pelagic cormorant and Brandt's cormorant. There is some conjecture that the Brandt's cormorant colony may not be a breeding site since they are known to build and attend "dummy" nests. Land birds include fox and song sparrows, a pair of peregrine falcons, and bald eagles. A Stellar



ER 11 Sartine Island

sea lion rookery occupies rocks just outside the reserve.

- Warden: no warden on record
- Potential threats: Environment Canada weather station (helicopter access, pollutants, introduced species), oil spills, commercial fishing



ER 12 Beresford Island

### ER 12 – Beresford Island

- Located 23 km W of Cape Scott on the Cook Bank, between Lanz and Sartine Islands in the Scott group
- 7.7 ha
- This small rocky island supports the only trees on the three outermost islands of the Scott group. On its rounded summit there are several very old and battered Sitka spruce. Dominant shrubs include red elderberry and black twinberry. Rare plants of the rocky slopes are hairy goldfields (*Lasthenia minor* subsp. *maritima*) and Pacific whitlow-grass

(*Draba hyperborea*). A 1987 survey recorded approximately 168,000 nesting seabirds including Cassin's auklet, tufted puffin, glaucous-winged gull, pelagic cormorant, pigeon guillemot, fork-tailed and Leach's storm-petrels. Single pairs of nesting bald eagles and peregrine falcons have been observed as well as abundant fox and song sparrows. Stellar sea lions use Beresford and its adjacent reefs and rocks as rookeries. Beresford is closed to the public and a permit is required to land.

- Warden: no warden on record
- Potential threats: oil spills, commercial fishing, boating, introduced species, pollutants, offshore drilling

### ER 13 – Anne Vallee (Triangle Island)

- Located 45 km WNW of Cape Scott, off northern tip of Vancouver Island
- 85 ha
- This island is the subject of Alison Watt's beautifully illustrated account of her time there entitled *The Last Island*. (See Peggy Frank's review on Page 6). It is a remote rugged island, with steep outer slopes and a rolling central plateau. The soil is well developed with a dense plant cover supported by the moist, humid climate and abundance of bird droppings. Trees are absent. A wind-pruned mantle of salmonberry protects associated species of Pacific crabapple, tufted



PHOTO COURTESY OF BC PROVINCIAL PARKS AND PROTECTED AREAS BRANCH

ER 13 Anne Vallee (Triangle Island)

hairgrass, salal and lady ferns which normally grow under a forest canopy. On the high ridges are Alaska saxifrage, Alaska brome, licorice fern, spiny wood fern and lady fern. Triangle Island's most remarkable feature is the size of its seabird colonies. With up to 400,000 breeding pairs recorded, it holds the record for the BC coast. The Cassin's auklet colony is the largest in the world and contains 40% of the world population. Other burrow-nesting species include rhinoceros auklet, tufted puffin (the largest colony on the BC coast) and pigeon guillemot. Cliff nesters include common and thick-billed murre. Pelagic cormorant, glaucous-winged gull and black oystercatcher nest here as well as several pairs of the rare Peale's peregrine falcon and the only known ground-nesting bald eagles in the province. Other nesters include northwestern crows, fox sparrows and song sparrows and many more land and oceanic birds visit seasonally. In total, eighty-one bird species have been observed on or near the island. The only mammals present are deer mouse (*Peromyscus maniculatus triangularis*) and Townsend vole (*Microtus townsendi cowani*) which have evolved in isolation for thousands of years and feral rabbits descended from introduced domestic rabbits. A Steller sea lion breeding rookery of 600–800 animals is one of only four in BC. Cultural features include extensive shell middens and struc-



PHOTO COURTESY OF BC PROVINCIAL PARKS AND PROTECTED AREAS BRANCH

ER 14 Solander Island

tural remains of the 1909–1919 lighthouse era. The island is closed to the public and a permit is required to land. The island provides exceptional opportunities to study seabird ecology, small mammal evolution, insular biogeography and climatic influences on vegetation.

