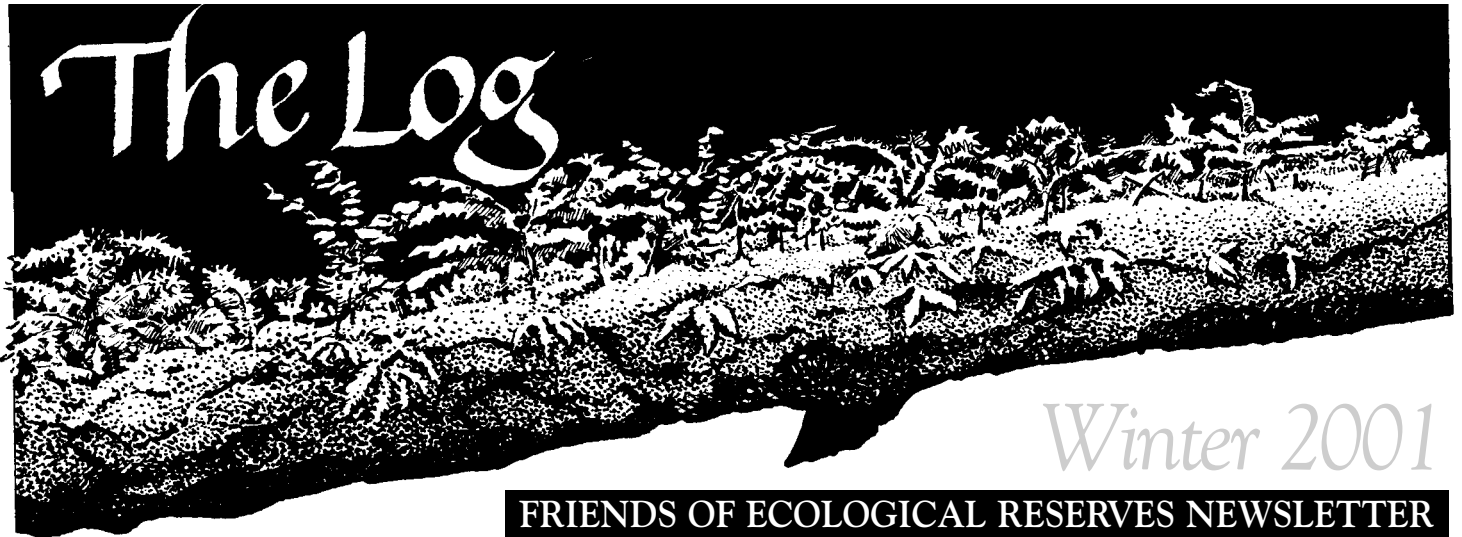


The Log



Winter 2001

FRIENDS OF ECOLOGICAL RESERVES NEWSLETTER

Overwhelming Support for Columbia Wetland Protection

The Columbia Wetlands are the headwaters of the transboundary Columbia River system on which millions of Canadians and Americans depend. Only here, in the Kootenays, can the river be experienced in its natural state. A recent public process undertaken by the Federal government and the Canadian coast guard revealed a strong majority of public support for protective measures on the Columbia River Wetlands. Ellen Zimmerman, spokesperson for the East Kootenay Environmental Society provides this comment.

Recently, the East Kootenay Environmental Society (EKES), along with many other groups and individuals, cheered the results of public comments to Coast Guard representative, Colin Michael. Three-quarters of those who wrote wanted the current 10 horsepower restriction or stronger and more protective regulation. EKES has been



Trumpeter Swans in early spring

PHOTO CREDIT: DAVE QUINN

reassured by the strength of the public's response as it is apparent that residents of the Columbia Valley value the Columbia Wetlands and understand what a precious and increasingly endangered natural resource it is.

Certain species, like the Trumpeter Swan and the Peregrine Falcon, are again nesting in our wetlands after an absence of decades. Local scientists and naturalists attribute the return to the 10 horsepower restriction and increased awareness by those recreating on the river and wetlands that wildlife are sensitive to intrusion. Obviously, residents value wildlife and are prepared to make personal decisions to help protect sensitive species.

