

The Log

Winter 2004

FRIENDS OF ECOLOGICAL RESERVES NEWSLETTER

President's Report: Lines and Progress

by Don Eastman

In this article, I wanted to do two things: to write about lines and to write about progress.

First, about lines: It is too bad we have lines on maps showing ecological reserves. Now, don't misunderstand me. I don't mean that we should be keeping their locations a secret. What I mean is that lines can give the wrong messages. For example, it is too easy to think that just because there are map lines around ecoreserves, that the reserves are all right, and that we don't have to worry about them any more. This way of thinking is a big mistake, as any Warden can tell you. Putting lines on a map is just the first step in the life of ecological reserves. Reserves need protecting, watching, managing and restoring – in a word, stewardship.

Lines can be ambiguous because they imply that what is on one side is separate from what it on the other. In one sense, this is true because ecoreserves are supposed to protect what is on the inside from what is on the outside. In this way, they can serve as benchmarks. In another sense, though, this is definitely not true. What happens around

the borders of a reserve has enormous influence on what happens inside them. Can a forested ecoreserve surrounded by a clearcut be unaffected by the clearing?

A related point is that lines on maps can give the impression that borders are solid. Wrong! Borders are porous, they leak like a sieve. Animals, plants, water, air, nutrients, pollutants don't recognize these lines: they move back and forth across ecoreserve boundaries as if they don't exist – they have their own boundaries and these often don't match ours. And because borders are not impermeable, reserves are both affected by their surrounding and they affect their surroundings.

Lines on maps are usually straight, with smooth curves, and the angles are sharp and often ninety degrees. These lines may reflect legal realities, but they sure don't reflect ecological realities. Straight, smooth lines and right angles are hard to find in Nature: ecosystems have convoluted boundaries. What is more, these boundaries are not static: they change over time, an issue of growing importance because of climate change.

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The Log

Winter 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 Spring issue of *The LOG* is March 21, 2005

Editor

Denise de Montreuil

Design and Production

Indigo Sky Graphic Design

Directors

Don Eastman, *President*

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Bristol Foster
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Trudy Chatwin
Vicky Husband
Josette Weir

Contributors to this issue:

Charles Bailey, Katie Christie,
Eva Durance, Mike Fenger, Garry Fletcher,
Emily Gonzales, Evelyn Hamilton,
Saila Hull, Rolf Kellerhals, Lynne Milnes,
Alison Nicholson, Mark Osburn,
Mary Rannie, Rick Searle, Marlene Smith.

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

E-mail: ecoreserves@hotmail.com
Website: <http://www.ecoreserves.bc.ca>

Canada Post Agreement No: 1060163

Goodbye and Welcome

by Saila Hull and Lynne Milnes

The Friends are sad to say goodbye to **Diana Wootton**, our faithful bookkeeper for over 15 years. She worked tirelessly behind the scenes ensuring that our finances were in order, with cheques deposited and paid out as needed, and monthly and annual reports produced as requested. The Friends sincerely thank Diana and wish her luck in her new ventures.

But in good news, **Tom Gillespie** has take up the position of bookkeeper on top of his role as Membership Secretary to ensure that things run smoothly and efficiently. He brings many years of dedicated volunteer bookkeeper experience to the job, and The Friends are very appreciative of his offer to take on the position.

Saila Hull has passed on the position of office manager to a great candidate – **Santiago Alvarez**. Saila has taken over the position of treasurer, so that she can focus on finishing her Master's degree. Originally from Columbia, Santiago is passionate about environmental issues, with volunteer and work experience with the David Suzuki Foundation and the Western Canada Wilderness Committee. He brings excellent organizational and people skills to the position, and The Friends welcome him with open arms! ■

Memberships Keep on Giving!

The Friends of Ecological Reserves is asking for your membership for another year so that we can continue to protect and promote Ecological Reserves throughout BC.

The Friends is entirely volunteer run. We have no office, no fulltime staff or capital costs but we do support as many students as we can who are conducting important research in and around Ecological Reserves. We also support those students who are exceptional volunteers in their environmental community. Students are trained by the Board and encouraged to get involved and they do. Your membership supports the publishing of *The Log* three times a year, ongoing field trips to Ecological Reserves, outreach to wardens throughout the province, the wardens meeting and ongoing negotiations with government staff in support of Ecological Reserves. It is a lot of work for a dedicated group of people who have busy day jobs.

Your membership keeps us going. Your gift of a membership to a friend or relative will be remembered with each issue of *The Log* and you will be satisfied in knowing you are helping to protect BC's most fragile environments. Remember to renew your FER membership and give a gift of a membership knowing that your gift will keep on giving all year long. ■

Lynne Milnes, *founding Director of FER*

Garry Oak Ecosystems – baseline research in the Gulf Islands National Park Reserve

by Emily Gonzales

Ecological reserves play a key role in protecting our native species and natural spaces. Unfortunately, some forces continue to degrade ecosystems even after land has been protected. Large herbivores, such as deer, sheep, goats and cattle, can devour and trample native plants. Exotic plants invade and change the appearance and function of natural ecosystems. I am studying the relative influence of herbivory and exotic grass competition in Garry oak ecosystems.



Emily Gonzales with Rum Islet (Isle de Lis) in the background

Garry oak ecosystems are one of the most endangered ecosystems in North America, but also one of the most beautiful, with the highest species richness of any ecosystem in British Columbia. Extending from central California to the southern coast of BC, Garry oak ecosystems have been severely damaged or have disappeared due to extensive development in this populous region.

Abundant herbivores can also damage Garry oak ecosystems. Black-tailed deer and Roosevelt elk are native herbivores and an important component to the ecosystem. Deer, however, are very abundant on some islands while others have feral sheep and goats. The intensity of herbivory



Researcher counting plants in one of 112 plots

leads to cascading effects including the loss of native plants and the loss of habitat for native animals.

Ecological reserves such as Channel and Brackman Islets protect the most pristine examples of this ecosystem. The Gulf Islands National Park Reserve is comprised of dozens of islands, large and small. The smallest islets have no herbivores and few exotic grasses. They are bright jewels in the spring with abundant wildflowers. These islets act as refuges for many rare and endangered plants, but exotic grasses and human activity are threatening these last vestiges of Garry oak ecosystems.

I am working with Parks Canada to develop baseline data for this new park, so that we can measure the effects of change. Change is coming in the form of more visitors to the islands, as many people are discovering the beauty of the Gulf Islands but not all are aware that they need to tread carefully and dispose of waste responsibly.

Change is also coming through the further invasion of exotic grasses and the decline of native species. Change may also occur in the Park for the better as management and restoration works to restore the Garry oak ecosystems to their natural state. My experiments and analyses will help us understand the relative and quantitative effects of herbivores and exotic plants in Garry oak ecosystems. Understanding Garry oak ecosystems will help us better protect, manage, and appreciate these unique natural spaces. ■

Emily Gonzales is a PhD student in the Centre for Applied Conservation Research at the University of British Columbia. Her work on Garry Oak ecosystems is funded in part by a research grant from the Friends of Ecological Reserves.

“President’s Report...” continued from page 1

Of course, it is reassuring to know that lines around ecoreserves mean that these areas have been officially recognized, and that they are legally protected. And, it is important for people to know that we have ecological reserves and where they are located. As well, lines on maps also show us how much work remains to be done to

adequately protect ecosystems in British Columbia – most of our reserves are small, and many areas of the province are under-represented. But it is just as important to remember that lines are only part of the story of ecological reserves.

