The Log

Spring 2006

FRIENDS OF ECOLOGICAL RESERVES NEWSLETTER

Tom Reimchen Addresses Friends' AGM

By Denise de Montreuil

The Annual General Meeting of the Friends of Ecological Reserves took place on Friday, February 24, 2006 in Room 157 of the Murray and Ann Fraser Building at the University of Victoria.

Secretary Tom Gillespie read the minutes of 2005's AGM and was followed by President Mike Fenger who spoke of the good efforts of all eleven directors during the past year and brought up the subject of organization renewal to be discussed at the next regular Board meeting. He addressed the need to consider recruiting new directors from outside of the Victoria area and of incorporating conference telephone calls to permit their regular attendance at meetings. He spoke of the need to develop a Scientific Advisory Committee to advise us when needed. (See President's Report, page 4) Mike also expressed delight at getting a resolution passed at the Professional Foresters Conference in Victoria on February 21, 2006

continued on page 2

DENISE DE MONTREUIL

Attentive crowd at Friends' AGM

Inside…

The LOG

Spring 2006

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 Summer issue of *The LOG* is September 1, 2006

Editor
Denise de Montreuil

Design and Production
Indigo Sky Graphic Design

Contributors to this issue:
Mike Fenger, Tom Gillespie, Phil Haight, Carla Mellott, Alison Nicholson and Stephen Ruttan

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

"Tom Reimchen…" continued from page 1

to pursue the development of new reserves in beetle kill areas. He was presenting a paper on Criteria and Indicators when he was invited to put a resolution before the meeting. (The text of his speech appears on page 14 of this issue).

Treasurer Saila Hull gave an overview of our current state of finances and presented a draft budget for the coming year. (See the balance sheet on page 3) The research grant committee reported two proposals which are being reviewed by director Evelyn Hamilton and will be considered at the next Board meeting. Board elections saw the current slate returned by acclamation. Two directors have expressed an intention to step down in the near future indicating that two positions may be vacant. The board is willing to entertain expressions of interest from anyone who thinks they might like to let their name stand and especially encourage interested persons outside the Victoria area.

DENISE DE MONTREUIL

Vicky Husband greets Dr. Ian MacTaggart-Cowan

Following the adjournment of the business meeting, Dr. Tom Reimchen of the University of Victoria's Biology Department gave a slide show presentation on the Spirit Bear of the mid coast and his concerns about its continuing survival. Named after curator Frank Kermode of the provincial museum, *Ursus kermodei* was thought to be extinct as early as 1912. They are most numerous today on Gribbell and Princess Royal Island on the mid-coast, not far from the site of the recent shipwreck of the Queen of the North. Its white coat is a genetically recessive mutation and the adaptation was thought in the past to be variously a glacial relict or a random neutral geographically isolated mutation that did not offer any evolutional advantage.

continued on page 3

DENISE DE MONTREUIL

Cream of the ecological crop: L to R Vicky Husband, Dr. Tom Reimchen, Bristol Foster, Ian MacTaggert-Cowan

"Tom Reimchen…" continued from page 2

Since these theories did not fully explain the presence and survival of the mutation, Dr. Reimchen and his team went to Gribbell for further testing. His study looked at (among other things) the interaction between white and black bears based on when they were active, which was dominant and what the difference was in salmon capture success between the two colours. He found that on Gribbell Island which has the highest percentage of white bears, the whites had a foraging advantage during daylight hours. It seems their white coats allow them a 50% increase in success rate over blacks as they are less visible to salmon, perhaps not standing out as much against a cloudy or bright sky.

The crowded meeting room fell into shocked silence as Dr. Reimchen delivered the truly bad news: the only salmon stream on Gribbell has been trashed by logging. There is no riparian zone left. It is an impenetrable tangle of logs and branches meaning that bears are unable to drag captured fish away from the stream as they do elsewhere. The follow-on benefits to mosses, liverworts, shrubs, trees, insects, birds and other mammals from the fish remains left by bears is mostly lost as a result.

The statistics present a dismal picture. The 1950–1960 biomass of salmon on Gribbell was 4,352 kilograms. It fell to 838 kilos in the 1990–2000 period, an 80% reduction in the amount of protein available for bears and by extension, everything below them on the food chain. Dr. Reimchen considers Gribbell a keystone island because of the white allele concentration in the bear population there. Gribbell has the highest occurrence of white bears as a percentage of the total of black and white of anywhere on the mid-coast. Nonetheless, the proposed Kitasoo Spirit Bear Protected Area announced with great fanfare by Premier Gordon Campbell on February 7 of this year does not include Gribbell Island. ■

See "Websites of Interest" on page 16 for links to the announcement and to information on the Spirit Bear.

Friends of Ecological Reserves Income and Expenses for 2005

Memberships, donations and placemat sales	$	4,450.58
Research Grants	$	24,900.00
Total income for 2005	**$**	**29,350.58**
"The Log" newsletter	$	4,196.47
Administration	$	1,740.00
Scholarships	$	1,000.00
Research grants given out	$	31,378.85
Office and Field trip expenses	$	946.53
Total expenses for 2005	**$**	**39,261.85**

Membership Report to the 2006 FoER AGM

By Tom Gillespie, Membership Director

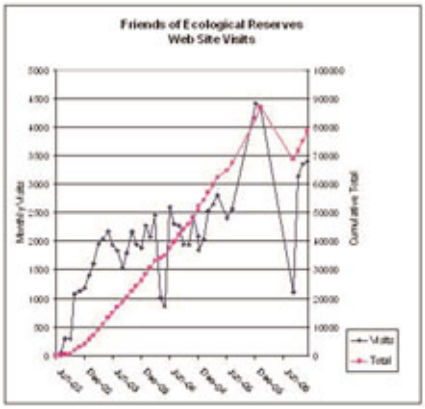
We now have 124 current households on the mailing list with 45 paid up for 2005 and expected to renew, 64 households already renewed for 2006 or later which includes 6 Honorary Members and 2 Life Members. Included in our total households are 14 new members signing up during the last year.