There are other benefits derived from a management emphasis on non-motorized recreation. The upper Columbia River and Wetlands are a quiet refuge for people, as well as

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The Log

Winter 2001

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

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

Articles for publication are invited. The deadline for submissions for the next issue of *The Log* is March 15, 2002

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

Charitable BIN #118914597RR

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PRESIDENT'S MESSAGE

A deep breath in the wilderness

Since September 11, 2001 we seem to be holding our breath waiting for the other shoe to drop. For some, the shoe dropped when the USA started bombing. For others this covert action only added to the anxiety. For the women and children and aged of Afghanistan bombing is not a solution to anything but a prolonged misery in an already intolerable existence. For those of us here at the Friends of Ecological Reserves we have decided to exhale. It is time. We must breathe deeply in order to think clearly about what is important to us.

Every morning I go for a walk at 6:30 a.m. along Victoria's waterfront overlooking the Strait of Juan de Fuca and watch the sun rise. I walk with two friends and the walk is as much about the talk as the physical exercise. These days it is dark at 6:30 a.m. and barely light by the return home at 7:30 when the rest of my family wakes to meet the day. It takes effort and commitment to get up that early when I could roll over and sleep in. Being able to breathe in the sea air wakes me up and I have to walk very, very fast to keep warm. Every morning I pass the same people. Some are walking dogs, some clutch coffee mugs, some jog and some meander. I have been waving and nodding to the same people for years. They are part of my morning community.

Since September 11, 2001 my friends and I remark on how lucky we are to greet the morning in such a beautiful place. We are not taking our routine for granted any more. Remembering the summer, I know how fortunate I felt to walk in the mountains of the Gladys Lake Ecological Reserve. Or last spring, the flora at Trial Island ER—breathtaking, no matter how often I have witnessed its miraculous burst of seasonal colour. I find peace and inspiration in the natural world and I am not the only one.

Now, more than any other time in our collective history we need places of sanctuary. Ecological Reserves provide that sanctuary—not just for endangered and representative species but for humans as well. When people are stressed and rushed they forget to breathe which adds to the frazzled nature of our modern lives. Wilderness slows people down, giving us time to inhale as we climb that last rise and exhale as we marvel at the new vista before us. Something in us changes at this point and affects the way we treat each other. When we have inner peace we are kinder to each other. We see each other as part of a collective community and not as diverse citizens who are in each other's way. Peace is possible when you can carry it in your heart and Ecological Reserves help us do that.

With this in mind, I ask you to consider making a donation to the Friends of Ecological Reserves. Your money goes directly to support scientific research and the volunteer wardens who are monitoring Ecological Reserves throughout the province. Your membership aids in the establishment and maintenance of wildlife habitat to protect endangered and threatened species. The Friends is a lean organization run by dedicated volunteers who believe that environmental education is one of the keys to our survival.

As we strive in our day-to-day lives to make positive change in the world we must remember our wilderness places, our parks, our Ecological Reserves that allow us sanctuary and the ability to breathe deeply. I believe they carry the answer to many of the world's problems. ■

Lynne Milnes, *President*

Editor's note

This issue of *the Log* continues with our featuring the ecological reserves of a specific region of the province. We've chosen the Kootenays—that corner of BC that features scenic valleys, glacier-fed lakes, natural grasslands, lush watersheds and mountain ranges of incredible beauty. There are four spectacular national parks in this district, as well as over 60 provincial parks. These parks are a recreational paradise, attracting millions of visitors every year—boaters, rock climbers, hikers, skiers, hunters, birders and naturalists.

From the vast Purcell Wilderness Conservancy to the 49,893 ha of Valhalla Park to the smallest protected area of the district—Mount Sabine Ecological Reserve with its 7.9 ha—each of these open spaces encompasses a diversity of ecosystems and provides a habitat for both people and wildlife.

In this issue, we will focus on a couple of important initiatives in the East Kootenays, and reflect upon some of our concerns regarding human interaction with the places we inhabit and report on some developments that are mitigating against urban encroachment. ■

Cheryl Borris, Editor

CALL FOR PHOTOS

As one of its projects this year, FER is developing a website. We are asking our membership to scour their personal archives for photographs of ecological reserves and activities in reserves and to send them to us—or, alternatively, if you have the technology, scan them and forward them to us as a .jpg file via e-mail.