Now about progress: I want to reflect on our progress over the past six months – a semi-annual report to the

Friends, if you will. As you may recall, at our last annual meeting we developed an annual plan. The plan had four components and each component had four objectives that we would try to accomplish over the year. In the following table, I have tried to summarize briefly where we are six months into the year:

PROGRAM	OBJECTIVE	PROGRESS
Wardens	Promote recruitment of individuals as wardens by: a) posting the application process on the FER website b) working with the wardens to update the Wardens Handbook and orientation package.	The application process is not detailed on the website, although information exists on who to contact in the Parks Branch. Work on the Warden handbook is continuing and should be completed within the next few months.
	Promote better communications among wardens and government by: a) creating a Warden contact system b) supporting annual regional and biannual provincial meetings.	There are continuing efforts to develop an up-to-date list of Wardens. We have begun discussing the next provincial meeting of Wardens, planned for 2005.
	Work with the provincial government to clarify key issues, such as liability insurance for wardens, acceptable levels of use, and the need for permits.	We have and will continue to have on-going discussions with government officials about issues relevant to ecoreserves.
	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.	This year we examined Land and Water BC policies regarding sale of Crown Land (article in the last issue of <i>The Log</i> by Mike Fenger). As well, we are watching for any follow-up activities related to the Working Forest proposal. (See pg.18)
Research	Initiate an assessment of the state of ecological reserves.	Initiated in September with hiring of Morgan McCall, Biology coop student at the University of Victoria.
	Become more pro-active in supporting research by asking for research proposals on topics we feel need attention.	On the Friends website (www.ecosreserves.bc.ca), we have posted a list of topics that we encourage researchers to consider when applying for support.
	Become more aware of researchers who are interested in working in ecological reserves.	This is an on-going activity.
	Explore additional funding to advance our research program.	This is also an on-going effort by the Board; we invite suggestions from the Friends.
Outreach/ Member Services	Develop a communications strategy to increase public awareness and appreciation of ecological reserves (includes cooperating with the Cowichan Valley Wardens to produce educational material).	A strategy has not yet been developed, but we are working with the Cowichan Valley Wardens to produce information for public awareness about ecological reserves.
	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.	The two trips for the Greater Victoria (Trial Island and Race Rocks) were held, but the two other field trips have yet to take place.

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**Outreach/
Member
Services**
continued

Produce three issues of *The Log*, and explore the value of distributing it electronically.

We are on track to producing three issues of *The Log*. Discussions are continuing on pros and cons of electronic distribution.

Explore opportunities for joint membership in like-minded organizations.

Still to be done.

**Organizational
Renewal**

Recruit new Board members, considering skill sets, time available and regional representation.

Two new Board members were elected this year: Mike Fenger and Steve Ruttan.

Make more effective use of a committee structure to more effectively draw upon the interest and expertise of Board members and share the workload of the Board.

Several committees have been established.

Explore additional sources of funding and ways of building effective relationships with donors.

Were successful in securing funding from the B.C. Ministry of Water, Land and Air Protection.

Increase number of Wardens on the Board.

Presently, we have one Warden (Marilyn Lambert); efforts are continuing to find several more.

So, you can see that we have made good progress on some of our objectives, limited progress on others and much yet to do on the remainder. Overall, I think we are in pretty good shape, but we need to keep focused for the rest of the year to be successful in meeting all of our expectations. ■

Friends of Ecological Reserves Annual General Meeting

Friday, March 4, 2005 at 7:30 PM
(Meeting of the Board begins at 6:30 PM)

Researcher Jane Watson will speak on “Sea Otters, Abalone, Kelp Forests and Snails: Should Changes in Life History Strategies be considered in Recovery Strategy?”

Location: Meeting Room of the Oak Bay Public Library, 1442 Monterey Avenue

All members as well as those interested in becoming members are welcome to attend.

For more info call Santiago Alvarez Mesa at (250) 595-6936 or check the website.

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

E-Mail: ecoreserves@hotmail.com



Correction

In the last issue of *The Log*, Barbara Westerman was incorrectly identified as the volunteer warden for Mara Meadows. Charles Bailey has been the warden there since 1994. Mr. Bailey writes: "Barbara Westerman, and her partner John Suffield deserve credit for their efforts in watching over the Violet Creek watershed, of which Mara Meadows is an integral part. This involved bringing to the attention of the relevant authorities what were deemed inappropriate logging practices as well as their discovery that water was being illegally diverted from the watershed." See Mr. Bailey's piece on page 13 describing an unusual phenomenon he observed in the reserve last June. ■

Thanks to Donors

by Lynne Milnes

The Friends of Ecological Reserves honours and appreciates all of its donors and respects their privacy. In 2004 we would like to pay a special tribute to the estate of Armelda Buchanan for her generous donation. (See "Tribute to Melda Buchanan", this page) ■

Visit www.ecoreserves.bc.ca



Tribute to Melda Buchanan

by Marlene Smith,
Friends of Strathcona Park

On the night of Wednesday April 15 2004, Melda passed away at the hospital in Comox.

Melda was born Armelda Anne McCulloch on February 12 1924 in Drumheller Alberta. She moved as an 8 year old to the Comox Valley with her family. To be suspended from school for the day was not unusual thus Melda had many opportunities to explore the natural beauty of the Comox Valley, which she came to love deeply, laying the foundation for her future environmental commitments.

She graduated from the University of BC with an honors degree in Math and physics. She returned to the valley to teach and later went to the University of Toronto to obtain a Master's degree in Mathematics and Physics. She became the first meteorologist in Canada.

She returned to the Comox Valley in the sixties and got more and more involved in political and environmental activities. In these activities she touched many people's lives with her deep love for all living creatures. She was the co-founder of the Comox Valley SPCA and helped fund the North Island Wildlife Center by selling an original Jack Shadbolt painting! She would stop her car before driving up her driveway to move earthworms to safety. She bought sacks of grain to feed the deer in her garden, bags of dog food for the raccoons and was known to buy a salmon to feed a hungry eagle. She made donations to protect local and international rainforests and animal protection societies.

She was a steady background worker, rarely missing a meeting (where she often brought juice and cookies) or an opportunity to make a presentation, always sharp and to the point.

She spent many days and nights on the 6 week Strathcona Park blockade in 1988 and continued with financial support and as a member on the board of directors, making sure nobody would stray off the path of maximum protection of the Park.

She was involved in the creation and expansion of Sealbay Park, the protection of Macdonald Woods in Comox and the Lazo March.

She lived at a beautiful place in Comox overlooking the bay and Tree Island. This small island just off Denman Island found a private protector in Melda since the BC Parks branch often lacked funding to maintain this park. She shared her little paradise with her cat Jessie, the deer, raccoons, birds and her extended family.

Melda's energy, words and presence will be deeply missed and her legacy will live on in those she taught the ropes of environmental protection. ■

Electronic Log

For those of our members who would prefer to receive *The Log* by email and help us save paper and costs, please drop us a line at ecoreserves@hotmail.com.

Thanks, The Friends.