- Warden: no warden on record
- Potential threats: oil spills, commercial fishing, boating, introduced species, pollutants, offshore drilling, people approaching wildlife, anchor damage, research camp (bird-banding operations, vegetation trampling)

### ER 14 – Solander Island

- Located 1.5 km W. of Brooks Peninsula, northwest coast of Vancouver Island
- 7.7 ha

- Named after Dr. Daniel Charles Solander, a Swedish botanist and pupil of Linnaeus, this reserve is a small steep-sided island with associated offshore rocks and reefs used as a winter haul-out for Steller and California sea lions. Trees are absent although there are some shrubs and grass cover. Burrow-nesting seabirds include tufted puffin, Leach's storm petrel and Cassin's auklet. Other nesting seabirds include pelagic cormorant, glaucous-winged gull and pigeon guillemot. Other seabirds observed on or near the

island include horned puffin, rhinoceros auklet, common murre, blacklegged kittiwake, sooty shearwater and Brandt's cormorant. Bald eagles and peregrine falcons are seen but nesting has not been confirmed. Solander has the second largest tufted puffin colony on the BC coast. The island is closed to the public and a permit is required to land.

- Warden: no warden on record
- Potential threats: weather station, helicopter landing pad, recreational visitation, commercial and recreational fishing, oil spills, vegetation trampling

See "Websites of Interest" on page 16 of this issue for links to the campaign for a Federal Marine Protected Area around the Scott Islands

continued on page 10

## ER 120 – Duke of Edinburgh (Pine/Storm/Tree Islands)

- Located 35 km E of Port Hardy off the northern end of Vancouver Island
- 660 ha (Land 125 ha)
- This reserve is made up of 20 small islands and surrounding shallows scattered over a 6 by 14 km area and fully exposed to ocean swells and storms. The islands are mostly exposed bare rock without surface soil deposits except for soft organic soils resulting from decomposition of plant material. The larger islands are forested with Sitka spruce, western hemlock and western redcedar with an understory, if any, of salmonberry, salal and false lily-of-the-valley. The largest breeding

concentration in the province of Leach's storm petrels, rhinoceros auklets and fork-tailed storm petrels are found here. The rhinoceros auklet contingent forms one third of the North American breeding population. Other resident seabirds include glaucous-winged gulls, pigeon guillemots, black oyster-catchers and pelagic cormorants. Ten pairs of bald eagles are thought to nest in the reserve. The shallows around the islands are rich in plankton due to nutrient-rich upwellings and are an important area for migrating water birds. Harbour seal pupping occurs on the low rocky islets and sei whales feed among the islands in summer.

- Warden: no warden on record ■

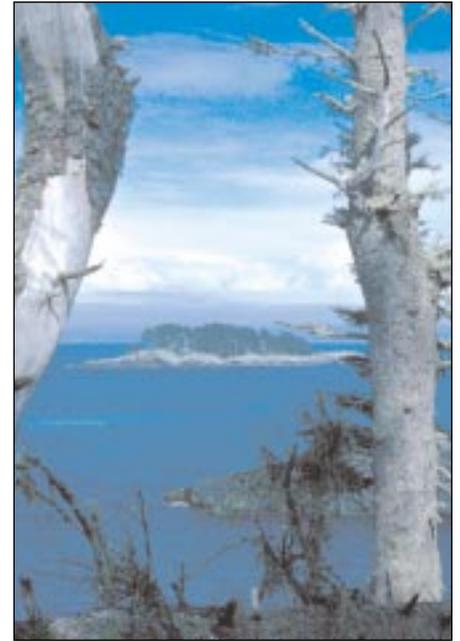


PHOTO COURTESY OF BC PROVINCIAL PARKS AND PROTECTED AREAS BRANCH

ER 120 Duke of Edinburgh  
(Pine/Storm/Tree Islands)