Please take the time to identify any people in the photograph(s), as well as who took the photograph (if you can remember). And, give us your name and phone number so that we may contact you if we have questions. If you want the photograph(s) returned, remember to include your own address. Thank you! ■

Friends of the Environment Foundation Supports Placemat Project

The Victoria/Sidney Chapter Advisory Board of *TD Friends of the Environment Foundation* has awarded Friends of Ecological Reserves \$2500 to assist in production of the new Mountain flora placemat.

Based on the drawings and observations made by FER members on a recent field trip to the Gladys Lake Ecological Reserve in Spatsizi Wilderness Park, the placemat is scheduled to be completed in the spring of 2002. FER would like to thank the *TD Friends of the Environment Foundation* for their support with this important educational project.

It should be a beautiful placemat with colourful alpine flora on one side and helpful safety hints on mountain wildlife encounters on the other. Look in future issues of the LOG for order forms. ■

Vicky Husband Award Honours UVic environmentalist



Rachelle Delaney, a fourth year student in the Faculty of Environmental Studies at the University of Victoria, is this year's recipient of the Vicky Husband Award.

Rachelle is currently just over a year away from completing a Bachelor of Arts with a double major in Environmental Studies and Creative Writing. After pursuing the first two years of her undergraduate studies at the University of Alberta, near her hometown of Sherwood Park, Rachelle came to Victoria to complete her undergraduate degree.

Rachelle is very busy volunteering locally. She has worked as a volunteer environmental educator at the Swan Lake Nature Sanctuary, teaching school children (kindergarten to grade 2) about gardening with Life Cycles. On campus, she is a regular contributor to the Environmental Studies Student Association (ESSA) newsletter, *Essence*.

Rachelle plans to use her double major and her experience with the newsletter to become an environmental writer.

From all of us at Friends of Ecological Reserves, congratulations Rachelle! ■

The Vicky Husband Award was established in 1999 to honour Vicky Husband, an Honourary Director of FER and a well-known BC environmental activist. The award of \$1000 is made annually to a student in third or fourth year of the Environmental Studies program at the University of Victoria. Chosen by the faculty, the student must have academic merit and have made outstanding contributions to the volunteer environmental sector.

The Compelling Need for a Clean Ocean

For one week in September every year, volunteers world-wide focus on cleaning the beaches and waterways in their neighbourhoods. This year, FER participated in this event for the third consecutive year. Nichola Walkden reports:

In past years, our small team of dedicated volunteers have always been able to apply our cleanup efforts to the nearby island ERs in the Capital Regional District. My experiences have been on Trial Island (ER 15), where we have removed an astounding amount of debris.

The first year we worked on Trial Island we had a large group and hauled off a lot of garbage. Most of what we have found on the island beaches is marine debris—styrofoam/foamed plastic, pieces of old rope, cables, plastic bits, wine corks, bait trays and the occasional beverage bottle. BC Parks has been very cooperative in helping pick up some of the pieces of foamed plastic (breakaways from marina floats) that were too large for us to remove on our zodiacs. Knowing that they are gone from the island has been very satisfying. In subsequent years, we have been heartened to find less trash about the beaches.

This year we continued with our enthusiasm for the beach cleanup. However, without a zodiac we traveled by foot and met at a popular Victoria public area—the beach at Clover Point. Clover Point is a popular local meeting place. It has a large parking area and is located at the east end of Beacon Hill Park (a 75 hectare park in the heart of Victoria). We met on one of the first truly blustery days of September, and retreated out of the wind to one side of the point.

This was definitely a beach cleanup

operation! There were only four of us this year and none of us really wanted to be outside in the cold. But that didn't stop us from collecting nearly four garbage bags of trash.

This was a different kind of trash than what I have become accustomed to finding on the island reserves. Food containers, broken glass, old plastic bags wedged into the rocks, as well as a few unmentionables were tossed into our containers. Morale slipped as we realized that this could seemingly go on forever. I made plans to come back on the weekend with a rake so that I could try to pick up some of the hundreds of cigarette butts that had been dropped at the look out—recalling that cigarette butts are the Number 1 trash item on North American beaches, accounting for over 20% of total trash collected in the annual cleanup.

I have always been a person who enjoys community cleanups, and I am sure I have seen far worse. What was bugging me this time though was that my thoughts were very much focused on the stark difference between this public 'park' and the ecological reserve less than 2 km away. I couldn't avoid drawing conclusions about peoples' concepts of caring for common areas. The Centre for Marine Conservation tells us that the International Coastal Cleanup is not about trash, but that it's about the compelling need for a clean ocean. What we leave on our beaches and what others find on our beaches, in terms of our leavings, speaks volumes regarding our respect for public places.