Okanagan Region Holds Annual ER Wardens Meeting

by Eva Durance, Warden, Mahoney Lake Ecological Reserve, #130

For the first time in many years, a meeting was held October 22 at the MWLAP office in Penticton for the Reserve wardens in the Okanagan Region. This Region stretches from Manning Park on the west to Grand Forks on the east and north to Enderby. There are now only five Area Supervisors and thirteen Area Rangers to manage the many Provincial parks and other protected areas so that the work of the fourteen volunteer wardens is critical to the well-being of the ERs.

I strongly encourage wardens in other Regions to request a meeting of this sort with your Parks staff...it may just take one meeting for staff and wardens to see how valuable such gatherings are.

Rose Gunoff, Area Supervisor in the South Okanagan was the driving force behind the meeting. She was well supported by other Parks staff, however, including the Protected Area Section Head and Regional Manager. I marshalled the wardens to attend and with Laurie Rockwell, Trout Creek ER warden, helped staff develop the agenda.

When the day came, seven wardens were able to attend, some from as far away as Enderby and Lumby in the North Okanagan. Seven staff also took time from very busy schedules to attend, some for the whole day.

Refreshments and lunch were provided and the information folder we received included extremely useful material: copies of maps of the Region showing all the parks and protected areas, a list of the Area Supervisors and their areas of responsibility, and a news release on new parks.

The day began with introductions around the table followed by a staff review of the Regional situation concerning staff and areas of responsibility. To make sure that the office records were up to date, wardens were asked to sign a new Volunteer Agreement form of which we received copies. The rest of the morning was spent discussing and getting input on the 'Wardens Responsibilities', 'Research', and 'Reporting Requirements' section of the Handbook that is under revision. Ideas were solicited as well on how staff and wardens could go about recruiting and training people who could take over an ER when the current warden needed or wished to step down. A discussion on the timing of wardens' annual report submission led to the group recommending the end of October as a report deadline so that staff could include wardens' action recommendations in budget plans for the following year.

After an excellent lunch, Bryn White, the Species at Risk Recovery Coordinator gave us a presentation on work of the SAR recovery teams in our Region. Crystal Klym, Invasive Plant Program Technician, then spoke on the problems of invasive plants (weeds) in the Okanagan and what the various agencies and organizations are doing to improve the situation. These presentations were both informative and part of the meeting's goal to bring wardens up to date on protected areas management.

The group discussed various topics and ways in which wardens might get some training. Staff was willing to look

at special workshops on topics such as using GPS units, setting up vegetation plots, and identifying and keeping an inventory of invasive plants in an ER. Other suggestions were for staff to inform wardens in an area where field work was going on so that the latter could take part and learn techniques that way.

The meeting ended with the wardens being presented with a certificate of thanks for their years of work and a BC Parks coffee mug, both greatly appreciated. All agreed that the day had been well organized, very informative, and an excellent opportunity for us to meet each other and discuss our Reserve experiences. The consensus was that future meetings might better be held in early spring so that wardens and staff could discuss plans for the coming season. As well, since a number of staff have never been to some of the ERs, even in their own area, the Section Head suggested that our next meeting should be a day's road trip to a few, an idea that was warmly received.

I strongly encourage wardens in other Regions to request a meeting of this sort with your Parks staff. Not all may meet with the enthusiastic support we have here, but it may just take one meeting for staff and wardens to see how valuable such gatherings are for all concerned. Good luck! ■

Eva Durance has been the warden at Mahoney Lake ER southwest of Penticton for 5 years. She is also Parks and Protected Areas Coordinator for the Federation of BC Naturalists. Mahoney Lake is highly saline and is covered about 7 metres below the lake surface with a layer of purple sulphur bacteria considered the finest example of this phenomenon in the world.

UVic Geography Students Visit Haynes Lease and Mahoney Lake Ecological Reserves

by Rick Searle

This past April, five undergraduate students and I spent nine days immersed in studying the challenges of conserving biodiversity in the South Okanagan. Our first morning in the field was spent with three BC Parks staff (Judy Miller, Rose Gunoff and Kevin Wilson) and Eva Durrance, an avid naturalist and ecological reserve warden, visiting Haynes Lease ER and Vaseaux Lake Wildlife Viewing Area. The students were shocked to learn that they were in the presence of the entire staffing complement for the South Okanagan district. Parks staff were very candid about the trade-offs necessitated by recent budget cuts. The seasonal ranger described his expanded territory and job responsibilities which left him with too little time to adequately address park management issues. He noted that his enforcement capabilities, particularly when it came to dealing with grazing in protected areas, had been greatly reduced. It was his impression that the ranchers have the upper hand with the provincial government reluctant to challenge them.

With so little on-the-ground capacity, parks staff rely heavily on partnerships with other agencies to achieve the conservation and protection of parks and ecological reserves. Yet, the pressures on Haynes Lease ER highlighted the limitations of this approach. The reserve is squeezed between two wineries that have pushed their vineyards right to the property line. Although these two operations have been generally cooperative, spray from their irrigation sprinklers falls just inside the reserve's boundary, changing the vegetation. There are also concerns about drift from any pesticides or herbicides that may be applied to the vineyards.

Additionally, the wineries effectively fragment the natural habitat and isolate the reserve, presenting significant barriers for species migration.

A wildlife management area also borders Haynes Lease and again the students were surprised and disturbed to learn that cattle grazing was permitted in what was supposed to be a protected area. The effects of overgrazing were apparent in the presence of shrubby vegetation too unpalatable for livestock. Park staff and Eva Durrance pointed out several species of invasive plants within the reserve which may have been introduced by the grazing.

...the future of ecological reserves such as Haynes Lease and Mahoney Lake (will depend) greatly on engendering a stewardship ethic within the public.

Despite these threats, Haynes Lease remains a biologically diverse remnant of the formerly extensive antelope brush ecosystem. Numerous native plant species were pointed out and frequent stops were made to identify birds spotted on the wing, atop of snags or soaring around rock walls. But the biggest cause for excitement came when the students volunteered to move some sheet metal that had blown into the reserve. No sooner had the scraps been lifted when not one but two rattlesnakes leapt into view. Fortunately none of the students were standing too close and the snakes lost no time in seeking out more protected confines. The encounter was a thrill of a lifetime, since none of the students



UVic students at Haynes Lease ER



Porous boundary, Haynes Lease ER

had previously seen a rattlesnake.

After a lunch at the Vaseaux Lake Wildlife Viewing Area and saying goodbye to Judy, Rose and Kevin, the students and I followed Eva to Mahoney Lake ER. Here we learned of the lake's unique character, that being the presence of purple algae colonies which are extremely rare. The students also had an opportunity to watch Eva in action as a volunteer warden. Her sharp eyes spotted someone walking a dog off-leash in the reserve and immediately made off to talk with them. Upon her return, she explained that most people simply don't understand that they're in a very different kind of protected area, where human use is not encouraged. In addition to dog walkers, she's dealt with illegal campers, parties, and mountain bikers cutting through the reserve to access the White Lake Grasslands Protected Area which lies alongside the reserve. Motor vehicle access used to be

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"UVic Geography..." continued from page 8
 a serious issue, but a neighbour took it upon himself to fix this problem by using his front-end loader to drop some big boulders at the access points. Still, we came across a site where someone on a dirt bike had got through and had torn up a small section of the shoreline.

While expressing gratitude to the helpful neighbour, Eva conveyed strong concern about the future for the reserve. She noted that the seasonal ranger wasn't able to get up to the reserve nearly often enough owing to the cutbacks and that she would be retiring as a volunteer warden sometime in the not-so-distant future. She then urged the students to consider becoming volunteer wardens, pointing out that the need to recruit younger people was a top priority for the ecological reserve program.