## Trial Island Field Trip May 1, 2004

The Trial Islands are precious jewels lying just off the Victoria waterfront near the Royal Victoria Golf Course. The most outstanding known assemblage of rare and endangered plant species in British Columbia occur here and have been protected as an Ecological Reserve for many years. The showy stands of spring wildflowers are a feast for the eyes and draw the Friends of Ecological Reserves back year after year for our annual field trip. With our leaders, Adolf and Oluna Ceska we will find many very rare plants that occur in only a few other localities in the province. Such delicate beauties as Golden Paintbrush (*Castilleja levisecta*) and the Bear-paw Sanicle (*Sanicula arctopoides*) will be in full bloom for our visit. Join the "Friends" and spend some time on this most delightful outing.

### Field Trip – Spring 2004

Saturday May 1, 2004 • Trial Island Ecological Reserve

Meet on the Beach at the foot of Transit Road, in Oak Bay at 9 a.m. for a short crossing by Zodiac to this small island with unique plantlife. Wear waterproof clothing, and bring your camera, sketchbook, and lunch.

FEE: FER Members – \$10, Non-members – \$30, Seniors/Students – \$25  
(includes a 1-year membership to FER)

Trip limited to 15 people: call and register by April 20 if you would like to enter the lottery for a place on the 2004 Friends of Ecological Reserves Trial Island Educational Trip

**TO REGISTER or FOR MORE INFORMATION call 477-5922**



# Salmon-derived Nutrients in Riparian Food Webs: Linking spawning salmon to songbird communities in the Pacific Northwest

By Katie Christie

Ecological Reserves in British Columbia protect areas of special importance because they host rare species, particularly threatened ecosystems, or biologically diverse communities. The eco-reserve network in BC protects a range of habitats, from sub-tidal marine ecosystems to Garry Oak woodlands to alpine meadows, and this reflects the biological diversity intrinsic to the province, a result of geological complexity and the juxtaposition of marine and terrestrial environments.

The flow of nutrients between marine and terrestrial environments fuels diversity and productivity along the coastline of BC. A critical link between these ecosystems is the predictable annual spawning events of pacific salmon (*Oncorhynchus spp.*), which result in large quantities of marine-derived nutrients being transported to the streams, lakes, and forests of BC. Many vertebrate species, such as brown and black bears, gulls, bald eagles, marten, and wolves congregate on salmon streams to consume this abundant resource. Bears and other wildlife transfer salmon into the forest and leave partially consumed carcasses to fertilize otherwise nutrient poor systems and this has cascading effects on riparian food webs. This nutrient subsidy results in increased primary productivity and aquatic invertebrate biomass in streams and lakes, increased riparian plant productivity, and increased terrestrial invertebrate biomass around salmon streams. During the spring and summer, the combination of high plant productivity and high aquatic and terrestrial invertebrate biomass may result in higher breeding densities of songbirds around salmon streams.

How the salmon nutrient subsidy affects terrestrial food webs is a major focus of our research group, comprised of five graduate students headed by

Dr. Tom Reimchen. Our group has conducted extensive research on salmon streams on the Central Coast, the Queen Charlotte Islands, and Vancouver Island, including the Megin River Ecological Reserve in Clayoquot Sound. This research began with a focus on bear-salmon interactions, and lead to findings such that up to 70% of the total salmon run can be transported into the forest by black bears and that bears regularly forage for salmon at night. Our research has broadened to include the role of salmon in maintaining the white morph of coastal black bear, or 'spirit bear', and the importance of salmon in the diet of coastal wolves. In addition, our group has found that salmon-derived nutrients affect tree growth rates, riparian plant species composition, and invertebrate community structure.