My own work is focused on the protection of land for the future. One of my concerns is that we encourage people to understand that our protected areas are places safe-guarded for our children and grandchildren, not as recreation areas or places set aside to be altruistically cared for and stewarded by staff. In BC we have been watching the creation of new protected areas—and changes to designation routes and rules. Experiences like the beach cleanup are the reason that I so avidly support the concept of ecologi-

cal reserves—special places protected specially against human interaction. ■

Nichola Walkden

Nichola Walkden is the Interior Regional Manager for the Land Conservancy of BC and former manager for FER.

Since 1986, the International Coastal Cleanup is a global project of the U.S. Center for Marine Conservation (CMC) and is supported by an international network of environmental and civic organizations, governments, industry, and individuals. Information about the amount and types of debris collected serves to educate the public world-wide on marine debris issues and to encourage changes that will reduce debris in aquatic environments. In British Columbia, the event is sponsored by the TD Friends of the Environment and the Vancouver Aquarium, with support from CMC.

Annual General Meeting

The Annual General Meeting of the Friends of Ecological Reserves will be held on Friday March 8 2001.

The meeting will be followed by an illustrated lecture by Dr. Tom Reimchen. Dr. Reimchen will speak about his research in northwestern coastal forests and the relationships between bears, salmon and healthy forests.

AGM Meeting: 6:30 p.m.

Lecture: 8:00 p.m.

Place: Classroom Building* Room C118 (University of Victoria)

**located between the University Centre and Cornett Buildings ■*

Call For Nominations

The 2002 Board of Directors will be elected at the Annual General Meeting in March 2002. If you are interested in serving on the Board of the Friends of Ecological Reserves, or if you wish to nominate someone, please contact the society at ecoreserves@hotmail.com or call Lynne at 250 598 1567 ■

Project News Update

I thought you might appreciate a brief, unofficial update about X'waYen (Race Rocks) Marine Protected Area (MPA) at Pearson College.

The official transfer of the land and facilities surplus to Coast Guard needs has now taken place. BC Parks has assumed ownership of all buildings and equipment except the light tower and navigational aids. A Coast Guard contractor completed the removal of the extensive concrete footings and retaining walls from the site of the old tank farm. They did a very thorough job and Mike Slater pressure washed the entire rock area restoring it to a near pristine state. This work was finished before nesting season and the grass and birds have quickly reclaimed this area which is a significant addition to the natural areas of Great Race Island. A group of Pearson College graduates, supervised by Mike removed the old wooden deck beside the winch house and rebuilt it entirely. This volunteer contribution is greatly appreciated.

Ecological News

The numbers of birds nesting appears to be comparable to the past few years. We are still suffering almost total loss of eggs and chicks however as a consequence of three otters living on the island. As these critters rely on the built structures on the island for shelter BC Parks has agreed they might not otherwise be on the island. It was decided to live trap and remove them. One Houdini otter has eluded capture. Harbour Seal numbers are strong with many pups observed. Sea lion numbers are very low as usual in the summer with a few branded and tagged animals noted. There have been four or five elephant seals in the MPA all summer. Orcas were more frequent than usual in June and July. There appears to be an increased

amount of feed moving through the Strait as evidenced by the number of sea bird created herring ball-ups.

Visitors

There has been a great deal of visitor traffic in the MPA. The eco-tour operators and dive charter operators have been very cooperative and respectful of their operating guidelines. We have had several encounters with the general public who still require some education about dos and don'ts in the MPA. Generally people have been very cooperative. Despite the lack of any sports fishing restrictions on the catch of migratory fish species in the MPA, sportsfishers have respected our no fishing recommendation. We have still not had the support of DFO regulations in this regard. CBC radio is doing an extensive series on Canada's oceans for broadcast in December. They have focused a good deal on the Race Rocks MPA. Our work together as a community partnership in establishing the MPA is of special interest to them and it will be an important feature of the series. It remains to be seen whether our work will be portrayed as a success as it depends on the completion of the MPA designation process in Ottawa.

