

President's Report

By Mike Fenger

I'd like to thank all our members, ER wardens and supporters of Friends of Ecological Reserves. A year ago FER had completed a number of projects which were the focus of last year's President's report. This year FER and everyone involved with ERs are receiving the benefits of those projects.

It has been a very good year and FER has risen to the major challenges, experienced some disappointments and increased its profile, and we believe Ecological Reserves attained a higher and fitting level of public awareness. Here is a retrospective look at 2012, linked to our five strategic goals, followed by a look ahead at 2013.

Goal 1. Support for the ER Wardens' Program.

- There have been big changes in BC Parks with regard to volunteers. There is now a Provincial Volunteers Coordinator, Becs Hoskin. We are grateful that Parks has recognized the value of

volunteers and the benefit of their support. We thank Becs for attending an FER Board meeting and helping us understand the BC Parks Volunteer Strategy. <http://www.env.gov.bc.ca/bcparks/volunteers/>. In our 2005 State of Ecological Reserves report, FER estimated that ER Wardens and FER provided government additional help equivalent to five full-time employees.

- In addition to a Provincial Coordinator, Parks has also hired seven Regional Conservation Coordinators and these new resource persons will be of benefit to ER Wardens and to all ERs. Wardens will continue to work directly with Area Supervisors.
- Thanks to Joanne Hirner the new Lower Mainland Conservation Coordinator for her invitation to Garry Fletcher and Mike Fenger to

Continued on page 2

Inside ...

President's
Report (Cont'd.) 2, 15, 16 & 17

BC Parks Long Term
Ecological Monitoring
Program 3,4,5 & 6

Race Rocks Field Trip 6 & 14

Oral Statement Given at
Enbridge Northern
Gateway Pipeline
Project Hearings 7 to 11

Caribou, Wolves and
Conflict in Society 12, 13 & 14

Remembering Syd Watts 18

ER Wardens
Information Back cover

Visit our website at:
www.ecoreserves.bc.ca



The Log

Spring/Summer 2013

The LOG is published 2 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 Autumn/Winter issue of *The LOG* is November, 2013.

Editor

Louise Beinhauer

Design and Production

L.B. Word Works

Directors

Mike Fenger, President

Tom Gillespie, Membership Secretary

Marilyn Lambert

Mary Rannie

Stephen Ruttan

Garry Fletcher

Jenny Feick

Rick Page

Don Eastman, Past President

Honorary Directors

Bristol Foster

Robert Bateman

Trudy Chatwin

Vicky Husband

Josette Wier

Contributors to this issue:

Mike Fenger, Tory Stevens, Aziza Cooper,
Rick Page and Garry Fletcher

Memberships are based on a calendar year.

Individual: \$20, Family/Institutions: \$25

Students/Seniors: \$15

Charitable BIN # 118914597RR

FRIENDS OF ECOLOGICAL RESERVES

PO BOX 8477 STN CENTRAL

VICTORIA, BC V8W 3S1

Email: ecoreserves@hotmail.com

Website: <http://www.ecoreserves.bc.ca>

Canada Post Agreement No: 40020740

President's Report (Cont'd.)

attend the regional ER meeting (Feb. 18, 2103) and for the opportunity to make a short presentation on what the strategic goals of Friends of Ecological Reserves are and how FER hopes to help Parks staff.

<http://ecoreserves.bc.ca/2013/02/19/south-coast-ecological-reserves-in-bc/>

- There have been a number of new ER Wardens added and we have lost a few as well. The names of the ER Wardens appear on the revised FER website under each of the ER profiles. FER continues to struggle to keep the ER Wardens' list current and remains dependent on Parks staff when there are changes to ER Wardens.
- Thanks to Garry Fletcher who made a special week-long trip in the fall of 2012 to the Okanagan to visit most of the Okanagan ERs accompanied by their Wardens and to hear the rewards and challenges Wardens face.

<http://ecoreserves.bc.ca/news/newsletter-archive/>

Goal 2. Support Studies in ERs

- FER continues to add existing research papers to our website, linked to ERs, as they become available. We suspect that there are studies known to ER Wardens and in regional offices that are not on the FER website. We will continue to post these when they are provided to us. Friends of Ecological Reserves depend on Wardens and Area

Supervisors to fill in the gaps in the existing completed research that is absent from the FER website.

- We thank Tory Stevens for attending an FER board meeting and clarifying elements of Parks Long Term Ecological Monitoring Program as well as Parks Conservation Risk Assessments. (See article by Tory Stevens in this LOG on page 3 for a more complete understanding).
- FER thanks Elyse Matthews for the work she completed to reach out to University of Victoria teaching and research staff. Elyse, together with FER board members, developed and sent a survey/questionnaire to teaching and research staff at the University of Victoria to learn what they know about Ecological Reserves. It was very unfortunate that the number of questionnaires returned was too low for FER to draw any conclusions about University of Victoria knowledge of ERs and their potential use for teaching and research.

Goal 3. Support Development of a Resilient Science-based ER System

- Progress on Marine Protected Areas is frustratingly slow. There is Federal government commitment to expansion of the Marine Protected Areas (MPAs) with a target of ten percent. FER was involved with both the Race Rocks and

Continued on page 15

BC Parks Long Term Ecological Monitoring Program

By Tory Stevens, BC Parks

Beginning in 2011, BC Parks developed and began to implement a province-wide, long-term ecological change monitoring program that can be conducted with the resources and expertise available. The goal was to create a program that relies on BC Parks' current staff, and monitoring protocols that were already developed. The program will give us the ability to observe changes over time across the province, and the opportunity to respond to those changes where possible.

The program has identified a core system of 100 monitoring sites that can be maintained by BC Parks staff. In addition to these care sites, there is the ability to augment the program with sites established and monitored by volunteers. Power results can be generated by many people contributing just a few days annually across the depth and breadth of the province.

FRAMEWORK

The monitoring framework is based on eight broad biomes with 1-3 indicators in each biome. In some cases the data is already being collected by outside agencies and so we will report on the data but not be involved in the data collection. In other cases there are well-established citizen science networks that can be expanded to cover the gaps in parks. We will take advantage of these opportunities.

Superimposed on the biomes are the 50 management areas within the protected areas



BC Parks Ranger doing intertidal biodiversity monitoring at Ten Mile Point ER

system. Each Area Supervisor will be responsible for establishing two plots and measuring one of them each year. Annual commitment is expected to be 1-3 days per year. The program is being gradually introduced so that the workload is not too onerous in any one year.