Unfortunately there are 15 households that are only paid up to the end of 2004 and they will not receive the Spring edition of *The Log*.

We also mail *The Log* to 72 Wardens. ■

www.ecoreserves.bc.ca

The website has been running for almost four years. We continue to receive hundreds of visitors each month from around the world. It is a great way to find out about BC's ecological reserves and a great way to read *The Log* in colour! ■



President's Report 2006

By Mike Fenger

The Annual General Meeting is the time to reflect on the year past, take the lessons offered, and set the course for the year ahead. This is the strategy used by Don Eastman, our past president, and I will continue in the same manner.

First, thanks for the effort and energy of all Board members and our two support staff, Denise de Montreuil, *Log* Editor, and Tom Gillespie, our office manager/bookkeeper. Sadly, Santiago Alverez, our office manager for a good portion of last year, left. Thank you Santiago – your warm energy is missed. We were not successful in finding and training a replacement for Santiago, so it was agreed that Tom Gillespie in addition to book keeping could take on the role of office manager. Thank you Tom, this provides efficiencies and eliminates the need for training new staff to the duties of this little volunteer organization. Sadly, Denise our *Log* Editor is leaving after 3 years and editing nine top quality issues of *The Log*. Thank you so much for your persistence and dedication, you will be missed. Denise has a new blessing calling for her attention: congratulations grandmaw.

We remain a Board with eleven directors whose commitment to monthly meetings has produced an amazing level of activity and steady progress. It amazes me how much we get accomplished. It is a truly great team with diversity and experience, a good group to spend some time with, living up to the name "Friends".

Thanks are due to our members whose financial support we truly appreciate and on whose support we depend. And the backbone of the organization is the wardens, to whom we also extend very warm thanks for keeping watch over the ecological reserve system.

The year in review.

Supporting the Wardens…

Thanks to a steady effort, the Friends, together with MOE staff, completed the up-dated version of the Wardens Handbook which is available at http://www.env.gov.bc.ca/bcparks/conserve/er_warden_handbook__24may2005.pdf .

There are plans to produce hard copies for wardens so they can have something more durable that transports better than home printer versions.

Funding Research…

First, thanks to Lynn Milnes for providing continuity with our major funding supporters, without whom we would be unable to support researchers and students. Thanks to Evelyn Hamilton for applying her research background and expertise to review research proposals and make recommendations to the Board on the technical merit of proposals received. In this last year we were able to direct $28,000.00 from our donors to support the following research:

- Tom Reimchen for his work on the Kermode bear and their relation to salmon. Tom provided an excellent and inspiring public lecture at the AGM 2006. Thank you Tom.
- Jane Watson for continuation of her work on west coast marine ecosystems. Jane provided our public lecture for the 2005 AGM. Thank you Jane for the new insights into marine ecology.

We were also able to support four university students:

- Patrick Williston of Gentian Botanical Research, Amy Wilson of the Centre for Applied Conservation at UBC, Brad Fedy of the Centre of Applied Conservation Biology at UBC, Carla Mellott working on her Masters of Science at the School of Environmental Studies at the University of Victoria and Krista Roessingh also pursuing a Master of Science at the School of Environmental Studies at the University of Victoria. Thank you all for contributing to our understanding of natural systems and ecological reserves. We are pleased to have been able to support your work.

DENISE DE MONTREUIL

Mike Fenger delivers his report to the AGM

Providing outreach…

We produced three issues of *The Log*: Spring, Autumn and Winter. Check the website for back issues. Thank you Denise, this continues to be our face to the world. We completed two successful field trips to Race Rocks and Trial Island. Trial Island was a "media event" as we had the Victoria CBC crew in tow, local TV, visiting South American botanists and local botanists

continued on page 5

"President's Report…" continued from page 4

Adolf and Oluna Ceska, who ably provided botanical commentary. Thanks to Mary Rannie and Marilyn Lambert for organizing these trips.

Keeping Effective…

We held two meeting with Nancy Wilkin, Assistant Deputy of Environmental Stewardship Division in the Ministry of Environment and we have been in regular contact with Parks staff. I was asked to make a presentation on behalf of FER at a forum on Criteria and Indicators, the abstract is included in this issue (Page 14) and a link to site with the power point presentation is on the Forrex website at www.forrex.org/publications/other/filereports/C&IForum2006.pdf

> *…a new ecological reserve, Grand Portage, is in the planning stages…*

We have completed, or I should say Alison Nicholson has completed, our final draft of the "State of Ecological Reserves of British Columbia". This report was started as a co-op student work term by Morgan MacCarl who was guided by Peggy Frank, Saila Hull and myself. We so appreciate Alison's fresh energy and her generous time and considerable skill in bringing this chapter to fulfillment. We will finally be placing the report in that spot we've been holding for some time on the web site under current news and issues.

Conclusion to the Gladys Lake Boundary issue…

(see background article Winter 2005 *Log*).

On March 29, 2006, Bill 15-2006 [Miscellaneous Statutes Amendment Act, 2006] went through Committee and Third Reading. This Bill contained the following amendments to the Protected Areas of British Columbia Act: section 2.The boundary of Gladys Lake Ecological Reserve was modified to remove 2, 499 hectares from the ecological reserve. These lands will be added to Spatsizi Plateau Wilderness Park. The boundary of Spatsizi Plateau Wilderness Park was modified to add the 2,499 hectares removed from Gladys Lake Ecological Reserve.