First Nations

We have continued to learn a great deal about traditional use of marine life from a number of local elders. A group of students from the Tsartlip Band recently visited the Race with Earle Claxton. We look forward to future visits with local bands. I understand DFO staff continue to engage in consultations with First Nations leadership regarding the MPA. We are hopeful that the unique model of management involving First Nations as a significant partner with DFO and BC Parks will be implemented as recommended by the Advisory Board.

Racerocks.com

The racerocks.com project continues to develop thanks to the enthusiastic support of Apple Canada, Apple Learning Interchange, Sony, and an increasing number of individual supporters who use the site. We now have wireless internet access throughout the MPA which allows us to go on-line to webcast or retrieve data from anywhere on Great Race Island and produce live web casts from throughout the MPA including underwater. We are now working to establish formal linkages for regular broadcasts to a number of schools and the Canadian Museum of Nature in Ottawa.

Finance

Our financial situation at Race Rocks continues to be somewhat desperate. We greatly appreciate the contributions we have received from the general public and some members of the Race Rocks Advisory Board. The Ivey Foundation from Ontario recently provided a generous grant to support our educational program. We are hopeful that other foundations may join them. ■

Garry Fletcher

*Angus Matthews, Pearson College
X'waYen project*

Garry Fletcher is the volunteer warden for Race Rocks Ecological Reserve.

Kudos

Hi Folks,

I want to tell you how impressed I was with the last issue! The President's Message was prophetic in light of recent revelations of cutbacks to WALP et al. Not to mention looting the environment to find \$ to pay for the apparent deficit. Get out the chain mail and broadaxes as we are all going to have to go toe to toe

Continued on page 6

Continued from page 5

with this anachronistic, hedonistic government.

Kudos for the great articles on the Spatsizi Field trip and Ecological Forecasting. You may be interested to know that Jim Ginns is a member of the South Okanagan Naturalist Club. Not only is he a mycological expert, he is a good birder and an active environmentalist in these here parts! I am pleased to hear that you are one of the few funding resources for Tom Reimchen's studies.

It was interesting to read about the Chasm ER (65) north of Clinton. It sounds a lot less pristine than it was when I used to stop in there while working in the area in the mid-70s. Finally, I appreciate the Changes in Government chart that I had not seen before. Not only do we have a clearer idea of who is responsible for what, there are Agenda and Key Project items that we can use to hold the government accountable. I would like to see this table made available to all BC citizens.

Thanks for your excellent publication and this issue in particular. Keep up the good work! ■

*Cheers, Laurie Rockwell,
Warden, ER# 7, Trout Creek,
Summerland
October 2001*



Spatsizi Wilderness

PHOTO: DARLENE CHOQUETTE

"Overwhelming Support..." continued from page 1

animals and it is an EKES priority to protect the Wetlands and their ability to continue to sustain wildlife.

It is our belief that whether the protecting device is a provincial or a federal regulation is not the important point. What is key is that any regulation be both simple to understand, enforceable, and adequate to provide the necessary protection. The 10 hp restriction does just that, as it applies to both vessels and land conveyances like ATVs and snow mobiles.

Because of the incomparable ecological values, the 180 km Columbia Wetlands was designated as a Wildlife Management Area (MA) in 1996 after decades of study and public consultation. This designation falls under the *BC Wildlife Act*, and affords, under this legislation, a far greater opportunity to protect wildlife than would be found on other crown lands in the province. Here, as in few other places, the well being and interests of wildlife take precedence over our own.

While countless wetlands in north America have disappeared behind dams, drained or flooded, the longest intact wetland in North America, the Columbia Wetlands have become almost all that is left of the Pacific flyway, the age old route traversed by countless migrating birds. Here, after many thousands of miles of flight, waterfowl, raptors, shorebirds and songbirds rest and replenish and survive.

The Columbia Wetlands are home to the second largest concentration of great blue herons in western Canada, with a colony of more than 300 pairs. 15,000 waterfowl in the autumn and more than 1,000 tundra swans in the spring have been counted in single day bird counts. Large nesting populations of bald eagle and Osprey take advantage of the many non- sport fish species as their main food source.

The Wetlands are known to support in excess of 10,000 American Coot during the fall migration. In the spring, the Columbia River Wetlands are home to over 1,200 swans, 2,000 geese, 1,000 diving ducks, and 7,000 dabbling ducks. Kokanee salmon, Rocky Mountain whitefish, Ling cod and several varieties of trout all breed in the Columbia River.