The following sections describe each of the biomes and the indicators that have been chosen to represent them. The first five are those that we are monitoring directly. The final three have other groups active within them and we are able to tap into their data to keep track of trends within the provincial park system.

Intertidal

The protocol in the intertidal biome is modified from the Partnership for Interdisciplinary

Studies of Coastal Oceans (PISCO) protocol developed in California. As a result, we can incorporate the PISCO sites that are located in protected areas into our monitoring network. These include sites on Hippa Island, Duck Island and Tow Hill. Our efforts will fill the gaps in this existing network. This protocol measures functional groups (barnacles, various kinds of seaweeds) in the intertidal, the density of sea stars and the diversity of non-sessile organisms.

We have also partnered with Bird Studies Canada to carry out beached bird surveys on the coast. Where possible, our staff will find local volunteers to conduct these surveys in parks.

Forests

This biome covers more of the

Continued on page 4



BC Parks Ranger and Ecologist doing grassland plant community monitoring in Tunkwa Provincial Park

"Ecological Monitoring" continued from page 3

province than any other. We have identified three indicators with associated protocols. These are 1. Squirrels, 2. Sopollalie (*Shepherdia canadensis*) and 3. Winter tracks. These indicators were chosen because of their importance in reflecting the productivity of forested habitats.

Grasslands

The grasslands protocol is loosely based on the range evaluation protocols developed by the Grasslands Conservation Council (GCC). Because our interest is in monitoring unmanaged (no domestic grazers) grasslands, we have focussed on the reference conditions identified by the GCC. This protocol measures the cover of species in our grassland plots.

Wetlands

Wetlands are being evaluated by measuring the change in water level, amphibian and bird productivity. We are using the

BC Frog Watch protocols for amphibians and supplementing with observations of waterfowl numbers. We have automatic data loggers which we are beginning to deploy in wetlands to record temperature and water level.

Alpine/Sub-alpine

These protocols are being developed in conjunction with a long-term alpine monitoring project being developed by Dr. Brian Starzomski from the University of Victoria. This species change protocol is similar to the grassland protocol and records the cover of every species within a permanent array of $\frac{1}{4}$ m² plots. We will set up and record the data from these permanent plots and augment our data with that from the University of Victoria plots.

Biomes with other groups primarily engaged in data collection:

Marine

The marine biome is being

CALENDAR

**Botany BC 2013 -
Revelstoke/Golden**

August 18 - August 11, 2013

For info:

<http://members.shaw.ca/botanybc/BCFrame-3.htm>

BC Nature Fall Conference

**September 19-21, 2013 in
Cranbrook, BC**

For info:

<http://www.bcnature.ca/wp-content/uploads/2013/06/Complete-Registration-information-FGM-2013.pdf>

**2013 - Conservation
Connection**

September 2013

Habitat Acquisition Trust holds Conservation Connection every year. For further information.

<http://www.hat.bc.ca/>

evaluated by the health of eel grass communities along the coast. This is being carried out entirely by various organizations under the umbrella of the Sea Grass Working Group.

Lakes

The BC Lake Stewardship Society has developed a protocol to measure Ice On and Ice Off events. This has a dramatic effect on the ecological functioning of a water body and changes in these dates are a clear indication of climate changes. We will use the data that they have already collected and, with our staff, attempt to fill some of the gaps in the latitudinal and longitudinal variation in BC.

Continued on page 5

Streams

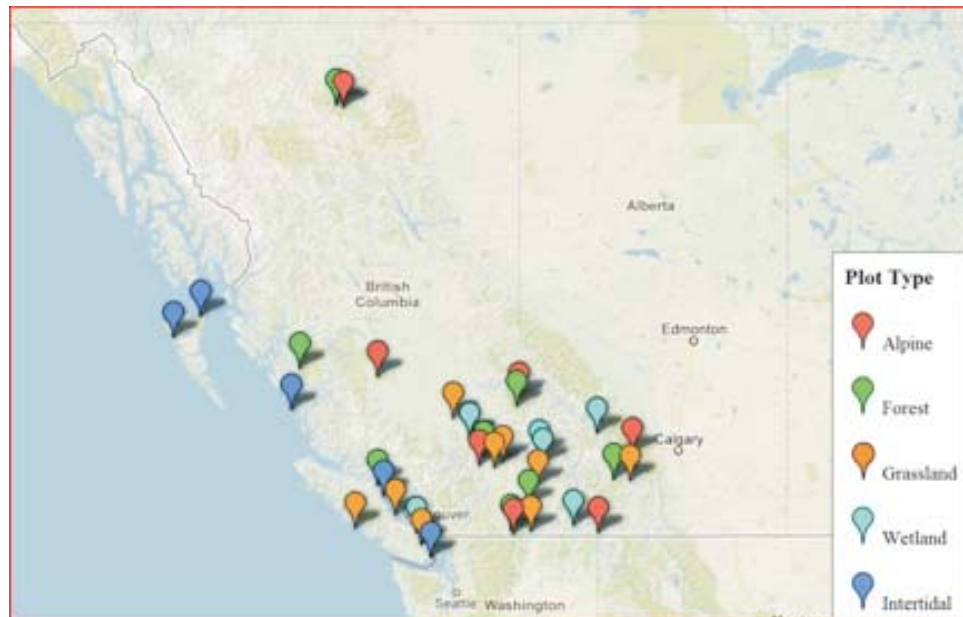
The most important indicator of stream condition is the benthic community living in the stream. There is a Canadian network already established to monitor these benthic organisms (The Canadian Aquatic Biomonitoring Network (CABIN)). We have identified where their sampling sites are located in protected areas and will rely on this network to monitor this biome without our direct involvement.

TESTING

Pilot testing occurred on every protocol that we are conducting ourselves during the 2011 and 2012 seasons. Modifications were made, both to make some protocols simpler so that they could be conducted within the limited time available from our staff, and to make some more detailed so that the information is more valuable. Although the official piloting is now over, BC Parks is still tweaking the application of the protocols.

TRAINING

For the most part the protocols are simple enough to be carried out without extensive training. Where possible, regional Conservation Specialists or Victoria staff will help set up plots and discuss the protocols with those carrying them out. We have focussed our training on the three protocols that involve detailed recording of species change. These are the intertidal, grassland and alpine protocols. We have also been involved in developing a



Location of established sites

method to deploy the data loggers in wetlands.