Later that night, as the students and I engaged in a lively discussion of the day's events, it became very apparent that the future of ecological reserves such as Haynes Lease and Mahoney Lake greatly depended on engendering a stewardship ethic within the public. To achieve this goal would require a remarkable degree of cooperation among the various stakeholders in the region. On this point, the students were guardedly optimistic, buoyed by the spirit, dedication and determination of people like Eva, Judy, Rose and Kevin. ■

Rick Searle teaches third and fourth year students within the Department of Geography at the University of Victoria. He and his students gratefully acknowledge and thank the Friends of Ecological Reserves for providing financial support for them to experience a once-in-a-lifetime field trip. Copies of the students' research papers have been provided to the Friends.

Friends of Ecological Reserves Annual General Meeting

March 4, 2005 at 7:30 PM
 Location: Meeting Room of the Oak Bay Public Library
 1442 Monterey Avenue
 Victoria, BC
 For more info call Santiago Alvarez Mesa at (250)595-6936 or check the website.
 Website: www.ecoreserves.bc.ca/
 E-Mail: ecoreserves@hotmail.com

Abkhazi Garden's Antique Side Show

Bring your treasures to be evaluated by the experts.
 Sunday, January 23, 2005
 10-4 PM
 1964 Fairfield Road
 This is a fundraiser for The Land Conservancy's Abkhazi Garden.
 Admission is \$25
 Website: www.conservancy.bc.ca/coming_events.php
 Phone: 598-8096 for more info.

Building Sustainable Relationships: Aboriginal Engagement & Sustainability Conference

February 8-9, 2005
 Vancouver Convention & Exhibition Centre
 Leaders from Aboriginal communities, industry, government and NGOs are taking part in this conference focusing on Aboriginal engagement in the context of sustainability and corporate social responsibility in Canada's natural resource sectors.
 Website: <http://www.cbsr.bc.ca/advisoryservices/aboriginalproject.htm>
 Contact: Caroline Rossignol at caroline@cbsr.ca
 Phone: 604-323-2714

15th Annual Brant Wildlife Festival

April 8-10, 2005
 Qualicum Beach - Parksville, Vancouver Island, BC
 Celebration of the arrival of the Pacific Black Brant on its annual northern migration. Events include carving competitions, birding, art and photography exhibition and sale, family activities and much more. Go to the website for a schedule of events.
 Website:
<http://www.brantfestival.bc.ca/>

Implication of Climate Change in BC's Southern Interior Forests

April 26-27, 2005
 Revelstoke Community Centre, 600 Campbell Avenue, Revelstoke, BC
 This workshop is directed at forestry professionals and technicians, biologists, ecologists, protected area managers, and other managers and planners with an interest in how climate change may affect forest ecosystems and forestry.
 Contact: Columbia Mountains Institute of Applied Ecology
 Box 2568, Revelstoke, V0E 2S0
 Email: office@cmiae.org
 Website: www.cmiae.org
 Tel/Fax: 250 837-9311



PHOTO CREDIT: DAVE QUINN

Visit www.ecoreserves.bc.ca

Ecological Reserves of Northern Vancouver Island

PART III – the northwest



Clanninick Creek ER



Megin River

ER 75 – Clanninick Creek

- Located on the west coast of Vancouver Island, 3.5 km N of Kyuquot
- 37 ha
- Situated on the floor of a glaciated creek valley 2.5 km inland from the Pacific, this reserve is surrounded by low rounded mountains. It takes in a 1 km stretch of creek, a single low gradient channel with little meander, frequent shaded pools and one low waterfall. The shaded creek sees small spawning runs of Chinook and pink salmon and larger runs of coho and chum. The reserve protects a small but exceptional stand of old-growth Sitka spruce up to 75

m in height, their size due, it is thought to the rich volcanic soils and 300 cm of annual precipitation. Adjacent logging has caused blowdowns which may in turn affect spawning salmon.

- Warden: Mark Osburn
- Warden's Report: *ER 75 is a stand of huge spruce on the Clanninick. Logging practices and right of way through the reserve have pretty much destroyed its integrity. The edges of the reserve have suffered from lots of blow down. The reforested areas are now stabilizing the sloped areas. A benefit of the logging*

right of way and bridge was that when a new fresh water source was needed by the community, this right of way proved up to have the best water in the area.
– Mark Osburn

ER 105 – Megin River

- Located at the mouth of Megin River, Shelter Inlet, 21 km NNW of Tofino
- 50 ha
- Preserves an old-growth forest of Sitka spruce – western redcedar along a 1 kilometre section of the

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“Ecological Reserves...” continued from page 10

Megin River. Riparian strips of tall shrubs including red alder, willows and salmonberry occur between gravel bars and forested land. The slopes above the river are dominated by western redcedar-western hemlock and the ridge crests are forested with western redcedar and lodgepole pine. Significant spawning runs supported by the river system include sockeye, Chinook, coho, pink and chum salmon. The area is important breeding habitat for the red-listed marbled murrelet.

- Potential threats: Vulnerable to recreational use as this is the boat access point into the Megin River.
- Wardens: No warden on record

ER 109 – Checleset Bay

- Located between Kyuquot and Brooks Peninsula on the west coast of Vancouver Island
- 34,650 ha
- This reserve is the largest and most diverse protected littoral/marine environment on the B.C. coast. It protects a high-quality marine habitat for a population of sea otters reintroduced to the area from Alaska between 1969 and 1972. Ninety-eight percent of the reserve's area is marine with 40 islands of widely varying size protected from the brunt of the Pacific surf by the Barrier Islands. The shoreline features low cliffs, sea stacks, arches and caves. Sitka spruce and western redcedar forest occurs on the larger islands. The intertidal and subtidal habitats have given rise to a tremendous diversity of species: invertebrates, algae and the full range of coastal fish species. Marine mammals include gray whales, harbour porpoises, harbour seals, northern fur seals and California and northern sea lions. Seabird colonies and nesting sites are present and breeding birds include Leach's storm-petrels, glaucous-winged gulls, pelagic cormorants, fork-tailed storm-petrels, pigeon guillemots, black oystercatchers,



Checleset Bay

and bald eagles. Land mammals on the Bunsby Group of islands include Townsend's vole, black-tailed deer, western toad and northwestern garter snake, all considered species of conservation concern. The reserve is home to many First Nations archaeological sites.

- Potential threats: vulnerable to oil spills, industrial traffic, recreational use, commercial harvesting, air traffic, and traditional harvesting. Cultural aspects are susceptible to recreational use as this area is a sea kayaking mecca with an international reputation.
- Warden: Rupert Wong

ER 118 – Nimpkish River

- Located 85 km W of Campbell River on Vancouver Island
- 18 ha
- Located on a small island at the confluence of the Nimpkish River and several smaller creeks, this reserve protects a sample of Canada's tallest Douglas-fir forest, some topping out at 80 to 96 metres. These large specimens are thought to be 500 to 600 years old. The old growth forest contains a nesting site of northern goshawk. Visitors to the island include Roosevelt elk, black bear, deer, beaver and bald eagles.