By directly participating in the assessment process last summer, we entered a new relationship with those closest to this largest of BC's ERs: local guide outfitters the Collingwood Brothers and northern Parks Branch staff. As part of that new relationship a new ecological reserve, Grand Portage, is in the planning stages with field work scheduled this coming summer. BC Parks staff will complete a review of this area, undertake appropriate consultations, particularly with the Tahltan/Iskut First Nations, and advance a recommendation during the coming year. We owe real thanks to the northern Parks Branch staff who worked hard on this difficult long standing issue. Thank you to Janice Joseph and Larry Boudreau as well as to Reg and Ken Collingwood who collectively have brought this boundary issue to a successful conclusion. BC Parks staff will initiate a program to monitor the effects of grazing at the various sites identified that were removed from Gladys Lake Ecological Reserve and added to Spatsizi Plateau Wilderness Park. Thanks is also owed to Roberta Reader who provided pro bono legal advice to FER. Thank you Roberta.

The year ahead

Supporting the Wardens:

- We will hold regional warden meetings together with MOE staff. (see Page 13 of this issue for details). Some Board members will be in attendance.
- We will begin to recruit new wardens
- We will post the State of BC Ecological Reserves Report

Funding Research:

- We will strike a Science Advisory Board to increase the confidence of current and potential new donors so that they will be assured their funds are placed to highest and best use.
- We will work closely with our existing donors and we will seek new ways to attract funds for research to Ecological Reserves.

Providing outreach:

- We will continue to keep our website up-to-date and to work on educational materials with interested clubs and participate when invited to speak on the benefits of ER systems.
- We will produce three issues of the *The Log*.

Keeping Effective:

- We will strengthen the partnership with MOE staff and work to implement the recommendations in the State of ER Report findings.
- We will renew and keep strong our relationship with existing donors and explore ways to attract new research funding.
- A Board retreat is scheduled for June to develop a Vision and Mission Statement and to help guide the direction of FER and develop the scope of the Science Advisory Committee. Thanks to Colin Rankin for once again facilitating this weekend retreat.
- We will advocate for new Ecological reserves in areas where they are most needed.
- We will seek ways to increase our membership. ■

Visit www.ecoreserves.bc.ca

Trial Island Field Trip – April 23, 2006

By Stephen Ruttan

We had a beautiful day for our annual outing to Trial Island. With the sun shining and the seas not too choppy for our Zodiacs, we were off to see Victoria's best display of native flora. We had a full complement of thirty people going there, as the trip is always popular. And judging by the remarks they made afterwards they were not disappointed.

When we landed, we were met by the lighthouse keeper Ian McNeil. Then, led by Adolf and Oluna Ceska, we set off to explore the island. Adolf pointed out many rare and unusual plants, such as Macoun's meadow-foam (*lymnanthes macounii*), and an unusual form of the shooting star (*dodecatheon pulchellum*). It was obvious we were at an earlier stage in the flora than on some other trips, because there were still some Easter lilies (*erythronium oregonum*) in their dying blooms. Also the golden paintbrush (*castilleja levisecta*) seemed to be young yet. But the bear's-foot sanicle (*sanicula arctopoides*) was in full glorious bloom, better than this observer has seen on previous trips. Also seen was the chocolate lily (*fritillaria lanceolata*), and many other species. There was some camas (*camassia sp.*) out, but it seemed early for that.

Everyone was very conscious of the sensitivity of the area, and how we had to stick to trails. We had brought snacks and lunches, and after a good morning of botanizing we sat down to eat. Then we wandered back to the beach, dozed a bit in the sun, and then got our rides home.

Thanks to Adolf and Oluna for guiding us around. And thanks also to Marilyn and Phil Lambert and Don Mais for taking us over and back in their Zodiacs. A good day was had by all. ■

Stephen Ruttan is a director on the board of the Friends of Ecological Reserves.

STEPHEN RUTTAN

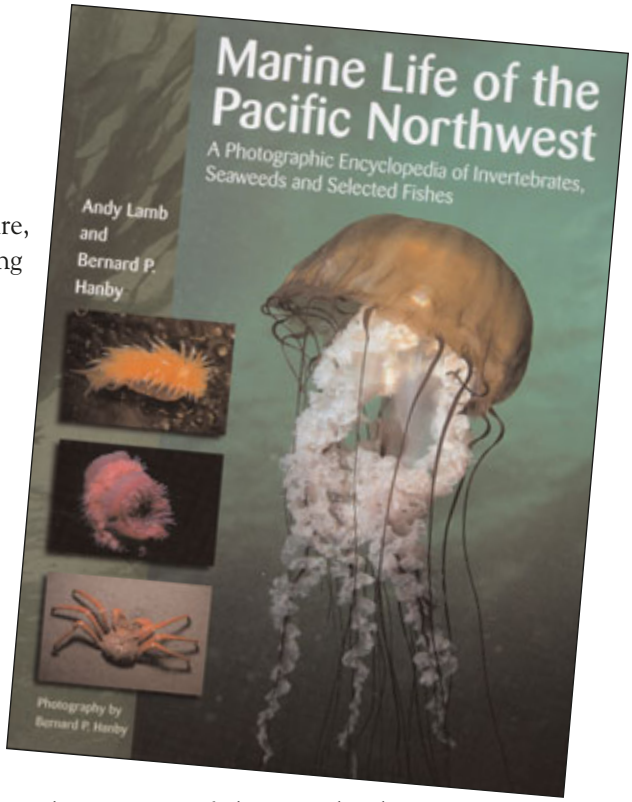
Botanist extraordinaire Adolph Ceska imparts his knowledge to Trial Island field trippers