DATA MANAGEMENT

The data will all be stored on an existing database known as the Species Inventory database or SPI. This database is open to the public. The long-term goal is to have data collected electronically to avoid the time and inevitable errors involved in transcription. We are discussing options with the MOE Knowledge Management Branch to design the data collection and data storage.

CONTINUOUS IMPROVEMENT

The intent of this framework is that additional indicators can be added as needed and existing protocols tweaked to make them better as time goes on. We are conscious of the fact that we will need consistency through time in order to draw conclusions about trends. We will also be encouraging volunteer groups to augment our 100 sites to increase the robustness of the data. The

system is designed so that in hard times we can pull back to our core sites, but the monitoring will continue.

PUBLICATIONS

Two publications have been published in the *Journal of Ecosystems and Management* as a result of the first year of the project. These are *Designing a long-term ecological change monitoring program for BC Parks* by Pamela Wright and Tory Stevens (13(2) pp.87-99), and *Field staff perspectives on managing climate change impacts in parks and protected areas* by Pamela Wright (13(2) pp. 51-71).

GOING FORWARD

We begin the 2013 season with 34 identified monitoring sites, 9 of them in Ecological Reserves. The ER Wardens are involved in the data collection in several of these. Most of these are in the southern half of the province and most are established by BC Parks staff. We

Continued on page 6

Race Rocks Field Trip

By Aziza Cooper

Ten people, including two children, visited Race Rocks and toured the lighthouse and grounds. Many of us were enthusiastic photographers, including the kids, and several of us were birders as well.

Garry Fletcher, the Warden of Race Rocks Ecological Reserve, was our guide for the trip. We had a very calm, warm day, mostly sunny with a touch of fog. The boat left from the Pearson College dock in Pedder Bay at 10:00 am, a 15 minute ride over calm water.

At the entrance to Pedder Bay, Garry had the boat stop to show us the relay of webcams from Race Rocks to Pearson College. He mentioned that the signal just clears the trees on the DND property at Rocky Point.

Hundreds of Pigeon Guillemots gave their high-pitched whistles as we approached the island. The tide was quite low, and embarking from the boat was a long step

"Ecological Monitoring" continued from page 5

hope to double this number by the end of the 2013 season and reach our in-house goal of 100 by the end of the following year. The map indicates where established sites are located. Sometime in the next few months, an LTEM website will go live on the Ministry of Environment web page. This same map will be interactive on that page. Where data has been loaded into SPI, it will be accessible from the map.



Northern Sea Lions

up. We were welcomed by Mike Robinson, the resident eco-guardian, and two Elephant seals along the concrete dock who were showing their teeth and grunting when we came too close. Guillemots and Black Oystercatchers called and kept a sharp eye on us.

Walking close to Elephant seals was unavoidable since about a dozen lay along the concrete paths around the lighthouse. Six were lined up in the sunshine among the garden flowers planted by former residents. We had very close views of pink mouths, last years' fur being shed, red-rimmed eyes and occasionally scars, which are used to identify individuals. Flies (a non-biting native species) were abundant, and the smell of guano was pretty strong.

Canada geese were nesting, incubating addled eggs. Grass and native plants around the lighthouse are stressed by geese grazing and by the many sea mammals hauling out. An exclusion plot has lush, tall grass, while the grass outside is very short.

Garry took us down to the intertidal zone at water's edge. He showed us many marine organisms and told us hair-raising stories of giant boulders which have been moved by the ocean's awesome power. A pond created for study purposes is now roofed over by a huge rock which shifted in the storms. He also showed us Anita's Pool with its amazing diversity of creatures.

Northern sea lions were on a

Continued on page 14

Oral Statement Given At Enbridge Northern Gateway Pipeline Project Hearings

By Mike Fenger

Thank you for this opportunity to provide input. I am Mike Fenger President of Friends of Ecological Reserves. We leave you a written copy of this presentation with web links and a map of BC's Ecological Reserves.

After examining available information we cannot support The Northern Gateway Project and will clarify how we came to that conclusion. We hope in the end, this panel draws the same conclusion and recommends against this project.

FER is a non-profit three-decade old volunteer group that assists BC Parks staff to safeguard 150 Ecological Reserves. Ecological Reserves (ERs) protect highly productive, unique ecosystems and representative examples of BC's nationally outstanding marine and terrestrial biological diversity. The purpose, existing research, size, location and intent of ERs can be found on the FER website (<http://ecoreserves.bc.ca/ecoreserves/map-of-ecological-reserves/>) and on the map. Although FER has a focus on ERs (which are less than 1/10th of a percent of the BC protected areas system) FER has concerns about current and proposed development projects and how to sustain the productivity of all of BC ecosystems.

FER does not support two pipelines crossing 1,700 streams and 200 super tankers annually in BC waters. There is too big a risk to incur long-term damage to complex marine ecosystems with five species of salmon, millions of sea birds, mammals and bivalves. Healthy ecologically-intact



Proposed Tanker Routes

marine ecosystems are part of BC's legacy and keeping them ecologically intact is part of our culture, identity and heritage, especially for Heiltsuk, Haida, Salish, and other First Nations. These ecosystems are also part of the national Canadian identity and maintaining them is in the national and global interest.

The guaranteed ecological disaster from these proposed pipelines is not a risk the Federal government should take; FER is completely opposed to this development project. We provide seven concerns to support why this project is not in the public

Continued on page 8

interest.

Our first concern is that less than 1% of BC's coast is marine protected area. This is an unacceptable level of marine protection. Marine ecosystems are productive but fragile and only through greater protection is there any viable hope of sustaining these in the longer term for our mutual and collective benefit.

Forty years ago the provincial government recognized the fragility of sea bird and marine mammal colonies and gave them special protection as ERs. We are talking about marine damage that goes far beyond the expected life span of this pipeline and beyond consecutive political terms; the long term affects generations not yet born and this project degrades our future.

Currently none of the marine feeding and migration routes have marine protection. There are 28 marine ERs set aside to help understand and protect some of BC's most productive marine ecosystems; world class examples of pristine aquatic ecosystems, these ERs contain many coastal islands with BC's highest densities of sea bird, sea mammal and sea otter colonies.