Much of this research involves the use of stable isotopes to trace salmon-derived nutrients into various components of forest food webs. Salmon is enriched in the heavy isotopes of carbon ( $\delta^{13}C$ )\* and nitrogen ( $\delta^{15}N$ ) relative to terrestrial sources and these heavy isotopes can therefore be used as chemical markers for salmon-derived nutrients in terrestrial food webs. Using this technique, members of our group have detected significant quantities of salmon-derived nutrients in riparian shrubs, trees, and invertebrates adjacent to salmon streams, revealing the flow of nutrients from marine ecosystems to forests.

It is likely that higher consumers such as songbirds obtain salmon-derived nutrients through the consumption of salmon itself, as well as insects, fruits, and seeds that are enriched in salmon derived nutrients. I investigate the effects of salmon on breeding and migrating songbirds during the spring and fall and elucidate the contribution



PHOTO: KATIE CHRISTIE

Winter Wren captured at study site  
on the Central Coast

of salmon-derived nutrients to songbird diets using stable isotopes. My study sites include two rivers on the Central Coast of BC which have waterfalls 1–2 km upstream that block the passage of salmon, thus providing a within-watershed comparison between salmon-influenced and control areas. Through point-count surveys in the spring, I compare the density and diversity of breeding birds above the falls, where there is no influence of salmon, to density and diversity of birds below the falls, under the influence of salmon. During the summer and autumn, I mist-net birds and collect feather samples in order to trace salmon-derived nutrients in their tissues using stable isotopes.

Perhaps the most obvious influence of salmon-derived nutrients on songbird communities occurs during the spawning period. When streams have large salmon runs and healthy bear populations, salmon carcasses litter the forest floor and are decomposed by fungi, bacteria, and thousands of blowfly larvae. Ground-foraging birds such as the Winter Wren, Fox Sparrow,

*continued on page 12*

*"Salmon-derived..." continued from page 11*  
 Song Sparrow, and Hermit Thrush consume the larvae that hatch out of salmon carcasses. Often these birds are seen hopping from carcass to carcass or foraging in groups, scraping the ground around decaying carcasses for the larvae that have burrowed underground to overwinter as pupae. In general, feathers of Winter Wrens captured below the falls were enriched in  $\delta^{15}\text{N}$  compared with those captured above the falls, indicating that salmon-derived nutrients are incorporated into the tissues of birds around salmon streams. For many birds, I was able to obtain multiple generations of feathers reflecting the diet during different seasons. Many wrens captured below the falls exhibited dramatically increased  $\delta^{15}\text{N}$  corresponding with high  $\delta^{13}\text{C}$  signatures in the autumn compared with summer, suggesting the consumption of carcass-consuming insects during the salmon season. Capture rates of ground-

foraging birds were slightly higher below the falls than above the falls, suggesting that the presence of salmon influences bird density during the late summer and autumn.

If indeed the presence of salmon is a predictor of songbird density, then the removal of salmon from coastal watersheds will degrade important breeding and stopover habitat for songbirds. The annual spawning events of Pacific salmon are integral to the diversity and productivity of terrestrial and aquatic ecosystems in British Columbia. Certain salmon streams have ecological reserve or park status; however, salmon populations continue to decline and watersheds continue to be logged. Only when we protect the processes that shape ecosystems in BC can we protect biological diversity in this province.

I would like to thank the Friends of Ecological reserves for their

generous support of my research as well as the work of Tom Reimchen. Without this support, our research would not be possible. ■

\*  $\delta$  = the deviation from an international standard measured in parts per thousand.