Nimpkish River ER

- Potential threats: adjacent logging, small size limits the ability to protect the natural values.
- Warden: Heather and Rolf Kellerhals

Warden's Report: ER 118, Nimpkish River, has a long and rather troubled history. In 1973 an 18 ha stand of very tall Douglas Fir forest on the floodplain of the Nimpkish River near Vernon Lake was identified as rare and with ecological reserve potential. The area consisted of the land inside a very pronounced meander bend in the Nimpkish River, with

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“Ecological Reserves...” continued from page 11 a cut-off channel, active at flood flows, making it a river island. Canfor owned the trees, but not the land. Federal Fisheries had effectively obstructed earlier logging plans. After long and involved negotiations the Province paid Canfor C\$900,000 and made the area into ER 118, in 1988.

By then almost the entire floodplain of the Nimpkish River, both upstream and downstream, was logged and this had destabilized the river, a process that can be observed at many locations all over BC. The channel was rapidly widening and straightening. The cut-off channel soon became the main river channel, so that the Reserve is now surrounded on three sides by an abandoned river channel. Initially some astoundingly foolish attempts were made to stabilize the river at the Reserve. At one stage BC Parks traded many truckloads of old growth logs recently eroded from the ER river banks (and essential for fish habitat and for giving some stability to the reserve) for a rip-rap dike that failed almost immediately. Close to half the reserve area was lost to river bank erosion during the first 10 years of reserve life. In **The Log** of winter 94-95 Peter Grant gives a detailed description of the efforts to try and save the Reserve. Later efforts at erosion protection have been less invasive and more successful. Large trees standing on the river bank and in danger of being undermined and falling into the river were cable-tied back to more solid trees, not to prevent them from falling, but to keep them at the river bank to act as erosion protection. As a result part of the most threatened river bank is now somewhat protected. However, in order to remain effective, this type of river bank protection requires occasional maintenance and this has been lacking entirely. The situation is presently quite critical: If a few cables were to fail in a large flood, another major chunk of reserve forest could be lost to the river in a matter of a few hours.

The abandoned river channel that surrounds the Reserve on three sides is undergoing rapid changes as it revegetates. The small spring-fed flow left in that channel is turning into prime Coho habitat, and the pioneer vegetation on



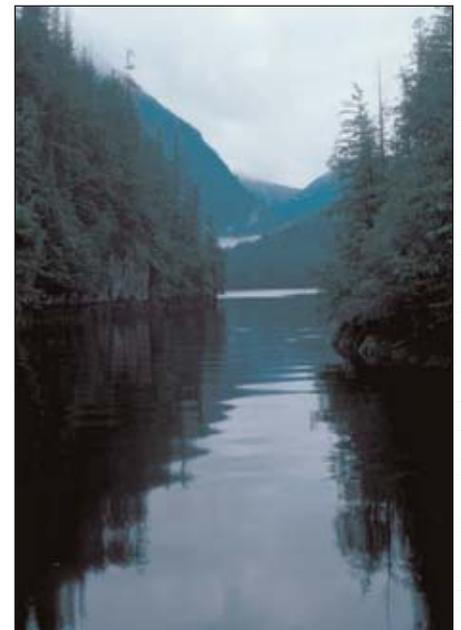
Tahsish River

the river bars is attracting elk and deer in large numbers.

Being volunteer warden of this reserve has been interesting but also increasingly more frustrating. At this stage there is zero communication with Parks staff, with letters, e-mails and phone calls going unanswered. – Rolf Kellerhals

ER 119 – Tahsish River

- Located 50 km S of Port McNeill on the west coast of Vancouver Island
- 70 ha
- This reserve protects an unaltered west coast estuary at the mouth of the Tahsish River on Tahsish Inlet, exceptional for its pristine state. Encompassed as it is by the large Tahsish Kwois Park, it is well protected from activity on its boundaries. The reserve consists of a long flat island cut into segments by river channels and supports a small Sitka spruce forest, tidal meadow, surf grass and algal communities. Animal life is abundant and diverse including Roosevelt elk, deer, black bears, bald eagles, harbour seals, river otters, shorebirds, Canada geese, trumpeter swans and various duck species. The network of river channels provides migrating, spawning and rearing habitat for several salmon species, cutthroat, steelhead



Klaskish River

and sculpins. Archaeological sites include fish weir posts and a village site used during salmon season.

- Potential threats: Vulnerable to recreational use (trespass from the adjoining park), poaching and adjacent log salvaging
- Warden: no warden on record

ER 129 – Klaskish River

- Located 23 km southwest of Port Alice on the northwest coast of Vancouver Island

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- 132 ha
- This reserve protects a near-pristine 1.5 km section of the Klaskish River estuary and a portion of Klaskish Basin, a steep-walled lagoon connected to Klaskish Inlet by a narrow channel. Three saltmarsh communities occupy the upper intertidal zone, forest stands of Sitka spruce line the river and old-growth western hemlock, western redcedar and amabilis fir forest dominate the higher ground. On land, the rare *Lilaeopsis occidentalis* (*Umbelliferae*) is present and in the waters of the basin the native oyster (*Ostrea conchaphila*) is thought to occur. Trumpeter swans, among other waterfowl, use the estuary as a wintering ground. Shorebirds, bald eagles, black-tailed deer, black bears and Roosevelt elk also use the reserve. Significant runs of Chinook, pink, coho and chum salmon spawn in the Klaskish River and the reserve is considered an important rearing habitat for juvenile salmonids.
- Potential threats: vulnerable to adjacent road construction and logging and contamination from boating activity and shore visits.
- Wardens: Heather Hay and Norm Holms

Notice to Wardens:

The next issue of *The Log* will feature the Ecological Reserves of the north central island – any wardens in that area who wish to contribute a report are asked to call Denise de Montreuil at 250 598-9825 or e-mail the Friends of Ecological Reserves at ecoreserves@hotmail.com ■

Report from Mara Meadows

by Charles Bailey

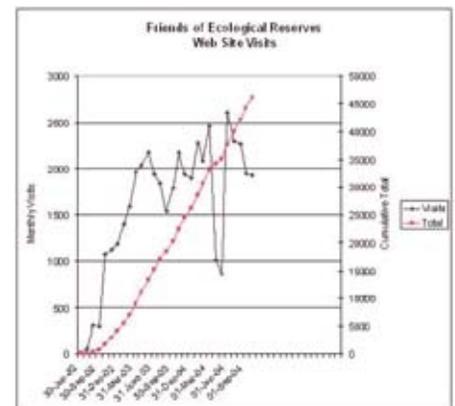
As volunteer warden of Mara Meadows Ecological Reserve, I make tours of inspection five to six times each season. During one of my visits in 2004 (June 5), my eye was drawn to a cluster of yellow Swallowtail butterflies hovering about a metre above a small patch of wet mud on the edge of one of the many calcareous pools dotting the meadow. This spot, as with numerous others throughout the meadow, is covered with sun dews (*Drosera anglica*). On approach, I noted that a further group of about 12 of the swallowtails were firmly stuck to the viscid fluid on the ends of the filaments around the margins of the sundew leaves. Some were still fluttering and others apparently dead. The sticky fluid on sundew leaves has an attractant that lures small insects, and it occurred to me that this attractant might have proved irresistible to the butterflies as well. However, the butterflies are far too big to be entrapped and digested by sundews. Moreover, there is room for doubt that the butterflies were lured by an attractant because there are many spots in the meadow where sundews are found in large numbers with no attention paid to them by butterflies. Also, a few days later, though no butterflies were found flying above the original site, several were seen hovering over muddy soil adjacent to a pool located far from any sundews. At this site, they occasionally landed and appeared to probe the mud with their probosci. I think it can be concluded that, at both sites, the butterflies were seeking to obtain some nutrient from the mud and, at the first site, they had the misfortune to be fatally ensnared. On the day of the second sighting, the butterflies that had been caught on the sundews at the original site were all gone and it seems likely that some bird made a meal of them. ■

Charles Bailey has been the volunteer warden at ER 42 Mara Meadows since 1994.



www.ecoreserves.bc.ca

The website continues to log in guests from around the world. As well as information about ecological reserves we feature a wonderful collection of photographs, back issues of *The Log*, samples of gift items for sale through the Friends, a chat line and many interesting links for you to browse. Make a point of visiting www.ecoreserves.bc.ca today! ■



Race Rocks Ecological Reserve: An Unusual Model of Reserve Management

by Garry Fletcher.