STEPHEN RUTTAN

Bear's-foot sanicle (sanicula arctopoides) *in full glorious bloom*

The Book Shelf

By Denise de Montreuil

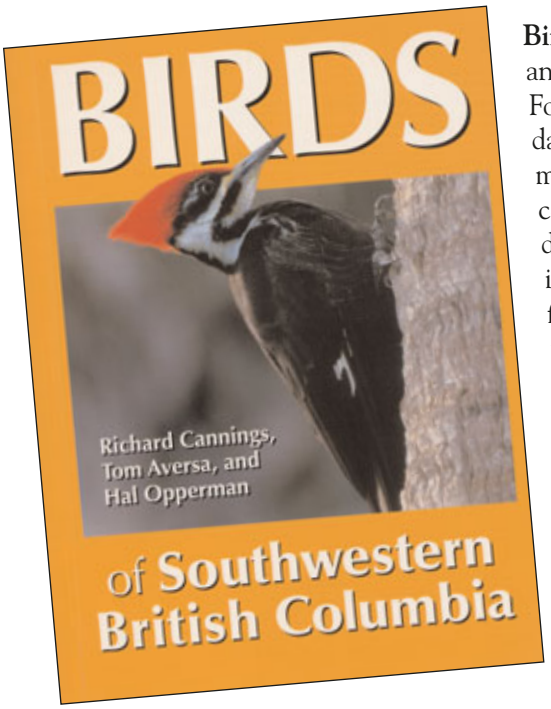


Marine Life of the Pacific Northwest: A Photographic Encyclopedia of Invertebrates, Seaweeds and Selected Fishes, by Andy Lamb and Bernard P. Hanby, Harbour Publishing, $69.96 hardcover, 400 pages, 1,700 colour photos.

This exhaustive catalog of marine species is impressive by any measure, useful to both scientist and amateur alike, replete with images of bristling worms, pearly shelled bivalves, anemones in startling greens, pinks, oranges and ghostly translucents. The photos, fascinating to look at in their own right, are also an excellent resource for identifying species, especially since there are often additional images of the subject in different phases.

Any book that claims to be a reference is really only as good as its utility in finding what one is looking for and this one is particularly easy to use. The authors have provided an excellent table of contents and quick reference guide color-keyed to scientific categories based on external similarities, for instance: green for seagrasses and seaweeds, yellow for sponges, etc. Each group is introduced by a description of its characteristics and followed by suggestions for further reading for more science oriented users. The species entries are consistent, logical and comprehensive and their layout is explained in a key in the introduction.

For the Pacific Northwest reader and amateur observer, a nice feature is the notation of photographic locations for the images. Who knew what chimeras lurk just off your favorite beach! A brief glossary demystifies the more impenetrable scientific terms and the index contains both common and scientific names. My biologist friends tell me this is a bargain considering the number and quality of the photos while a general audience will appreciate the relaxed tone and tongue-in-cheek humour especially in the final entries in the "Selected Vertebrates" section describing a certain ubiquitous two-legged subspecies. (Special thanks to biologist and author Ann Eriksson for her input.) ■



Birds of Southwestern British Columbia, by Richard Cannings, Tom Aversa, and Hal Opperman, Heritage House, $19.95, 414 pages.

For those just getting started with birding, you can't do much better than this dandy little guide. A perfect size to slip into a pocket or backpack, it covers most of the species a beginning birder is likely to encounter in the southwest corner of British Columbia. As with the larger reference book above, the different bird families are color-coded and thumb-indexed for ease of access in the field. Descriptions are succinct and the print is a decent size to facilitate reading under alfresco conditions. A small space at the bottom of the description is lined for field notes and there is an indexed checklist for recording sightings at the back of the book. The entire left page opposite the descriptions is given over to good quality photos, often showing male and female, breeding and non-breeding phases, in flight and at rest, or juvenile and adult specimens.

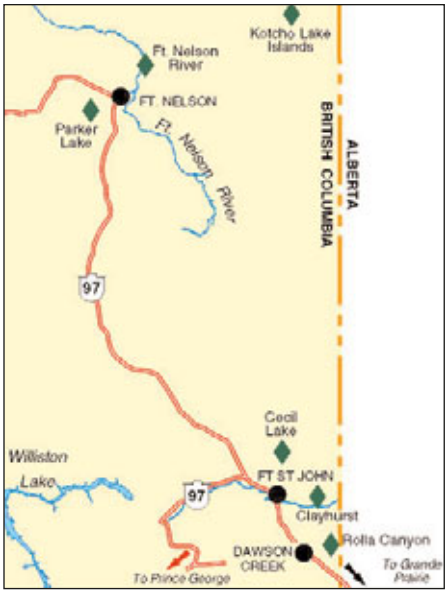
This guide does not purport to be definitive. Its chief drawback will probably be the hunger it inspires to know more, prompting the acquiring of ever-more comprehensive (and expensive) birding guides and other birding paraphernalia. Be warned: this book could be the start of a full-on obsession. ■

Ecological Reserves of Northern B.C.