Ecological Reserves along the proposed southern tanker exit route from Douglas Channel are Moore-McKenney-Whitmore Islands ER and Byers-Conroy-Harvey-Sinnett Islands ER. Also threatened are three ERs in Scott Islands group off the north tip of Vancouver Island which protect BC's largest sea bird colonies (over a million nesting sea birds) as well as the Duke of Edinburgh and Robson Bight ERs and ERs now managed as part of the Gwaii Haanas National Park. A northern



Nesting Pigeon Guillemots at Race Rocks. (Photo by Aziza Cooper)

tanker exit route from Douglas Channel will negatively impact Rose Spit and Lepas Bay ERs.

The Federal government has acknowledged the need for expanded marine protection but this designation process has significantly lagged behind provincial conservation efforts. Over the last two decades, the amount of publicly held in-trust land on the Pacific Coast or "crown land" under provincial jurisdiction has grown from less than 6% to an area greater than 30% in the Great Bear Rainforest and Gwaii Haanas areas, and a provincial average of just over 15%. A marine protected areas system is necessary to sustain seabirds, salmon and marine mammals and reduce risk. The Federal government has, after a decade, been unable to increase marine ecosystems protection to even 1%. In addition, the Federal government continues to withdraw support for natural ecosystem research in general and is

decreasing environmental protection and removing existing legislated tools that help to safeguard Canada's ecosystems.

These federal tactics are changing the legal ability to even attempt to protect BC's pristine coastline. Less Federal oversight increases the need for zoned protection.

We ask that you recommend a moratorium on projects in BC that propose diluted bitumen ("dilbit") transport. It is urgently needed in order to increase marine protection as well as provide the time to increase monitoring, research, establish clear legislated protection and build experienced enforcement teams. Because the marine and terrestrial ecosystems are interconnected, the currently protected provincial areas remain at extremely high risk without greater complementary marine protection. Although marine conservation planning processes

Continued on page 9

such as the Pacific North Coast Integrated Planning Area and Scott Islands National Wildlife Area are in place, they appear stalled in part due to the Federal government's lack of commitment to them. FER believes that not less than 30% marine protected area is needed to match the Crown land protection that now exists on the coast and this is required in advance of increased industrial developments, such as the Northern Gateway Project.

Our second concern is this project is based on the untested hypothesis that dilbit can be removed from ecosystems and ecosystems can and do recover. This hypothesis is false and misleading; dilbit recovery remains completely unstudied.

What are the hazards to species and humans and how long would this persist? Spills into marine systems such as the 2010 British Petroleum Gulf spill and the 1989 Exxon Valdez in Alaska, demonstrate that restoration or recovery are unrealistic and overstated by proponents and likely increase harm and degradation.

A moratorium is necessary because of the absence of knowledge about the impacts that a spill of dilbit would have on marine life, terrestrial organisms and human health. Dilbit sinks and has a different chemical makeup than oil and the current marine spill response are not suited to marine and fresh water dilbit spills. (*A Dilbit Primer: How It's Different from Conventional Oil* <http://insideclimatenews.org/news/20120626/dilbit-primer-diluted-bitumen-conventional-oil-tar-sands-Alberta-Kalamazoo-Keystone-XL-Enbridge>).

This project, if approved gives permission to conduct an indus-



Tufted puffins (*Fratercula cirrhata*) (photo courtesy of K. Bodtke)

trial-scale experiment without prior knowledge about and disclosure of environmental, economic and human health impacts to the environment. There is an absence of practical peer-reviewed research and operational trials.

If approved, there would be over 200 super tankers much larger than anything operating in BC today. The 1989 Exxon Valdez spill was estimated between 11 to 32 million litres so these new super tankers set the stage for equal or bigger sized dilbit spills into west coast waters. The fragility of coastal ecosystems cannot withstand even one dilbit spill, which is inevitable with 200 annual super tankers.

Construction costs for this mega-project are estimated at 6 billion dollars. The cost of attempted clean-up from a single super tanker spill is estimated at more than the construction costs and reduces our current economic base from fishing, eco-

tourism, and as well the underpinning of First Nations communities. We believe the real impacts and costs of this project far exceed the optimistic 'benefits' being promoted by orders of magnitude.

The impacts in the case of Exxon Valdez are long lasting and essentially permanent. Herring spawn survival in the spill area in Alaska has recovered to only 20% of pre-spill levels after 24 years despite significant clean-up efforts. Today Exxon is no longer willing to pay to compensate individuals impacted or to continue to spend funds compensating residents despite their profitability. There is no ability or willingness to force them to compensate in lieu of failed restoration. Exxon has limited its liability through legal means and left Alaskans a degraded un-restorable marine ecosystem. Like the Enbridge proposed mega project, there was no knowledge

Continued on page 10

beforehand of how or whether spilled oil could be removed and productivity restored in a reasonable time frame.

The chemicals used in the BP Gulf spill were toxic to key species. Spill clean-up is left to member supported Western Canada Marine Response whose equipment appears inappropriate and inadequate for dilbit.

At this time there is not sufficient experience and credible scientific understanding of how to clean up dilbit. It is a reasonable public expectation to know this outcome before taking the risk; and not disclosing knowledge of dilbit clean-up would be willful ignorance. The current regulatory approach is to prevent spills. When spills occur, then industry and government must be seen to react at that time, even if it is ineffectual and make promises on world class standards and safeguards followed by inaction. The Exxon Valdez was an industrial scale experiment from which Prince William Sound has not recovered. Although tar sands oil is chemically different from the Exxon Valdez oil, we argue that it will be more difficult to remove dilbit. The cost of restoration and unwillingness of Exxon to continue to take responsibility after initial statements of responsibility are clearly an insight into their corporate priorities, which do not include environmental protection and ecological restoration. We expect similar behaviour from Enbridge and tar sands advocates. After dealing with more than 8,000 pipeline spills "experts" stated they had never before dealt with a dilbit spill once it entered the Kalamazoo River. It will only take one dilbit spill to irreversibly damage BC's marine and fresh



Sea Otter (*Enhydra lutris*)

water aquatic ecosystems. A moratorium on this and other dilbit development proposals is needed to answer some of these very basic questions.

A third concern is the number of shipwrecks in west coast waters suggests that it is a matter of time before there are human errors and we have a tanker aground and a spill. Environment Canada marine weather reports indicate the winter weather in Hecate Strait regularly produce 8 to 10 metre waves and the depth of the Strait make short steep waves and create the fourth most dangerous waterway in the world for small boats. Floundering or grounded tankers need small boats readily available to provide assistance. This typical tanker rescue process is not possible in Hecate Strait; the dangers and risks are too extreme.