The following article is also printed complete with hyperlinks to relevant parts of the Race Rocks website at <http://www.racerocks.com/racerock/news/2004..htm>.

On October 3rd, a group of the Friends of Ecological Reserves made a trip to Race Rocks in the Pearson College Boats with Garry Fletcher and Chris Blondeau. Chris is the Pearson College Sea-front Coordinator and Operations Manager of Race Rocks. This fall has been remarkable in the consistently high population of Northern and California Sea Lions and high populations of seagulls and Cormorants on the islands, so it was a good time for the visit after the nesting season.

As a result of questions from members on the trip, I thought it might be useful to update everyone who is interested in the events on the reserve with the present state of the management and financing of Race Rocks. Lester Pearson College assumed the full management of the facilities and staff at Race Rocks in the fall of 1997. The light and foghorn had been automated, and the Canadian Coastguard was retiring the light keepers, Mike and Carol Slater. All the facilities except the light tower and foghorn were returned to BC Lands. An agreement was reached whereby the island was leased for long-term management and continued use for education and research by Lester Pearson College. In 2001, BC Parks was able to expand the Ecological reserve, which had previously omitted the large island with the facilities, to include all the remaining land area of Great Race Island in addition to the original 256 hectares of Islands and water to the 36 meter depth.

The Slaters were hired by Lester Pearson College to stay on as Ecological Reserve Guardians, providing security and keeping the diesel generator running, thus ensuring that



Field trip group on the waterfront at Pearson College

the college could have full use of the other buildings and facilities on the island. In addition, the daily collection of air and sea temperature and salinity data was continued, maintaining a valuable long-term database. An anonymous donor from Ontario met operating costs for the first year. Each year after a special effort has been made by the college to secure the operating funds to carry through to keep the island open. By the year 2000, a proposal was made to the Millennium Partners Fund of Canada, to help fund the installation of Internet facilities and microwave to provide a link to the College for the transmission of Broadband Internet. A number of partners and sponsors who continue to assist are referenced on the website. Each year since, the college has had to seek funding from a number of sources to keep the island going, since government funding for parks is very hard to come by.

One of the higher costs incurred in the operation is the diesel fuel to run the island's generators. Last year over \$20,000 went into this, so it has been an aim for some time to incorporate alternate energy technology in the operation. It is with great relief that I can now tell you that our efforts are paying off as we now have a company, Clean Current Power Inc. securing

the complete funding and installing at Race Rocks in the next year, an underwater tidal current generator which will have negligible negative environmental impacts. (See press release on pg. 16) Although a research prototype, this should generate all the required electrical needs for the island. The diesel generators will become backup utilities.

BC Parks has made a good effort to help with some of the facility costs on the island. Keep in mind that most Ecological Reserves do not have dwellings and facilities such as docks and workshops, so they have provided the funds to mitigate the effects of human sewage from the two houses, with the installation of Composting Toilets in 2003. The Coast guard, although having no direct financial commitment, has provided technical assistance when necessary. In 2000 an Advisory Board was set up by DFO for the formation of an Official Marine Protected Area under the Oceans Act. The Ecological Reserve is still a Marine Protected Area Designate, since final treaty negotiations have put a hold on complete Marine Protected Area Status. This has meant that no federal funds are available for maintaining the Protected Area.

It is a difficult job securing at least

continued on page 15

"Race Rocks..." continued from page 14

\$80,000 a year to keep the island operational. What is really needed is an endowment, and this we are determined to seek over the next few years. Keeping observers and cameras on the island has in the last few years served to keep the many users of the area accountable, so that the ecological integrity of the resource may be sustained. On the home page of racerocks.com is written: "we humans are never content just to know that a special area exists on this earth. We strive to be there, to touch, to feel, to consume. But therein lies the paradox. In so doing we can destroy the very thing we love." The aim of the racerocks.com program has always been to make this special ecosystem available to all through the Internet. We have been fortunate to have this opportunity to establish a window into the daily lives of the creatures of a rugged marine island ecosystem. We just hope that we can continue to make the amazing life of these islands available to all. This spring with the further assistance of Apple Computer, we upgraded our computers and added a new 340 degree robotic camera which provides a much more thorough survey of many parts of the islands from your own computer.

We are grateful for any assistance in the funding of the program at Race Rocks. One can pay by cheque or credit card to The Race Rocks Operating Fund c/o Lester B. Pearson College, 650 Pearson College Drive. (250) 391-2411. A tax receipt will be provided for amounts over \$25.00. ■

Garry Fletcher, the volunteer warden for Race Rocks Ecological Reserve is the Educational Director of racerocks.com. He has recently retired after teaching for 36 years. The last 28 of those years have been spent in Biology, Environmental Systems and the SCUBA diving program at Lester B. Pearson College of the Pacific. Garry now continues with his work on <http://www.racerocks.com> and serves as a consultant from his home in Metchosin.

Field Trip to Race Rocks

by Mary Rannie

A splendidly sunny day dawned for our annual field trip to "Race Rocks" Marine Protected Area. Gary Fletcher, warden, and Chris Blondeau from Lester B. Pearson College of the Pacific took 14 FER members and one Pearson College student out the inlet in two boats while herons and double crested cormorants watched from the trees. We were lucky to have an opportunity to observe this remarkable ecosystem since Pearson College, which manages the whole island, restricts visits and disturbance from May to October. Our eager eyes were rewarded en route by the sight of migrating turkey vultures circling upwards for enough height to make the trip across the Strait of Juan de Fuca.