PART I

ER 8 – **Clayhurst**

- Located 4 km S of Clayhurst, 32 km E of Baldonnel, at the Alberta border
- 316 hectares
- This reserve is characterized by eroding bluffs and steep slopes above the Peace River and south-facing breaks along its north bank and small areas of plateau surface. Upstream flow control on the Peace has modified alluvial action by eliminating spring flooding and reducing winter ice cover. Aspen forest covers a good portion of the reserve along with grassy slopes and shrubby uplands. Alluvial cottonwood stands flank the river with an understory of willows, red-osier dogwood and water birch. Rare plants include long-leaved mugwort (*Artemisia longifolia*) and slender muhlenbergia (*Muhlenbergia filiformis*), only present in BC in Peace River Parklands. The flora and fauna of this reserve are characteristic of the Great Plains but are rare in British Columbia.
- Potential Threats: there is evidence of cattle grazing in the reserve; a pumping station was in place before the reserve was established and is accessed by the oil company through a locked gate; dirt bike access points to the need for signage and community education.
- Warden: Walter Schoen



COURTESY OF BC PARKS AND PROTECTED AREAS

The warden visits the reserve three or four times a year. He reports that cactus grows on the reserve and many garter snakes are seen. On a recent trip he observed two bears having a bath in a beaver pond. The beavers are no longer present. The sign for the reserve is missing.

ER 47 – **Parker Lake**

- Located on the S side of Parker Lake, 10 km W of Fort Nelson
- 259 ha
- The reserve is a level boggy lowland on the Alberta Plateau little changed since the glacial period. The north-east quarter of the reserve holds four small shallow lakes ranging in size from five to twelve hectares in size. Considering the latitude, a diverse range of communities appears in the reserve: from pondweed in the shallow lakes to bog forest. The shrub-sedge habitats of the reserve are supported on a thin organic layer of semi-decomposed materials which act as a huge sponge regulating streamflow. Three species of wetland plants present in the reserve are at greatest rarity in British Columbia and include Mackenzie's water-hemlock (*Cicuta mackenzieana*), the common pitcher plant (*Sarracenia purpurea*) and a lousewort (*Pedicularis macrodonta*). A wide diversity of waterfowl and shorebirds are thought to nest within the reserve including twenty pairs of black terns. No recent surveys have been done within the reserve.
- Potential Threats: Some snowmobile activity has been reported but the reserve's boggy ground makes travel through it nearly impossible in summer.
- Warden: no warden on record

ER 50 – **Cecil Lake**

- Located 28 km NE of Fort St. John, 30 km W of the Alberta border
- 129 ha
- Like Parker Lake and Clayhurst ERs, Cecil Lake ER is part of the western extension into BC of the Alberta Plateau. Aspen woods cover more than half of its area, the rest being a mosaic of fen and extensive bog forest of black spruce, Labrador tea, cloudberry and lichens. This extension of the Great Plains ecosystems contains floral and faunal elements that are

continued on page 9

COURTESY OF BC PARKS AND PROTECTED AREAS

A view of the Peace River in Clayhurst ER

"Ecological Reserves…" continued from page 8

rare in British Columbia, given that most similar habitat has been given over to agriculture. Wildlife present includes red-tailed and marsh hawks, gray jays, red squirrels, deer and moose.

- Potential Threats: runoff from surrounding farmland may ultimately affect its water regime.
- Warden: no warden on record

ER 62 – **Fort Nelson River**

- Located on the W bank of the Fort Nelson River, 20 km NE of Fort Nelson
- 121 ha
- This reserve protects a productive floodplain in the Fort Nelson Lowland. Successive deposits on the shoreline of the northern half of the reserve have established concentric bands of forest growth increasing in age up the slope away from the river. Balsam poplar (cottonwood) forest covers the majority of the reserve although juvenile white spruce are gradually replacing the poplars. Shrub communities of sandbar willow, mountain alder and scouring-rush dominate the sandbars. No surveys of fauna have been done but moose, beaver and ruffed grouse would be typical in this habitat.
- Potential Threats: the reserve is accessible to hunting and other recreational uses.
- Warden: no warden on record

ER 148 – **Kotcho Lake**

- Located 100 km ENE of Fort Nelson
- 64 hectares (49 hectares of upland and 15 hectares of foreshore)
- This fairly recent addition to the reserve system is made up of two flat partly boggy islands and surrounding parts of Kotcho Lake. Established in 2000, it protects, according to the Ministry of Environment website, a Colonial Waterbird nesting site and important migration stopover. It is the only nesting colony in British Columbia where three species of gulls breed – Herring, Mew and Bonapartes. Moose use the bigger island as a calving site and caribou and varying hare are present. At this time, no detailed management plan is in place although a contact at the Ministry says it is in the process of being written.
- Potential Threats: none identified
- Warden: no warden on record

COURTESY OF BC PARKS AND PROTECTED AREAS

Poplar trees at Cecil Lake ER

PHIL HAIGHT

Eroded clay banks of Rolla Canyon ER

ER 150 – **Rolla Canyon**

- Located E of the community of Rolla along the Pouce Coupe River valley, NE of Dawson Creek.
- 45 hectares

continued on page 10

"Ecological Reserves…" continued from page 9

- Rolla Canyon Ecological Reserve was established to protect the paleontologigal features of the site as well as special natural, cultural, heritage and recreational features. The area made the news in 1969 when Dawson Creek resident and rock hound Ted Williams found a huge mastodon tusk along the river. It was twelve feet long, 32 inches around at its widest point and weighed approximately 200 pounds. No management plan exists as yet for the reserve.
- Potential Threats: the risk from fossil hunters is considerably reduced by the inaccessibility of the site. It is an incised sandstone canyon with no direct road access.
- Warden: Phil Haight (see this page for a report on a visit to the reserve by the warden)

Notice to Wardens:

The next issue of *The Log* will feature Grayling River Hot Springs (147), Ospika Cones (152), Portage Brule Rapids (149), Raspberry Harbour (91), Sikanni Chief River (46) and Smith River (80). Wardens of these reserves are asked to contact Denise de Montreuil, Editor of *The Log* at 250 598-9825 or e-mail the Friends of Ecological Reserves at ecoreserves@hotmail.com to fill us in on the latest news from your reserve. Our apologies if we've missed out on any of you in this or in past ER features – we're doing the best we can but it is very difficult to get an up-to-date list. If you have been appointed as a warden any time in the past five years, please get your contact information to The Friends so we can add you to our list. ■

An Outing to Rolla Canyon

By Phil Haight

On June 12, 2005, five canoeists in two canoes undertook a trip down the Pouce Coupe River to reach Rolla Canyon Ecological Reserve. Three biologists/ birders armed with a satellite navigation system were in one canoe, and myself and another member of the Timberline Nature Club were in the second one.