*Katie is a master's student at the University of Victoria under the supervision of Dr. Tom Reimchen. She hopes to pursue a career in biology with a focus on avian ecology, evolution, and conservation.*

## CALENDAR

### Earth Week 2004: Celebrating Peace, Earth & Justice

April 22 to May 1, Earth Day to May Day  
 Look for special Earth Week and Earth Day activities in your community including tree plantings, marches, cleanup and invasive species work parties, concerts, festivals and much more. For a complete listing go to the Earth Day Canada website at [www.earthday.ca](http://www.earthday.ca)

### Wings Over the Rockies Bird Festival

May 3 to 9, 2004  
 Various locations in the  
 Columbia River Valley  
 Contact: Wings Over the Rockies  
 Bird Festival  
 RR#4, #2 – 1535 14<sup>th</sup> Street, Invermere,  
 BC Canada V0A 1K4  
 Tel: 888 933-3311 or 250 347-2207  
 Fax: 250 342-9221  
 E-mail: [wings@AdventureValley.com](mailto:wings@AdventureValley.com)  
[www.adventurevalley.com/wings/](http://www.adventurevalley.com/wings/)

### 4<sup>th</sup> Annual Riversheds Forum of the Fraser River Basin

April 29 to May 2, 2004  
 Hills Guest Ranch, 108 Mile Ranch, BC  
 Theme: "Stormy Weather": Affects of  
 Global Warming in the Fraser River Basin  
 Contact: Fin Donnelly  
 Tel: 604 941-5937 • [fin@rivershed.com](mailto:fin@rivershed.com)

### 4<sup>th</sup> World Fisheries Congress

May 2 to 6, 2004 • Vancouver, BC  
 Theme: Reconciling Fisheries with  
 Conservation  
 Contact: Wayne MacCallum, American  
 Fisheries Society  
 Tel: 605 986-8018 • Fax: 604 904-9619  
 E-mail: [wmacallum@shaw.ca](mailto:wmacallum@shaw.ca) •  
<http://www.worldfisheries2004.org>

### 7<sup>th</sup> Annual Meadowlark Festival 2004

May 20 to 24, 2004  
 Penticton, BC and throughout South  
 Okanagan Similkameen Region

Contact: Janelle Parchomchuk,  
 Festival Coordinator • Tel: 250 492-4422  
 E-mail: [meadowlarkfestival@telus.net](mailto:meadowlarkfestival@telus.net)  
[www.meadowlarkfestival.bc.ca](http://www.meadowlarkfestival.bc.ca)

### Brant Wildlife Festival

April 4 to 6, 2004  
 Qualicum Beach and Parksville, BC  
 Write to 174 Railway Street  
 Qualicum Beach, BC Canada V9K 1K7  
 Tel: (250) 752-9171  
 Fax: (250) 752-9883  
 E-mail: [office@brantfestival.bc.ca](mailto:office@brantfestival.bc.ca)  
[www.brantfestival.bc.ca/](http://www.brantfestival.bc.ca/)

### Golden Wildlife Festival of Birds and Bears

May 8 to 11, 2004  
 Golden and Columbia Valley Wetlands  
 Contact: Golden Festival of Birds and  
 Bears, Box 1320 Golden, BC  
 Canada, V0A 1H0  
 Tel: 800 622-4653 • [goldcham@rockies.net](mailto:goldcham@rockies.net)

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# Forest Certification in BC

In recent years, increasing international demand for certified forest products has forced the BC forest industry to embrace forest certification – the voluntary, independent third party verification of sustainable forest management. Four systems of certification are currently active in the province: the International Organization for Standardization (ISO), the Canadian Standards Association (CSA), the Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC). The ISO guides forest companies in the development of an Environmental Management System (EMS), but does not include specific performance based standards. The CSA, SFI and FSC systems are performance based, requiring applicants to show a long-term commitment to a Defined Forest Area (DFA) and to Sustainable Forest Management (SFM) planning. Under these three systems, forest companies produce a Sustainable Forest Management Plan, Forest Stewardship Plan or similar plan, which outlines objectives and measurable indicators for meeting sustainable forest management targets. Regular third-party audits are conducted on the DFA to determine whether these targets are being met and whether certification or re-certification has been achieved. All certification systems offer a label for use on a product or packaging to demonstrate links to SFM certification (see sidebar). All three performance-based standards (CSA, SFI and FSC) include objectives for:

- Conservation of biological diversity
- Maintenance of wildlife habitat and species diversity
- Protected areas and maintenance of special sites

- Maintenance of soil and water resources
  - Sustainable harvests
  - Unacceptability of wood from illegal or unauthorized sources
  - Protecting forestlands from deforestation and conversion
  - Aboriginal rights and/or involvement
  - Independent audit required for certification claims, forest planning and practices
  - Public disclosure
- Abusow (2003 a)

According to a December 2003 *BC Certification Status Report* produced by the Canadian Sustainable Forest Management Certification Coalition (Abusow 2003b), over 57 million hectares of BC forest land and over 60 million m<sup>2</sup> of the Annual Allowable Cut are now certified under at least one of the certification systems. This includes 31 companies with over 46 million ha managed under an ISO Environmental Management System, 5 companies with over 10 million ha certified under CSA standards, 10 companies with over 11 million ha certified under SFI and 5 companies (mostly small woodlots) with 100,291 ha certified under FSC.

Many large retailers of BC wood products, such as IKEA and Home Depot, are demanding certified wood products. Forest companies are delivering. But is certification making a difference in the forests? The BC government thinks so. According to a January 2003 fact sheet produced by the BC Ministry of Forests (2003), the provincial government “supports forest certification as a way to meet the interests of customers and demonstrate the province’s commitment to sustainable forest management’.

Changes to the Forest Practices Code and other government policies will allow companies greater flexibility to meet certification requirements.

However, a 2003 report, *On the Ground*, commissioned by ForestEthics, Greenpeace and the Sierra Club – BC Chapter uses case studies to compare the effectiveness of the three performance-based certification systems internationally. The report provides evidence of continued environmental damage under CSA and SFI certified operations, including a proliferation of clearcuts, continued logging of forests inhabited by endangered species; damage to drinking water, fisheries and streamside forests; ongoing use of chemical herbicides; accelerating losses of natural forest; and tree farm expansion. Only FSC certification was found to represent “a viable system that delivers positive results on the ground and in the communities where it matters most” (Tan 2003).

In 2002, the BC Chapter of the Forest Stewardship Council completed forest management standards for BC. However FSC certification is rare in the province, occurring mostly on small woodlot operations. Tembec Industries is one large company with a corporate direction to achieve FSC certification on all its woodlands, but none of its BC operations are yet certified. Some companies adhere to FSC standards without seeking certification. Why is FSC certification so rare in BC? Industry says the standard is unworkable and the audits expensive. The BC FSC standards are currently under revision to address problems.

So where does that leave the consumer? The NGOs say to ask for FSC certified products, but they are hard to find in BC. Certification is a

*continued on page 14*

"Forest Certification..." continued from page 13  
 relatively new concept in forest management: the Forest Stewardship Council was established in 1993, the first CSA sustainable forest management standards were published in 1996. All standards are subject to improvement over time. It is important to remember that the concept of forest certification, a definite step towards sustainable forest management, was the result of consumer demand. In the same way, progress toward improvement in CSA and SFI standards and implementation of FSC standards will likely also be the result of consumer pressure.

**References and for more information:**

Abusow, K. 2003 a. Focusing on Certification Similarities to Promote SFM. Produced for Forest Products Association of Canada. March 2003. [http://www.sfms.com/pdfs/FPAC\\_SFM.pdf](http://www.sfms.com/pdfs/FPAC_SFM.pdf)

Abusow, K. 2003b. BC Certification Status Report. Canadian Sustainable Forest Management Certification Coalition. December 2003. <http://www.sfms.com/status.htm>

BC Ministry of Forests. 2003. Forest Certification British Columbia Canada. January 2003. Government of BC. On the internet at <http://www.for.gov.bc.ca/het/certification>

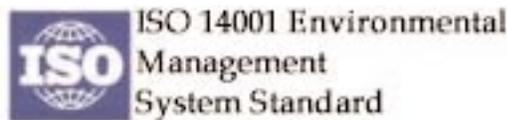
Canadian Sustainable Forest Management Certification Coalition. <http://www.sfms.com> Includes information about ISO, CSA, SFI and FSC.