Other species rely on this unique wetland/grassland ecosystem as well. Most of the elk and deer populations of the region use the wetlands as essential winter range. The relatively low snowfall in the valley bottom allows them to easily reach their food sources at this critical time of the year.

Moose, wolves, black and grizzly bears, coyotes, mink, river otters, and beavers are among the larger mammal species found in the Columbia Wetlands. The soils deposited by an ever-changing river system make an excellent habitat for North America's most northerly population of badgers, now considered endangered. Colourful reptiles and amphibians also use the Wetlands, including rubber boa, painted turtles, and the Columbia spotted frog.



PHOTO: EKES WEB SITE

Columbia Wetlands

This unique wetland and lake system has achieved international recognition through the Global Nature Funds Living Lakes Network. In a world where wetlands disappear daily, the Columbia Wetlands are an increasingly rare and priceless ecosystem, without which many migrating and resident species could not survive. ■

Ellen Zimmerman, EKES

Universal Shoreline Speed Restriction

Every year Canadians suffer property damage, injury or death due to the high speed operation of boats too close to the shore. The risks are numerous, including:

- Shoreline erosion and disruption of local ecosystems
- Water skiers and tubers striking the shore
- Wake induced injury to persons on docks, in boats and on beaches
- Collisions with swimmers and with fixed shoreline structures
- Wake-induced damage to vessels and docks

Following extensive consultations throughout BC, on June 20, 2001, new provisions in the Boating Restriction Regulations (Subsection 6(5.2)) restrict the speed of vessels operating within 30 metres (100 feet) of the shore to 10 kilometers per hour (5.4 knots) in the inland waters of British Columbia. A similar provision has been in force in Ontario, Manitoba and Saskatchewan since 1991, and Alberta since 1996. The Universal Shoreline Speed Restriction does not apply:

- To a vessel that is travelling perpendicularly away from the shore, and which is towing a skier, wakeboard etc.
- In areas which have a specified speed limit.
- In rivers less than 100 meters in width or in canals or buoyed channels.

Public response indicated a high level of support for the proposed restrictions, particularly for inland waters. Stakeholders agreed that power-driven vessels may pose safety and environmental concerns on waterways while operating close to shore.

REGULATORY IMPACT ANALYSIS STATEMENT

The *Boating Restriction Regulations* (<http://www.tc.gc.ca/Actsregs/csa-lmmc/csa5-a.html>), made under the *Canada Shipping Act*, provide for the establishment of restrictions to navigation to promote public safety, protect property near shore and ensure safe navigation. The restrictions under the Regulations can prohibit boats from entering specified areas, restrict the mode of propulsion used, specify limits on engine power and speed, and limit water-skiing activities and regattas to specified locations and times.

Alternatives

Education and voluntary compliance are the only other alternatives to regulating shorelines of the inland waters of BC. In the past, education and voluntary compliance have fallen short of obtaining compliance. The regulatory restriction will increase compliance through clearer expectations and enforceability. The speed limit of 10 km/h within 30 metres from shore was selected as a consistent and effective speed, successful in four other provinces and used in some harbours and ports internationally.

Benefits and Costs

Costs for enforcement efforts are shared by enforcement agencies at the federal, provincial and municipal levels with the majority of these costs being borne by the latter two. The federal government is also responsible for minor costs associated with erecting signs and advertising the restriction.

Compliance and Enforcement

The *Regulations* are enforced by federal, provincial and municipal agencies through an existing program. Current enforcement costs are shared among the enforcement agencies at the federal, provincial and municipal levels. No increase in the cost of enforcement is expected.

The *Boating Restriction Regulations* provide for fines up to \$500 upon conviction of contraventions. The *Contraventions Regulations* provide for the issuance of tickets with prescribed fines for specific contraventions under the *Boating Restriction Regulations*. Also, the *Canada Shipping Act* provides for penalties upon conviction of up to \$2,000. ■

reprinted, in part, from *Canada Gazette Part II, Vol. 135, No. 13*

The Ecological Reserves of the Kootenays

ER 19—Mount Sabine

- On gently sloping terrain just north of the summit of Mount Sabine, 3 km NNE of Canal Flats
- Preserves a forest site that is representative of the Montane Spruce Zone east of the Rocky Mountain Trench. Forests typically consist of a mixture of western larch, Douglas-fir, Engelmann spruce and lodgepole pine in equal proportions. Paper birch and subalpine fir are also present.
- Forest cover in the reserve has been modified by pine beetle mortality and selective logging. Considerable logging has occurred on adjacent lands. Although old logging roads pass through the reserve, the vegetation has recovered without significant weed invasion.
- 7.9 ha
- No warden