The river offers a very interesting paddle. In places the river is so shallow that it eventually wore two large holes in the bottom of our canoe. And in other places, it is narrow and swift with water cascading over large boulders. There were places where the river tested our limited paddling skills. The entire trip offered very picturesque surroundings with 300 metre banks the whole way.

The only evidence of other people being on the river was a place where a fire had been lit, close to the river's edge. I found out later that it had been a man with his two small dogs. He had left during the day thinking it was a short distance but found he had to stay the night under his canoe. There is also evidence of a few old dumping sites, but none were found in the E.R. itself.

There are no cutlines or signage on the river as you enter or leave the ER so we didn't know where the boundaries were, but because of our earlier trip in May we recognized when we were in the ecological reserve. We spent some time exploring the reserve, looking for mastodon bones, etc. Some fossils were found but nothing too spectacular.

The biologists with the GPS unit recorded all interesting turns and bird nesting areas and also our start and finishing coordinates at the two bridges. A colony of violet-green swallows was recorded at N55,53' 24" and W19, 58',30", north of the reserve. The biologists recorded over 40 species of birds on the 5 1/2 hour trip.

The reserve is a uniquely secluded and nearly inaccessible 43 hectares, completely surrounded by private land. Because of the steep hills and banks on either side of the river up to the flat farm land, the ground is totally untouched and except for a few invasive weeds from above, retains its native fauna.

continued on page 11

PHIL HAIGHT

Clay banks along the Pouce Coupe River in Rolla Canyon

"…Rolla Canyon" continued from page 10

We arrived at the lower crossing at 7:30 PM, wet and tired in our canoe, the duct tape having worn off. A completely satisfying trip it was.

There will no doubt be more outings to Rolla Canyon for me, however I will be embarking earlier with a sturdier canoe. ■

Phil Haight is volunteer warden for Rolla Canyon Ecological Reserve.

PHIL HAIGHT

Leaky canoes in Rolla Canyon

PHIL HAIGHT

Group with warden inspecting Rolla Canyon ER

CALENDAR

Friends of Ecological Reserves Board Retreat

June 2, 3 and 4, 2006
Home of Mike Fenger on Hornby Island

Conference: Valuing Nature – Stewardship & Conservation in Canada 2006

July 5 to 8, 2006
Pepsi Centre and Sir Wilfred Grenfell University, Cornerbrook, Newfoundland and Labrador…
Valuing Nature will build on successful previous conferences in Victoria in 2003 and Guelph in 2000
Keynote speaker on Youth Day: Severn Cullis-Suzuki
Website:
www.stewardship2006.ca
E-mail:
staciegregory@gov.nl.ca.

Conference: Bear conservation in a Fast-Changing North America

October 24-25, 2006
Revelstoke Community Centre, Revelstoke, B.C.
Keynote speech:
Polar bears in a warming world
Field trip:
The Urban – Wilderness Interface, Revelstoke and area, full day
Website:
http://www.cmiae.org/conferences.htm#Bear
E-Mail:
office@cmiae.org

Progress Report Prepared for Friends of Ecological Reserves

March 28, 2006 Carla Mellott (Master of Science Student, School of Environmental Studies, University of Victoria)

Abstract

This progress report contains an outline of the outcomes of my first field season (May to October 2005) for my Master of Science thesis project titled, *Ethnobotanical and Ecological Aspects of Sunt'iny (Claytonia lanceolata) on Chunoz Ch 'ed (Potato Mountain)*. This report also contains a brief outline of my plans for my second field season that will commence in May 2006. My first field season essentially consisted of a process of getting acquainted with the physical, ecological, social and political landscapes of the region where I am working. Although this process has involved overcoming many challenges, overall it has provided me with the knowledge and skills to identify and modify my thesis project to accommodate the realities and opportunities of working in this particular landscape.

Outline of Field Season One (May – October 2005)

Overview:

My ecological field work during my first field season consisted of selecting research sites and conducting a number of pilot studies to determine how best to study *Claytonia lanceolata*. This was necessary as there is very little information published about the ecology, phenology, physiology etc. of C. *lanceolata* and there are very few research protocols established for studying the underground structures of plants in general. These pilot studies allowed me to "get to know" the C. *lanceolata* and to assess how best to study it. Completing these pilot studies also allowed me to familiarize myself with the climate and landscapes of Chunoz Ch 'ed.

During this first field season, I also had the opportunity to meet and work with people from the Xeni Gwet'in, Tsidel'del and Tatlayoko communities. It has been a wonderful experience getting to know individuals from each of these communities and I am looking forward to working closely with them again this upcoming summer.

Data Collection

In this section I provide a more specific outline of the data that I collected in my first field season.