Although we hoped for a view of an elephant seal (last year a baby lounged on the grass beside the path), Gary could only point to the grassy area in the middle of an islet where 4-5 usually hang out. No luck there but Northern sea lions and many of their smaller California cousins returned our stares as we approached the main island for a short tour. Several species of gulls, including Mew, Glaucous Winged, Heermans, California and returning Thayers, covered the rocky terrain. The rare Icelandic gull has been seen but is difficult to tell apart. Gary gave us an interesting walkabout, sharing his knowledge and enthusiasm for this unique marine sanctuary and we were happy to hear that neither broom nor blackberries have found a niche here! ■

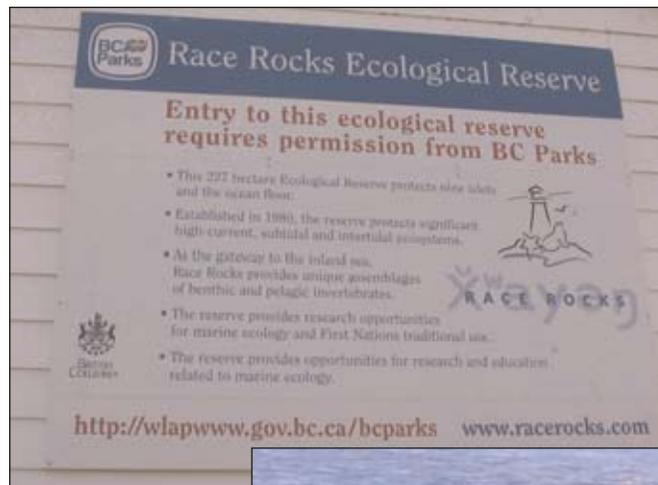


PHOTO CREDIT: DENISE DE MONTREUIL



Sea lions gathered at Race Rocks ER

PHOTO CREDIT: DENISE DE MONTREUIL

Race Rocks diesel generator electricity to be replaced with renewable energy using a tidal turbine generator

Wednesday, November 3, 2004

Lester B. Pearson College of the Pacific (Pearson College) has applied for and received permission from BC Parks to replace the diesel generators on the Race Rocks Ecological Reserve with a tidal turbine generator and battery system. The project will be led by Clean Current Power Systems Incorporated (Clean Current), a Canadian Company which will install a 3.5 metre diameter demonstration tidal turbine generator that will generate electricity with no greenhouse gas emissions. It will be the first free stream tidal turbine generator deployed in Canadian waters that will replace an existing power source. This project is expected to yield many environmental, research and educational benefits.

All appropriate measures will be taken during installation to minimize disturbance to the environment. This project will reduce the danger of hydrocarbon spills, reduce noise levels and eliminate air emissions.

Clean Current, as a final and critical part of its technology development plan, will arrange funding for the project.

Pearson College faculty and students have acted as long-time volunteer wardens at Race Rocks and were key players in having the area protected as an Ecological Reserve in 1980. As the environmental steward of Race Rocks, the College is dedicated to protecting the marine ecosystems within the reserve and to increasing the awareness of students, visitors and the public about marine systems,

ecological reserves and environmental issues. By transforming a decommissioned light station into a dynamic educational and research centre, Pearson College is able to share the rich cultural and environmental history of Race Rocks with Canadians and the world. Race Rocks now serves as an award-winning showcase of sustainable and innovative educational initiatives and emerging technologies.

Clean Current Power Systems Incorporated (Clean Current) is a private Canadian controlled corporation headquartered in Vancouver, British Columbia. Clean Current has developed a high efficiency tidal turbine generator that can be deployed as individual units or in farms similar to wind energy farms. ■

Tracing salmon in songbirds: how salmon-derived nutrients travel to upper-level consumers in forest food-webs

by Katie Christie, M.Sc. candidate, University of Victoria

The predictable annual spawning events of anadromous salmon (*Oncorhynchus spp.*) act as a critical link between terrestrial and marine ecosystems and constitute a substantial food source for many species. An important component of this process involves bear-mediated transfer of salmon into riparian forests and subsequent fertilization of otherwise nutrient-poor systems. The influx of salmon-derived nutrients causes streams and surrounding riparian areas to have greater primary productivity and invertebrate biomass, which is likely to benefit higher-level consumers such as songbirds. I am currently investigating the flow of salmon-derived nutrients from invertebrates to songbirds, and am attempting to quantify how the presence of salmon in a system affects songbird community structure.

Using isotopic ratios of nitrogen (^{15}N) and carbon (^{13}C), I have been able to detect salmon-derived nutrients in the feathers ground-foraging passerine, the Winter Wren (*Troglodytes troglodytes*). I compared isotopic signatures of wrens above and below a waterfall barrier to salmon migration on two rivers on the central coast of B.C., where concurrent studies have shown major enrichment of salmon nutrients in shrubs, trees and insects in riparian habitats. Feathers of Winter Wrens captured below the falls were enriched in ^{15}N compared with individuals captured above the falls, indicating that wrens around salmon streams incorporate salmon-derived nutrients into their diets. Wrens acquire salmon-derived nutrients directly through the consumption of fly maggots hatched from salmon carcasses, and indirectly through the consumption of aquatic and terrestrial arthropods that are themselves enriched in salmon-derived nutrients. Nutrients from spawning salmon have cascading effects on multiple trophic levels of terrestrial food webs and this process is intrinsic to the health and functioning of coastal ecosystems throughout the Pacific Northwest. I would like to thank The Friends of Ecological Reserves for supporting my project over the years; without their generous funding, my research would not have been possible. ■

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.

Call for Research Proposals

Each year, the Friends of Ecological Reserves welcomes applications for funding in support of biological and ecological research related to ecological reserves in British Columbia.

Applications should include:

- title of research project
- name of applicant(s)
- mailing address of applicant
- institutional (college or university) affiliation
- a brief description of the research and its relationship to ecological reserves in BC
- any other pertinent details
- two letters of reference supporting the project

Financial information should include:

- total budget required for project, with an indication of contributions from other sources
- amount requested from FER

Note: If the project is a multi-year proposal, provide an indication of how the project is to be supported/funded through its duration.

Applications will be judged on the merit of the project, the financial viability of the project and the financial need of the applicant. Research grants are generally between \$500-\$2000. As a condition of award, applicants are asked to submit regular reports on their research findings and may be required to present a public lecture on their research. Applications for funding for the current calendar year should be received by **January 31st, 2005**.

Send applications to:
Friends of Ecological Reserves
PO Box 8477 Stn Central
Victoria BC V8W 3S1

Priorities for research include:

- determining priorities for conservation, ie which ecosystems are at greatest risk.
- determining the range of natural variability of ecosystems at risk
- baseline inventories and monitoring of ecological reserves to determine if the reserves are maintaining the values for which they were established assessment
- baseline studies of the ecological reserves and adjacent areas, particularly in areas of high human visitation, to develop strategies that will limit negative impacts on the reserves. ■

Working Forest Initiative: what's next?

by Mike Fenger

Just what is the current status of the BC government's Working Forest Initiative (WFI)? The initiative was intended to address forest industry concern over the potential for continued expansion of Protected Areas and other conservation measures which might constrain forestry activities on public lands. The Working Forest web site (http://srmwww.gov.bc.ca/rmd/working_forest/index.htm) states, "The goal is to enhance land-base certainty for the forest sector and other forest-dependant industries to improve the investment climate, in balance with the needs of other sectors and the environment." A public discussion paper received 2700 public written responses and submissions from 130 groups. A summary of these responses entitled, "A Working Forest for BC, Consultation Report,

August 2003" found there was no consensus on how to provide land-based certainty for the forest sector but clearly showed a high level of anxiety about the proposed initiative. The report states that "Roughly 97% of respondents oppose the Working Forest Initiative" (page 11).

The most recent government press release (July 29th, 2004) indicated the WFI will proceed on the basis of:

- "LRMPs, which set out the land use priorities that will be used to establish the amount of forest land that will be available for timber harvest over the long term.
- The longstanding Provincial Forest designation, which identifies the Crown lands outside of protected areas that are available not only for forestry uses, but also tourism, mining, energy, ranching and recreation, as well as conservation and wildlife habitat.