ER 20—Columbia Lake

- On the west-facing slope (east side) of Columbia Lake, 4.5 km N of Canal Flats
- Protects calcicolous vegetation and ecosystems representative of the Interior Douglas-fir Zone. The slope exposure (west and southwest) combined with the rain shadow effect of the Selkirk and Purcell Mountains, results in a locally dry climate.
- Of significance here are limestone-loving (calcicolous) plants, growing in wet sites and on limestone cliffs. A number of rare plants specific to this habitat are present. The reserve is part of an important winter range for mule deer, elk and bighorn sheep (evidenced by grazing, trails and droppings).
- 32 ha
- No warden

ER 26—Ram Creek

- On the west side of the Hughes Range, in Ram Creek Valley near the confluence of Marmalade Creek, 20 km SE of Canal Flats
- Protects hot springs and associated plant communities containing plants that are rare or outside their usual distribution range
- The most unique vegetation is immediately surrounding the hot springs and along the stream sides below the springs. The heat from the hot springs tends to allow vegetation to develop much earlier in the spring than vegetation a few metres away. As well, vegetation is lush and contains species that, in this region, are only able to survive in this specific environment.
- This reserve has been subjected to

considerable disturbance. Parts of the area were selectively logged and much of it was burned in a 1985 forest fire. Bulldozed firebreaks caused additional damage. Weeds are extensive in these disturbed sites. A gravel pit, parking area and primitive campsite are present. As well, the pools have been enlarged by blasting.

- 121 ha
- No warden

ER 31—Lew Creek

- SW side of Trout Lake, 35 km E of Upper Arrow Lake
- Protection of a complete watershed containing an elevational sequence of three biogeoclimatic zones in one drainage basin, in a wet interior environment. Despite timber

harvesting on both sides, this reserve is in a completely natural state. Its boundaries enclose the entire narrow valley of Lew Creek, a turbulent mountain stream which flows northeast into Trout Lake.

- Due to its location, it is largely inaccessible
- 815 ha
- No warden

ER 32—Evans Lake

- Located in Valhalla Provincial Park, on a steep south-facing slope at the west end of Evans Lake, 18.5 km NW of Slokan
- Subalpine forests that include a rare stand of yellow cedar in interior BC, protected for future research. This species occurs in very few interior locations and is probably the best example of its kind.
- The only practical access to this ER is by helicopter or float plane and, due to frequent avalanches, the reserve is unsafe for casual or inexperienced visitors. While hunting is permitted, animals are easier to hunt elsewhere.
- 185 ha
- No warden

ER 56—Goosegrass Creek

- A steep, northerly exposed drainage basin on the west side of the Rocky Mountain Trench. W side of Kinbasket Lake (Mica Reservoir), 20 km E of Mica Creek
- Protects an entire drainage basin of wide elevational range, containing representative, undisturbed examples of three biogeoclimatic zones in an area of wet interior climate.
- This is the only sizeable, undisturbed watershed in the wet interior climatic

zone having ecological reserve status. It is ideal for long-term monitoring of climax forest ecology and watershed hydrology. It provides good habitat for grizzly and black bear, marten and a variety of small mammals and birds at home in old-growth forest.

- 2,185 ha
- Warden: Gordon Carson

ER 143—Gilnockie Creek (formerly ER 104)

- Located on the relatively flat valley bottom of Gilnockie Creek at its confluence with the Yahk River, 34 km SSE of Moyie
- Provides an undisturbed area for silvicultural research on western larch, and a genetic bank for that species. This is one of the few areas in BC where old-growth stands of western larch are preserved.
- Western larch is a shade-intolerant species and its best growth is made on deep, porous, moist soils typical of much of the reserve. The trees here are mature and relatively disease-free. Tree diversity in the reserve is low, with western larch and lodgepole pine providing almost all arboreal cover. A small centrally-located wetland is surrounded by larch woods.
- 58 ha
- Warden: Annie Coulter

In addition, last year a proposal for a new ecological reserve “YELLOW PINE” was put forward as part of the class “A” provincial park at Kokanee Creek. At this point, it is still crown land and is being considered as part of the Goal 2 proposal for the Kootenays.