Site Selection

I randomly selected 15 study sites on Chunoz Ch 'ed. I achieved this by georeferencing air photos of Chunoz Ch 'ed, selecting pixels of a greytone corresponding to broadleaf meadows, by transforming each selected pixel into a unique number, and by randomly selecting unique numbers. I have defined patch edges for 12 of these 15 study sites. To do this, I started at a central location and using a lawn edger, dug radial transects from this central location. Edges were defined where I encountered no potatoes for a full five meters

Pilot Studies

Quadrat size – I did a small pilot study to determine appropriate quadrat size and shape as well as number of quadrats required to characterize sunt'iny populations on Chunoz Ch 'ed. I recorded the weight of each corm, associated plant species, soil characteristics, micro-topographic measurements and a photograph (% cover associated species) for a total of 32, 0.35m x 0.35m quadrats at three different sites. I took measurements to analyze spatial distribution of soil characteristics (i.e. bulk density, soil CEC, organic matter content) at one pilot study site. I recorded the exact location, depth (for –75% samples) and cross-sectional (50% samples) along a transect at three different sites. I recorded wet weight versus dry weight for more than 1000 corms (underground edible structure of *Claytonia lanceolata*) collected in pilot study quadrats. I made plant collections at all sites for lab identification. I also started a collection of plants for herbarium samples and voucher specimens. I collected seeds and pot-planted seeds in Tatlayoko to test C. *lanceolata* germination.

Interviews

I interviewed four Chilcotin old-timers who are ranchers who have lived at the base of Chunoz Ch 'ed for 60-90 years and two "back-to-the-landers" who live in Nemiah (Xeni Gwet'in territory) and dig potatoes on Chunoz Ch 'ed on a yearly basis. I have transcribed these interviews and sent them to interviewees for revisions. There are two other Chilcotin old-timers who are interested in being interviewed.

Research Plan for Field Season Two (May 2006 – August 2006)

This upcoming summer my intention is to organize from one to three sunt'iny digging excursions with elders from the Xeni Gwet'in and Tsidel'del bands of the Tsilhqut'in First Nation. During these excursions I hope to document traditional land management and harvesting techniques as well as

continued on page 13

"Progress Report…" continued from page 12

elders' perspectives on the landscape change that has occurred on Chunoz Ch 'ed over the past sixty years, with particular reference to cattle grazing. My hope is that the compilation of this information will be useful to the Xeni Gwet'in band and Tsilhqut'in Nation in terms of restoration of the Chunoz Ch 'ed landcape.

I have also submitted a grant to hire two Xeni Gwet'in or Tsidel'del youth to assist with this project. These students will help with organizing the digs, help elders with the digging and help with the data entry and analysis. Depending on their skills and interests they may also have the opportunity to create a report or piece of art reflecting their experience digging sunt'iny and working with elders.

In between digs with elders I intend to make several excursions up Chunoz Ch 'ed to take basic ecological measurements of sunt'iny. These measurements will address two research hypotheses:

1. Above ground biomass and flowering phenology can be used to accurately predict corm size (underground, edible structure) and nutrition in sunt'iny (*Claytonia lanceolata*).
2. Soil compaction affects rooting depth, density and corm size of sunt'iny (*Claytonia lanceolata*).

This project has been made possible through the generous support of Friends of Ecological Reserves, Natural Sciences and Engineering Council of Canada, The Nature Conservancy of Canada, Xeni Gwet'in First Nations Government, Orrie Charleyboy and Family, Fritz and Sally Mueller, Nancy Turner, Barbara Hawkins, Don Eastman, Peter Keller and many others. Thanks! ■

2006 Warden Gatherings in Regions

The organizers for the September 2006 Warden Gathering have shifted direction to facilitating smaller-scale Regional meetings. This will enable wardens to meet with other wardens and Ministry of Environment staff in their regions to discuss area-specific initiatives and concerns surrounding Ecological Reserves. Some topics to cover could include management and administrative concerns of regional Ministry of Environment staff; wardens' data gathering and reporting, such as photo monitoring; vegetation survey techniques and GPS usage; and management activities such as invasive species removal. The Okanagan Regional meeting held last year in Penticton was extremely valuable for both staff and wardens and will be proposed as a model for other Regions to follow.

We are waiting for confirmation and support from the regional Ministry of Environment staff, but hope these meetings could take place mid to late October 2006. There is some funding available to help with travel costs. Ideally, we would like to have a 'local' Volunteer Warden help coordinate the meeting for each Region. If you are willing to help, please contact one of the organizers.

- Marilyn Lambert at: marilynlambert@pacificcoast.net
- Eva Durance at: edurance@vip.net
- Bev Ramey at: bevramey@telus.net ■

PHOTO CREDIT: DAVE QUINN

Visit www.ecoreserves.bc.ca

A lesson from the mountain pine beetle on sustainable forestry. Do Criteria and Indicators (C&I) help?

Prepared by Mike Fenger, President of Friends of Ecological Reserves for FORREX Feb 21st Criteria and Indicator Forum, Victoria BC.

Abstract:

Environmental organizations, like the members of Friends of Ecological Reserves, are deeply concerned both intellectually and spiritually about society's collective responsibility to steward our natural environment; so are many resource professionals. We depend on science-based C&I to inform the public (the owner of the forest) on whether our use of forest resources is sustainable. We look to historic trends and forecasting of C&I to hold government, the forest industry and ourselves to account. C&I are central to answering the question, "Are we living on the interest from our ecosystems or are we consuming our natural capital?"

> *To understand how much incremental disturbance a system can take is the Holy Grail to understanding forest sustainability.*

As good and compelling as C&I are for informing us on the sustainability of forestry, they require a firm "science-based" understanding of how C&I track in dynamic natural systems that have naturally evolved through disease, insects, and wildfire disturbance. Our harvesting and road building are cumulative to these. To understand how much incremental disturbance a system can take is the Holy Grail to understanding forest sustainability. Too much development and we cross thresholds, degrade terrain, lose productivity, decrease diversity and receive less goods and services from our ecosystem.