Good Wood Watch. <http://www.goodwoodwatch.org/goodwoodwatch>

Tan, Amy. 2003. On The Ground. A report commissioned by ForestEthics, Greenpeace and the Sierra Club-BC Chapter. On the internet at Good Wood Watch. <http://www.goodwoodwatch.org/goodwoodwatch/PDF/OnTheGround.pdf> ■

A Joint NGO Statement on Forest Certification released on March 26, 2003 by the David Suzuki Foundation, Greenpeace Canada, the Pulp Paper and Woodworkers of Canada, Rainforest Action Network, ForestEthics, Sierra Club, West Coast Environmental Law Association and 30 other Canadian And US based non-government agencies, recommends Forest Stewardship Council (FSC) certification as the only forest certification system worthy of support at this time and encourages wood consumers to specify a preference for FSC certified forest products. The full text of the statement and more information can be found on the internet at: <http://www.goodwoodwatch.org/goodwoodwatch>.

*Watch for these logos on BC Forest Products*



Visit [www.ecoreserves.bc.ca](http://www.ecoreserves.bc.ca)

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# FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central Victoria BC V8W 3S1

Renewal for 2004                       New membership

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 Contributing articles/photos to *The LOG*  
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# Websites of Interest

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## Public review of the moratorium on offshore drilling:

Starting on April 5 and continuing until May 15, a public review panel will be visiting coastal and offshore communities to get public input on potentially allowing oil and gas drilling off BC's coast to resume. Presentations can be oral or written. The website has a calendar of times and locations of hearings along with profiles of the panelists, details on how to participate and submission deadlines.

[www.moratoriumpublicreview.ca](http://www.moratoriumpublicreview.ca)

The Royal Society of Canada's "Report of the Expert Panel on Science Issues Related to Oil and Gas Activities, Offshore British Columbia" can be accessed at [www.rsc.ca](http://www.rsc.ca)

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## Marine Conservation Area campaign for the Scott Islands:

Canadian Parks and Wilderness Society (CPAWS) and the Canadian Nature Federation (CNF) have launched a campaign to have a marine protected area put in place around the Scott Islands which include the ecoreserves of Anne Vallee, Sartine and Beresford Islands. Environment Minister David Anderson and the federal government make all the right noises about the importance of protecting marine areas but have yet to commit funds to their Ocean Action Plan. A backgrounder

and a link to the PDF version of a brochure on the Scotts campaign can be found at [http://cpawsbc.org/action/scott\\_islands](http://cpawsbc.org/action/scott_islands) Information is also available on the CNF website at <http://www.cnf.ca/action/scott.html>

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## The Stewardship Centre:

This organization has set itself no small task: to educate landowners, developers, volunteers, professionals, local governments and agencies on handling conservation values on their land. Their conviction is that most people would "walk lightly on the land" if they only had a little encouragement, information, and guidance tools. Their vision is to link human development and natural ecosystems to create healthier and more sustainable communities. To that end they have produced stewardship guides on aquatic habitat, grasslands, community greenways, land development guidelines and several handbooks on stewardship skills. The guides are available in PDF format on the website or a printed copy can be ordered.

[www.stewardshipcentre.bc.ca](http://www.stewardshipcentre.bc.ca)

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## West Coast Environmental Law:

These people are the heroes when it comes to using the law to protect the environment. They have assisted citizens and organizations with free legal advice, research, education,

advocacy and law reform services for thirty years. If you or your organization could use their help with solving an environmental problem in your community, look at the guidelines for applying on the website. There is also an excellent synopsis of our provincial government's record on environmental issues under Hot Topics.

<http://www.wcel.org>

# The Log



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Victoria BC V8W 3S1  
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