A fourth concern is the transfer of corporate liability from Enbridge and super tanker owners to British Columbians. It is our understanding that Enbridge created a separate pipeline entity to limit their overall corporate liability – in effect transferring liability to British Columbians. Currently spills, clean up and fines are operating costs. Enbridge has continually demonstrated a lack

of sincerity when indicating to the public it will take full responsibility while it has limited its liability through the creation of a separate pipeline entity.

Providing an escrow account containing billions of dollars may be a means to more fully shift liability away from the public. An escrow account or bond may not be effective when governments are sympathetic to private business interests over public liability. A credible third party sufficiently arms-length from political and corporate interests would be needed to administer the private monies held in escrow or in bond. The size of an escrow account sufficient for baseline monitoring, enforcement, spill response and restoration and compensation might render this project uneconomical. Using a parallel from engineering safety design, private investors would need to put in escrow twice the worst case scenario. The only means to make this project profitable is to successfully transfer liability to non-shareholders, meaning to British Columbians. A spill would permanently cripple the fishing, eco-tourism, education and research, and First Nation economies. We do not believe an escrow approach will work in the short or

Continued on page 11

long term because it is susceptible to oil lobby interests.

There is also concern with new federally supported investment treaties that transfer financial liability to Canadians and safeguard investors' profitability as highlighted in the conditions of the Canada's Foreign Investment Promotion and Protection Agreement with China (FIPAs). Canadians may yet be liable to foreign investors' expectations. Should China invest in this pipeline and Canadians change the regulatory requirements as contained in the FIPA with China, would Canadians be liable for Chinese investors' expected returns over the next three decades or prior to 2043?

Fifth is our concern that this panel will approve this project in principle, trust Enbridge with design details and allow costs to become a negotiated item left to the implementation stage. We are concerned with this approach as it comes at a time when Federal and Provincial governments are severely reducing legislated requirements safeguarding the environment (changes to the *Environmental Assessment Act*) and removing government oversight (achieved by removal of section 35 of the *Fisheries Act*). Enbridge has a dubious record on spills and has a poor performance record as demonstrated by the US Environmental Protection Agency report on their Kalamazoo spill.

A sixth concern is the role tar sands oil will play in accelerating the rate of global warming. What are the climate change effects of speedy extraction of tar sands oil and opening up a raw product Asian market and building refineries in a nation with the lowest environmental standards? We see



Killer Whale (*Orcinus orca*)

no short, medium and long term benefit for the Canadian public. The Northern Gateway Project will not result in any benefits to Canadians. This will place a thirty-year delay in alternate non-carbon energy solutions.

Finally we do not believe in the economic arguments presented in support of the tar sands expansion and this pipeline. Hopefully there will be a collective global common sense approach to carbon management and energy policy, and Canada will be subject to some larger global carbon management solutions that would render this project uneconomical.

The project benefits are grossly overstated and the accounting of costs at the local, provincial, federal and global levels understated. There are many flaws with the logic, but principally the market and economic calculations used, do not include any dollar value to ecosystems as these do not trade in the market. FER believe they have real value and ecosystems need to be valued in terms of dollars; if this is done then the longer-term benefits of keeping ecosystem productivity outweighs, and the current sustainable coastal economics outweighs, short-term market-driven returns to carbon inves-

tors and tar sands taxes collected by government.

Conventional economics and its inability to adequately value clean water and clean air and functioning ecosystems are central to the continuation of unsustainable development being experienced on a global scale. The failure of the current systems can be seen in the collapse across North America of the large predator-prey species in step with our western industrial approach. BC has most of the last remaining intact carnivore – large mammal predator-prey systems. (See article on Page 12.) Why should we agree to high risk development and projects that accelerate degradation of the last piece of North America's former biological legacy? This legacy is our future. There are many other possible futures for BC and for Alberta and for Canada that do not include pipelines to the west coast moving dilbit. Raising royalties and building a legacy fund to eliminate carbon use is one. A moratorium on dilbit in BC is needed now. Again, FER as well as most of BC's public and First Nations stand in total opposition to this proposed project.

Thank you for your time.

Caribou, Wolves and Conflict in Society

By Rick Page, PhD, RPBio

Caribou are icons of the North, and are especially important to the First Peoples, not only in Canada but circumpolar. Without caribou, humans would not have been able to colonize the Arctic. The culture of the Inuit of Alaska, Canada, Greenland and Russia, the Sami of the Nordic countries, the Dukha of Mongolia and the Chukchi of Siberia revolve around the seasonal rhythms of caribou. Caribou provide their clothing, their shelter and their food and in Eurasia they are domesticated as reindeer, also providing milk and transportation.

If only because of the legend of Santa Claus, every Canadian child is familiar with caribou but almost none of them will ever see the animal in the wild. When people modify the land through logging, agriculture and settlements, caribou inevitably disappear. So far, there has never been a herd in North America that has been able to withstand these changes.

I began my study of caribou in 1979 in Spatsizi Wilderness Park in northern BC, including Gladys Lake Ecological Reserve, BC's largest ER. For two years we radio-collared newborn caribou and followed their fate in the first year of life. Too many died to sustain the population in most years and the main cause of death was wolf predation. We continued the research through the decade and confirmed a decline, but the population has



Returning a radio-collared caribou calf to its mother on Level Mt, June 1980

naturally recovered now and is considered stable.

Throughout the entire range of caribou they were preyed upon by wolves and for many, many people, wolves are also an icon of wilderness and freedom. Humans are so fond of wolves we invited them into our homes, domesticated them as dogs and bestowed upon them the title "Man's Best Friend". Dogs, like caribou, also became critical to the survival of Inuit in the Arctic, allowing them to travel long distances between hunting grounds in dog sleds.

In 1981, I had the good fortune to do research on the moose and wolves of Isle Royale, a US national park in Lake Superior (now running

for 53 years, making it the longest continuous predator-prey study on the planet).

For thousands of years, the native people mined the copper of Minong (as the island was known) and hunted caribou. Around 1900, moose arrived on the island for the first time and in a few decades, caribou were gone. Wolves hadn't yet journeyed across the ice to the island, but lynx predation may have contributed to the impacts of hunting.

Isle Royale was once thought to be a classic example of a predator stabilizing the natural fluctuations of its prey but the studies were too short. A decade after the first research, the moose population had doubled. We now know that moose populations vary by 500% from

Continued on page 13

their highs to their lows, as does the wolf population – a classic predator-prey cycle.