> *Undeveloped watersheds are ideal benchmarks since diversity of both aquatic and terrestrial ecosystems and variability can be monitored.*

Forestry is a long term landscape/watershed level experiment. Fundamental to any experiment is the need for controls, a place to calibrate C&I and compare the results to the control. A sustainable forestry benchmark needs to be of sufficient size that after a stand-replacing disturbance, the elements of variability persist within the benchmark. Undeveloped watersheds are ideal benchmarks since diversity of both aquatic and terrestrial ecosystems and variability can be monitored. Gap replacement forest disturbances operate over a smaller area in wet coastal and interior ecosystems so smaller watershed (5,000 hectares) are suitable to serve as benchmarks. Forests developed through frequent major disturbances such as wildfires and insects require larger undeveloped watersheds as smaller areas are reduced to a single seral stage in a single event. Undeveloped watersheds of 20,000 hectares are a practical minimum in the pine forests of BC's interior. Undeveloped benchmark watersheds need to contain ecosystems representative of those managed (roaded and harvested areas) so that C&I and natural areas research can be extrapolated between them.

Do we have a system of sustainable forestry benchmarks (controls) to guide forestry? Yes we do, in many of the forested watersheds within Ecological Reserves, Parks and Protected Areas; there is however, a significant lack of benchmarks in our pine forests. Currently there is more dead pine than can be harvested. This is the moment in our forest history where we face unprecedented opportunity and can establish long term research benchmarks from the remaining undeveloped pine-dominated watersheds, forested watersheds where students, research scientists from UNBC, from Cariboo College, UBC and SFU can focus on C&I and natural areas research. To be a leader on sustainability we must seize this day. Who will stand with FER to make sustainable forestry benchmarks a reality? When we invite the world in 2010, who will stand to celebrate, rising to the challenge and opportunity given us by the mountain pine beetle to create tomorrow's laboratories. ■

Mike Fenger is also a forester and principal of Mike Fenger and Associates, a forestry, ecology and biology consulting group.

FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central Victoria BC V8W 3S1

☐ Renewal for 2006 ☐ New membership

NAME (please print) _____ Date _____

Membership Category

☐ INDIVIDUAL: $ 20 ☐ STUDENT/SENIOR: $ 15 ☐ FAMILY: $ 25 ☐ INSTITUTION: $ 25

ADDRESS _____

_____ Postal Code _____

PHONE ( ) _____ E-MAIL _____

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 FENWICK LANSDOWNE PRINT

Lansdowne "Meadowlark"Numbered Limited Edition Print (200) – $50.00 each

Placemats – $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	UNIT PRICE	TOTAL

Shipping, Handling and Postage for Placemat Orders $4.00

Total Enclosed (Cheque or Money Order) $

Websites of Interest

By Denise de Montreuil

On February 7, 2006 Premier Gordon Campbell announced the creation of the Kitasoo Spirit Bear Protected Area in consultation with First Nations and several environmental organizations. Read the text of Premier Campbell's announcement at **www2.news.gov.bc.ca/news_releases_2005-2009/2006AL0002-000066.htm?preloader=%5Btype+Function%5D&myInterval=1**
(Sorry about the cumbersome link but it defeated all attempts at abbreviation.) The announcement is accompanied by a backgrounder explaining the different levels of protection within the area, and a factsheet on the Kermode or Spirit Bear. A government map of Kitasoo can be found at **www.mediaroom.gov.bc.ca/Download.axd?objectId=75**
For an analysis of the different land uses within protected areas, go to **www.raincoast.org/**. Raincoast Conservation Society's website also provides extensive information on threats to the rainforest from oil and gas activity, clearcutting and fish farming.

One of the environmental organizations consulting on the Kitasoo Spirit Bear PA is San Francisco based ForestEthics who claim to "pioneer a new approach to environmental activism by focusing its efforts on the marketplace". Their policy is to inform corporations about how their practices contribute to deforestation and advise them on a more sustainable path. If they prove resistant, ForestEthics mounts a public information campaign to mobilize consumer pressure. They are legendary in the U.S. for their "Victoria's Dirty Little Secret" campaign aimed at the Victoria's Secret lingerie catalog giant and are involved in a number of environmental campaigns in B.C. Their website is at **www.forestethics.org/**.

If you have a high tolerance for bad bear puns and want to know more about bear species worldwide, go to **www.bearden.org/**. On this kid-friendly website, you will find loads of information on bear anatomy and behaviour, habitat and adaptation, captive breeding programs and human/bear interaction. Although it does not specifically mention the Spirit Bear, this is a good general site covering species from the panda to the sloth bear.

For a slide show of the work of B.C. photographer and activist Ian McAllister, go to **www.grist.org/news/maindish/2004/10/29/raincoast/#**. Ian and Karen McAllister spent seven years visiting every unlogged valley along a 2,000 kilometre strip of coastal rainforest. They followed this up by publishing Great Bear Rainforest: Canada's Forgotten Coast (Harbour Publishing), a coffee table book dubbed "an act of treason" by some, by others as "the book that saved the rainforest". Ian's work can also be seen in the publications of the Raincoast Conservation Society.

Still hungry for more images of Spirit Bears? Ron Thiele is a Calgary based photographer whose portfolio includes some dazzling shots of spirit bears taken on Princess Royal Island. When he isn't providing photography services for corporate clients, he leads photography tours to spirit bear habitat on Princess Royal and Gribbell Islands. View his work at **www.ronthiele.com**. ■

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.

Return Address

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

Canadian Publications Mail Agreement No. 1060163