- Innovative, science-based approaches, such as those successfully developed in the Cariboo-Chilcotin land-use plan (CCLUP) over the past decade, which balance the full range of uses for timber lands to arrive at long-term timber area objectives

Under these terms, there will be no new land designation entitled "Working Forest" administered by the Ministry of Sustainable Resource Management (MSRM). Any land considered for removal to other non-forestry uses, such as sale by Land Water BC, will need prior approval by the Ministry of Forests, as has been the case historically.

The reference to Land and Resource Management Plans (LRMPs) means that there will be numeric targets for access-to-land for forestry purposes and other non-forestry uses such as conservation and tourism for the

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“Working Forest...” continued from page 17
provincial forest. The Provincial Forest is all publicly owned land including areas without trees such as glaciers, alpine, grasslands and wetlands outside of Parks and private land. The targets for forestry will be derived from decisions taken in current land use plans and the timber access-to-land target will be the working forest.

Many of the land use plans referred to provide general consensus statements on land use within broad zones. When developing land use objectives, those negotiating the plans did not contemplate a precise numeric target. FER members and others need to be aware that assumptions will be made when taking non-specific land use direction as the basis for developing concise access-to-land percentage targets in order to precisely define the working forest and other land uses.

For example, an assumption will be made on whether the forests not presently contributing to the current Allowable Annual Cut (AAC) will in future be dedicated to the timber target. The non-timber harvesting land base (non-THLB) is classified by the Chief Forester as a factor in measuring which forests are economic and supporting the AAC and which forested lands provide the forest industry with commercial forests to log. In many Tree Farm Licenses (TFLs) and most Timber Supply Areas (TSAs) the non-THLB forms the majority of forested land. Current forestry policy transfers forest land from the non-THLB to THLB whenever timber values minus development costs (roads and harvesting costs) are at break-even or above. In other words all forests are available for harvest and will be included by the Chief Forester in the AAC determination once a forestry operation demonstrates performance in these stands. Currently, timber harvesting has priority access to the non-THLB lands unless other resources values have previously been identified for priority. The trend over the last 50 years has been a steady increase in the size of the THLB as improvements in technology and efficiency lower costs and allow forestry companies to move into more remote and/or lower quality stands. Will those

who are deriving the timber targets assume commercial forest use is the highest and best in the non-THLB therefore giving timber values priority in future over other values in the current non-THLB? Excluding all current non-THLB as identified in areas supporting the present AAC determinations will have no impact on the forestry sector today.

A number of conservation provisions are contained in the Forest and Range Practices Act, regulations and policies: establishment of riparian reserves and management areas, maintenance of forest biodiversity by establishing Old Growth Management Areas (OGMAs), Wildlife Tree Retention (WTR) areas, and habitat for threatened and endangered species through Wildlife Habitat Areas (WHAs). All conservation provisions are constrained by timber impact policy which states that there will be no more than a 6% decrease in AAC provincially over 1995 harvest levels. Therefore conservation values have an access-to-land target determined by the timber impact target, a conservation budget set in 1995. Will conservation access-to-land targets sustain the conservation values over the next century? What risks do current forest practices place on non-timber values?

With regard to “science-based approaches”, the CCLUP is the only provincial land use plan that included access-to-land targets stated as a percentage of land available to conservation and commercial forest development. The plan also gives priority to commercial forestry over conservation in areas where the commercial forest access target cannot be met. Can the assumptions in the CCLUP be extended to other LRMPs? The stated intent of government is to use decisions taken in existing plans. Does application of an assumption, such as priority to a timber target over conservation re-open other land use plans which lacked priorities to timber? The process for amending current plans and re-balancing between values is under revision and not explicit at this time.

The goal of certainty over land use is a laudable one. Certainty for timber will

also provide greater certainty for the conservation values as well as other forest resource sectors (i.e. tourism, recreation etc.) in terms of percentage access-to-land. The mining and oil and gas sector are, however exempt from access-to-land constraints outside of Protected Areas. FER members and others are encouraged to closely follow the unfolding conversion of current land use plans and current forest practices policy assumptions into access-to-land targets. There is a need to make full use of existing land use plans and decisions already taken but it is unclear whether yesterday’s consensus stakeholder agreements will result in sustaining environmental values. Many land use plans do not provide sufficient detail to allow for easy conversion to access-to-land targets for a variety of resource users. If the access-to-land targets are too generous to any sector or value this means that others sectors and values will not sustain the quality or quantity of goods and services coming from public forest land. By committing to a long-term timber access-to-land targets it is assumed that we have the optimum mix today and for the next century too.

Do the land use plans and current forest policy have the mix of conservation and forest development sufficiently correct to make these very long term land use commitments? FER and others need to closely monitor the information and assumptions used to derive targets, the amending processes and become involved to ensure accountability for conservation values. This initiative is being lead by the Ministry of Sustainable Resource Management (MSRM) and there are regional contacts assigned to implement the WFI. Interested parties can contact these regional MSRM staff and formally request information updates and notification of meetings held to inform stakeholders in order to offer input at critical decision points in the next phase of WFI. ■

Prepared by Mike Fenger at request of FER Board.

FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central Victoria BC V8W 3S1

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Websites of Interest

by Denise de Montreuil

Smithsonian National Museum of Natural History

You don't have to go to Washington, D.C. to make use of this treasure trove of information. The North American Mammal Search is recommended... use a map, or a species name, create a field guide online then download and print it, check out conservation status or look up a species in the special collections either by common name or by order and family for drawings of skulls, teeth and bones. Use an interactive animation to look at the animal you've selected from different angles or listen to the sound files for vocalizations. The map function takes forever to load during busy hours but is very useful for creating a field guide selecting for a particular species or for everything on record for the area.
www.mnh.si.edu/

Tidal Energy and Power Generation

Race Rocks ER is about to make the leap away from conventional technologies and harness the power of the sea. For an explanation of tidal energy, investigations into ancient methods and particulars on modern technologies in the quest for a renewable clean energy source, try these websites:

www.eling.aaugonline.net/sitem.html: a functioning tidal mill in England with a history dating back to 1086

www.poemsinc.org/FAQtidal.html: a list of FAQ's about tidal energy

www.darvill.clara.net/altenerg/tidal.htm:

a clear and uncomplicated explanation of tidal energy and methods of using it along with links to other alternative energies

www.ceet.niu.edu/faculty/vohra/tech%20484/tidal%20pres_files/frame.htm:

an excellent Power Point slide show entitled "What is Tidal Energy"

<http://collections.ic.gc.ca/western/tidal.html>: cutaway diagrams of the Annapolis Tidal Generating Station.

www.bluenergy.com/: the latest research and development on tidal energy

Birdcams

Only the barn owl nest box is occupied at the moment but at this Cornell Lab of Ornithology website, you can look at archival shots of an eastern bluebird family nestbox and an osprey nest at various phases over the past season and the comings and goings at the live "feeder" at Ithaca, New York. At the Lab's main website there is an online bird guide with many user friendly features: migration tracking, a bird of the week feature, birds in the headlines and conservation links. If you are a bird watcher and want to get involved, the website has several suggestions on joining projects like The eBird Site Survey where you can

report your observations and add to the database being compiled on bird migration in North America or participate in the Great Backyard Bird Count coming up in February. Find the lab at <http://birds.cornell.edu/> or go straight to the nestbox cam at www.birds.cornell.edu/birdhouse/nestboxcam/ ■

The Log



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