This dynamic of predator and prey has played out for millennia with booms and busts (due to rabies) in wolf numbers and apparently cyclic fluctuations in caribou numbers throughout the Arctic, possibly due to interactions with predators and weather. Many herds circumpolar in the Arctic are currently in decline. We don't yet know if this is due to climate change, over-hunting or is a natural cycle, but we seem powerless to stop these declines. As a consequence of our inability to manage this resource, Aboriginal people suffer from periodic limitations in a critical source of their diet, that is not easily replaced by food from southern sources. Some have suggested that wolves should be shot so that people can eat more caribou.



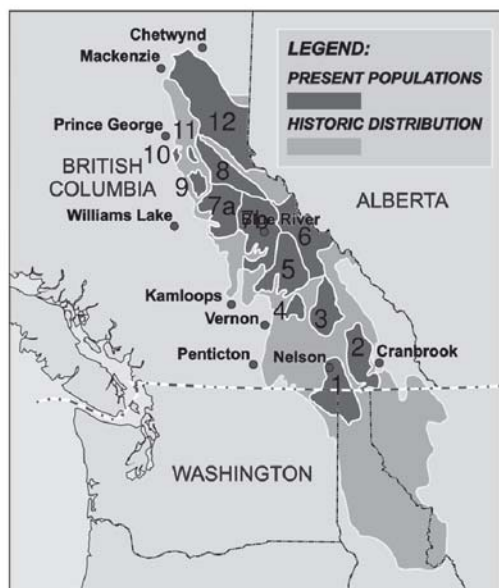
Young Inuit girl wearing caribou clothing – NFB. Wolves – RO Peterson

The mountain caribou of southeastern BC are considered a species at risk, both provincially and federally. As well, some animals range into

the United States where they are also federally listed. Extensive and expensive efforts have now continued for three decades to save these herds but they continue to decline. Even where their mountain-top habitat has not been changed, mountain caribou have declined or disappeared.

There is no agreement among scientists about the specific cause of decline but the likely causes include logging, disturbance from snowmobiles and increased predation due to increases in alternate prey. The alternate prey that have increased the most are whitetailed deer, elk and moose. All of these ungulates benefit when continuous old growth forest is logged in the valley bottoms. With many more prey, wolves and cougars increase

Mountain Caribou Metapopulation



07/06/2013

1. South Selkirks
2. South Purcells
3. Central Selkirks
4. Monashee
5. Revelstoke
6. Central Rockies
- 7a. Wells Gray North
- 7b. Wells Gray South
8. North Cariboo Mtns
9. Barkerville
10. George Mtn
11. Narrow Lake
12. Hart Ranges

Continued on page 14

rocky island offshore, roaring and lolling in the sun, along with several Elephant seals, California sea lions and Harbour seals. Northern sea lions' golden or light brown fur was gleaming photogenically in the sunlight. The massive bulls towered over the smaller cows and calf sea lions. The roaring of the bulls can be heard all the way to Rocky Point.

The only numerous birds on the main island were the hundreds of Pigeon Guillemots which nest there. They were very elegant with their crisp black and white breeding plumage, and bright red feet and mouth linings. We also saw 10 Brant in flight, a Wandering Tattler down on the rocks and two juvenile Bald Eagles near the sea lions. Two each of Barn Swallow and Savannah Sparrow were also seen.

We were shown the power plant. One of our group had been a lighthouse keeper himself, and mentioned how his noisy generator had to be run almost continuously. The solar



Garry Fletcher at Race Rocks

power at Race Rocks means the engine only has to be run a short time each day – a big plus for peace and quiet.

Lastly we climbed up to the top of the lighthouse. I loved the wonderful acoustics in the staircase and the great view from the top. Garry talked about the history and future of the lighthouse. It's not certain

which level of government will be responsible for the maintenance of the site and its future is uncertain.

We had wonderful close views of the sea lions as we set out on the return trip at 12:30PM. Thanks to Garry and Friends of Ecological Reserves for this rare opportunity and a very interesting trip.

"Caribou, Wolves...." continued from page 13

and can hunt the caribou in their mountain-top refuges.

To save mountain caribou, areas have been deferred from logging, logging practices have been modified, and protected areas have been created, yet the decline of caribou continues. In a number of cases, caribou have been captured in northern herds and transplanted to the south at great expense. None of these management efforts have succeeded.

As a last ditch effort, wolf control has been proposed to

maintain the final remnants of once widespread caribou herds. So is society forced to sacrifice one iconic species to benefit another? Not everyone agrees that this is appropriate, necessary or even moral, leading to public protests and confrontation.

Some have suggested that more research is necessary to resolve this dilemma. Continuing research will undoubtedly provide a better understanding than we currently possess about these complex ecosystems. The

conflict, however, will not be resolved by science and will continue unless society becomes singular in our expectations about species at risk. The choice between the killing of a predator or the continuing loss of a rare species is not a scientific question but one of human values. Extinction is forever.

Dr. Page presented this article at the Friends of Ecological Reserves Board meeting in March 2012.

Scott Island consultation processes, both now complete, and we are waiting to hear from the Federal government about their consultation with First Nations.

- The Race Rocks Advisory Group appears to be on track and First Nations are expected to publically endorse this Marine Protected Area with incremental protection afforded by MPA designation. The Cape Scott advisory process is also completed and progress is expected on the Marine Wildlife Area but the level of Federal commitment is less than needed, in the eyes of the conservation community who participated in this process.
- We can celebrate the addition of 22.3 hectares of waterfront to Mount Maxwell ER (see press release) <http://ecoreserves.bc.ca/2012/02/18/6702/>
- We have sent information to Parks Canada and their advisory board on management of Saturna Island ER. This ER is no longer under provincial jurisdiction and FER hopes to influence management, equivalent to ER status for this former reserve within the bigger Gulf Island National Parks. FER is supportive of increased protection and plans for a National Parks in the Okanagan, however the fate of ERs and the future of research in the potentially impacted ERs remains a concern. Parks Canada has



James Clowater giving his presentation at the March Friends of Ecological Reserves AGM

been unresponsive to concerns that FER has raised through advisory groups linked to National Parks.

Goal 4. Raise Awareness of the Value of Ecological Reserves

- The re-design of the FER website was completed in 2011 and the rewards have been the amount of new and timely information that is now available on this website. Please take a look at this new resource at <http://ecoreserves.bc.ca/>. In comparison to the old website, it is now possible for a number of people to add and change information. Wardens take note this can be your filing system.
- We successfully produced two issues of the newsletter the LOG.
- Out of concern for potential losses and erosion of existing protected areas, FER made presentations to the Special

Committee on Timber Supply as did many other organizations. <http://ecoreserves.bc.ca/2012/07/10/presentation-to-the-special-committee-on-timber-supply/>. Sadly eight months after the close of the special committee hearing, there was draft legislation (Bill 8) giving the Minister of Natural Resource Operations the legal tools to grant, at his discretion, major Forest License holders, Tree Farm Licenses. For an analysis of this legislation, see *Vancouver Sun* article <http://www.vancouversun.com/news/Tree+licence+rollover+public+benefit/8061475/story.html>. FER is a non partisan organization but a letter was written to raise concerns over this major tenure shift. Happily, because of concerns raised, Bill 8 was withdrawn.

- FER made an oral presentation

Continued on page 16

opposing the Enbridge Northern Gateway pipeline and tanker route. We believe there needs to be a moratorium on bitumen movement and there are too many unanswered (avoided questions). There are also too few safeguards and too few Marine Protected Areas to warrant taking on the risks and liabilities. There are four articles outlining concerns and opposition on our website <http://ecoreserves.bc.ca/?s=Enbridge>.

- FER is pleased with the new ER map with its narrative and images of the types of ERs such as: grassland, marine, springs, forested, alpine described on one side of this map as well as clarification of the threats to the ERs. On the other side of this folding map/brochure is the location of ERs and their names, main purpose, and access-restricted status. Also shown are the existing Protected Areas in the province and the currently unroaded areas of BC inside and outside of Protected Areas. FER produced 6,000 copies of the new map which replaced another version that had been out of print for over a decade. We are pleased this ER map/brochure is once again in the hands of Parks staff and the public. We owe Tory Stevens and Doug Biffard thanks for their data and checking for factual accuracy. The map is now in BC Parks offices. Copies can be viewed and purchased for \$5.00, including shipping, at the FER website.
- We again hosted a public



Sami Reindeer herder in traditional clothing - "Best of Finland" magazine

speaker for our annual general meeting and this time we were able to draw from a well known bird enthusiast and lecturer James Clowater. <http://ecoreserves.bc.ca/2013/02/19/agm-speaker-james-clowater-friday-march-8-2013/>

Goal 5 Sustain a Nurturing and Effective Organization

- Sincere thanks to the FER Board members who continue to keep this amazing little group together and well-focused on our mission. Welcome to Jenny Feick who has joined the Board; otherwise the make-up of the Board remains the same. Thanks to all those on the Board who continue to give of their time and ideas to keep this venerable group going. We do take the summer and Christmas months off. Thanks also to Habitat Acquisition Trust (HATs) for the use of their boardroom. FER remains a small NGO with no regular staff.

- Thanks to Garry and Helen Fletchert for hosting our summer west coast beach barbeque.
- Many of the Board enjoyed a trip in November to Saturna Island with Pam and Harvey Janszen despite the fog and rain,
- We have added strength in bookkeeping and shifted some of the responsibility carried for so many years by Tom Gillispie to Michael Brinsmead, who though not on the Board, does attend our meetings, deposits funds and makes sure we pay our bills. Thanks Michael. Tom continues to provide sage advice but has a lightened load and the work Tom has provided for so long is now more evenly spread across the Board.
- We would like to thank BC Parks staff for their continued support and help.

The Path Ahead in 2013

This will be discussed at the

Continued on page 17

monthly Board meetings but may include some of the following:

Goal 1. Support for the ER Wardens' Program

- Work with BC Parks to continue to increase the number of ER Wardens with the goal to have at least one Warden in every ER. We will need to arrive at a process that FER and Area Supervisors can use to keep our Wardens' list current.
- Discuss the concept of continuing the ER Wardens' Program as part of National Parks with the aim to keep ERs as special research benchmarks and ensure Parks Canada continues to build on the research legacy already in place. The six ERs transferred to Federal Parks and Metro Vancouver do appear on the new ER map and remain on the FER website although they are gone from the provincial Parks ER site. FER has kept these in public and institutional view because we believe that the baseline research done in these reserves should not be lost and the new managers need to be encouraged to continue the original goals of protection, education and research when Ecological Reserves were created.
- Explore more fully, Wardens', training and data collection within the Long Term Ecological Monitoring and Conservation Risk Assessments and assist with permanent sample plots establishment and data collection and



management protocols.

- Encourage regional ER and Area Supervisor meetings to build stronger relationships between government and volunteers.
- Other activities to be decided (TBD).

Goal 2. Support Studies in ERs

- Continue the long-standing request to BC Parks to change and streamline research permits application procedures especially for non-destructive sampling type projects in ERs.
- Gather and share on line all existing research that may be in Regional Offices.
- Others to be decided (TBD)

Goal 3. Support Development of a Resilient Science-based ER System

- Work with larger conservation organizations with similar goals of improving marine and terrestrial protected areas.
- Assist when asked by ER

Wardens to reach out to research organizations.

- Others TBD

Goal 4. Raise Awareness of the Value of Ecological Reserves

- Continue our newsletter the LOG and our Annual General meetings and public lecture series.
- Maintain the web site and add reports and images as these are made available and encourage wider use by Wardens and Area Supervisors.
- Others TBD.

Goal 5. Sustain a Nurturing and Effective Organization

- Increase membership and build a larger operating budget.
- FER intends to remain volunteer run and not acquire staff.
- Add new members to the FER Board.
- Continue to plan our field trips to ERs and to have a sense of fun in the course of volunteering.
- Others TBD.

Remembering Long-Time ER Warden Syd Watts

By Garry Fletcher

Syd Watts, our long time Ecological Reserve Warden of Mount Tzuhalem, died on May 25, 2013 at Cowichan District Hospital. He had been unwell for some time and valiantly tried to get well so that he could be back in the outdoors he loved so much. Sadly, this was not to be.

In 1984 Syd and his wife Emily were instrumental in having a part of Mount Tzuhalem, which had beautiful flower meadows, set aside as an Ecological Reserve. Since then Syd has been the warden, or as some say the 'eyes' of the reserve, visiting it at least twice a week.

In 2007 the Environment Minister Barry Penner recognized Syd Watts' devotion and presented him with the Volunteer of the Year Award for his long-term contributions to Strathcona Provincial Park and the Mount Tzuhalem Ecological Reserve. Sadly Emily passed away several years ago and wasn't able to share Syd's recognition but her name is forever linked with Syd's in the preservation of the Mount Tzuhalem Ecological Reserve.

In 2005, the FER LOG featured an article on Syd by Genevieve Singleton and Dave Polster. Here is a small snippet of this article:

"Less than 5% of Garry oak woodland and associated spring flower meadows still exists in its natural condition on the earth. Mt. Tzuhalem Ecological Reserve is unique as it is an excellent example of this habitat. Located on the south slope of a mountain used in the past for logging, then for recreation and now in the process of being heavily developed, the pristine state of



this reserve is a wonder but by no means an accident. This is almost entirely due to the commitment and dedication of one couple, Syd and Emily Watts. When locals of the Cowichan Valley think of the Mt. Tzuhalem Ecological Reserve, they think immediately of warden Syd Watts.

Over the years, the exceptional involvement of Syd and his late wife Emily in the protection of special ecological places has encouraged others to get out and explore Vancouver Island. See the Friends of Ecological Reserves WINTER 2005 LOG for the full article

at : <http://www.ecoreserves.bc.ca/newsletters/LOG0512.pdf>

The following information is extracted from "Bivouac.com", <http://bivouac.com/default.asp> and "Beyond Nootka", http://www.beyondnootka.com/biographies/s_watts.html:

"Syd made his first trip to Strathcona park in 1949. In 2010 the name of Syd Watts peak, endorsed by Strathcona Parks, was officially proclaimed for a

mountain. This was already an extremely well-established name, identified in *Hiking Trails III* and similar climbing guidebooks, and is routinely used by Strathcona Park staff and visitors.

In 1952, Syd joined the Outdoors Club of Victoria and the Alpine Club of Canada. Syd led many trips with these groups. In 1958 Syd and Harry Winstone formed the Island Mountain Ramblers, a hiking group with an Island focus. From 1958 to 1964 Syd, Jack Ware and Don Apps explored all the high ridge routes in Strathcona Park. Syd then documented these trails for the guide *Hiking Trails III*. In 1959 Syd led the first post war trip to the Golden Hinde. Starting in 1965 he began the project of planning and building the Marble Meadows Trail which involved leading work parties until 1970. It was in 1970 on a week-long trip with Jack Shark that Syd and Emily climbed [Syd Watts Peak] for the first time.

The FER website has references to the many articles written about Syd: <http://ecoreserves.bc.ca/2013/05/26/in-memorial-syd-watts-1927-2013/>

FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central, Victoria, BC V8W 3S1

☐ Renewal for 2013

☐ New membership

Membership Category

☐ Individual: \$20

☐ Student/Senior: \$15

☐ Family: \$25

☐ Institution: \$25

NAME (please print) _____ Date _____

ADDRESS _____

Postal Code _____

PHONE (____) _____ E-Mail _____

☐ Instead of receiving the LOG by post, please send me my copy of the LOG electronically (please provide your email address)

I/we enclose Payment for:

____ year(s) membership \$ _____

Donation \$ _____

____ copy(ies) Constitution & Bylaws @ \$1 each \$ _____

TOTAL ENCLOSED: \$ _____

Tax receipts issued for donations of \$20 or more
(Charitable BIN#118914597RR)

I am interested in volunteering for:

☐ Assisting with Field Trip organization

☐ Contributing articles/photos to *The LOG*

☐ Fund-Raising ☐ Telephoning ☐ Other

Please apply my donation to:

☐ Land acquisition projects

☐ Scholarships for post-graduate research

☐ Where most needed

ORDER FORM FOR PLACEMATS AND MAPS

Placemats – \$5.00 each

Maps – \$5.00 each

Interior Grasslands • Douglas Fir • Garry Oak • Alpine Flowers

* Non-profit Group Volume Discount (10 or more) \$4.00 each

Name (please print) _____

Address _____

Postal Code _____

Phone (____) _____ E-mail _____

| DESCRIPTION | QUANTITY | UNIT PRICE | TOTAL |
|-------------|----------|------------|-------|
| | | | |
| | | | |
| | | | |
| | | | |

Shipping, Handling and Postage for Orders _____ \$4.00

Total Enclosed (Cheque or Money Order) _____ \$



Ecological Reserves Warden Information

An ER Warden recognition lunch and workshop sponsored by the West Coast Region of Ministry of Environment, was held on March 19, 2013 for the Vancouver Island Wardens.

Each warden introduced themselves and gave a brief description of their reserve. Presentations were made by Gary and Katherine Backlund (Woodley Range ER), Dave Polster (Mt. Tzuhalem ER), Bill Image (Bowser ER), Jenny Balke (Tsitika River ER), Marilyn Lambert (Oak Bay Islands

ER) and Paul Linton (Mt. Maxwell ER). Garry Fletcher, FER Board member and ER warden for Race Rocks gave a presentation on the Friends of Ecological Reserves website. Doug Biffard, BC Parks described a new method for monitoring intertidal zones (see related story on Page 3).

Erica McClaren, Conservation Specialist for BC Parks produced a list of action items from this meeting which include the following. Erica will circulate an updated list of ER wardens and their contact information to FER as well as sending an updated list of West Coast Region BC Parks contacts and the parks that they manage to all wardens and to FER. ER wardens were asked to send Erica a list of materials that they would like to have to help them to better do their work in Ecological Reserves. Wardens were also asked to compile a list of priority projects that they would like to seek funds for. This list will be prioritized so that ERs that we know the least about are put on the top of the list. Erica will seek funding to visit the top ER each year to fill information gaps.

New ER Wardens Handbook

www.env.gov.bc.ca/bcparks/conservation/er_warden_handbook.pdf

Ecological Reserve Wardens



Photo credit: Judy Millar

Stewardship Handbook



Return Address



Friends of
Ecological
Reserves
PO Box 8477
Stn Central
Victoria, BC
V8W 3S1

The Log



Friends of Ecological
Reserves
PO Box 8477 Stn Central
Victoria, BC V8W 3S1

Email:
ecoreserves@hotmail.com
Website:
www.ecoreserves.bc.ca
Charitable Tax#
118914597RR

Printed on recycled paper.



Please share and/or
recycle.

Visit our website at:
www.ecoreserves.bc.ca



Canadian Publications Mail
Agreement No. 40020740