Reserves Without Wardens

Sadly, not every ecological reserve in British Columbia has a warden to care for it. Of the 7 ERs in the Kootenay District, five are in need of wardens. If you are interested in becoming a volunteer warden for an ecological reserve, or want to know more about BC Parks' ecological reserve program, call Glenn Campbell at 250 422 4209 (ERs 19, 20, 26) or Steve Kent at 250 825 3512 (ERs 31, 32).

The American Badger Gets Some TLC



PHOTO: © TIM McALLISTER

Recently added to the endangered list is an inhabitant of southeastern BC who has been getting a lot of interest lately. The American Badger (*Taxidea taxus jeffersonii*) is a medium-sized, territorial carnivore. While the range of its population encompasses the western United States from California west to central Colorado, in Canada it can only be found in the dry interior of southern BC, where its population is estimated at 250 to 600 individuals.

Continued on page 10

"The American Badger..." continued from page 9

The American Badger is a heavy-bodied, short-legged and short-tailed member of the weasel family. It has yellowish-grey body fur that is grizzled on the back. It has a black and white striped face, a flattish body and long stout claws on black paws. The American Badger lives in underground dens. It is mostly nocturnal and mostly solitary, but can frequently be active for brief periods during the day when it may be observed travelling, hunting, or sunning.

The badger's home ranges vary from 2 to 500 km², depending on region habitat suitability and prey availability. In the East Kootenay, large home ranges (an average of 42 km² for females and 399 km² for males) have been documented. Badgers, as carnivores, are adapted to capturing small burrowing mammals, which is their primary diet in most locations. However, they are opportunistic feeders as well, and supplement their diet with a wide variety of mammals, birds, eggs, reptiles, amphibians, invertebrates and even plants.

They are fierce fighters when cornered or attacked. In southern BC, they have few predators (bears and cougars), other than humans. Most badgers live in the open habitats of valley bottoms—the same habitats that are rapidly being altered by human development. It is the result of intense urbanization and increase in agriculture (annual crop production, conversion of natural habitat to farmland, clearing of native vegetation), reduction in prey, control of badgers as nuisance animals, invasion of open habitat by trees and shrubs because of fire suppression, and a potential for high mortality from roadkills have led to declining populations.

The Wycliffe Wildlife Corridor

Open Ponderosa-bunchgrass habitat is a prominent component of the East Kootenay Rocky Mountain Trench area of BC. This provides valuable Class 1 and 2 winter range for elk and mule deer



PHOTO: © TIM McALLISTER

as well as a home to other rare and threatened species, including the badger. Indeed, no other habitat in BC has such a large number of species at risk; no other system is disappearing to development as quickly as grasslands—which are diminishing rapidly due to urban encroachment and development, forest in-growth, fire suppression, and overgrazing.

In 1998, the Ministry of Environment made a land trade with Cominco to acquire an important wildlife corridor in this area. Partnered with the Columbia Basin Trust Fund, Habitat Conservation Trust Fund, the Donner Canadian Foundation, and community members, the Land Conservancy of BC (TLC) has recently announced that over 1800 acres of bunchgrass habitat in the East Kootenays will be purchased. These lands, in the Wycliffe—St Mary's Prairie area, are critical for the area's conservation strategy. The parcels have significant conservation value both locally and regionally as they contain excellent native bunchgrass habitat and will complement and surround the wildlife corridor, increasing the protected area from 560 to almost 2500 acres.

This is an important acquisition for TLC (and for badgers) in the East Kootenays. It will be an essential corridor for wildlife travelling between the rich riparian areas of the St. Mary River and the prairie uplands. As well, it is a singular opportunity to raise awareness of the threatened status of grasslands in the region—serving as a stepping-stone to other acquisitions and projects in the area and profile land trust options for local landowners. To complete

this acquisition, TLC still must raise \$2 million.

The East Kootenay Badger Project

A current research project involving live-trapping and telemetry is in progress in the East Kootenays. The East Kootenay Badger project, initiated in 1995, is a multi-year study of the ecology and distribution of badgers. This information will be used to incorporate badger habitat requirements into development and forestry plans and to develop private stewardship initiatives. The Project is the first intensive radio telemetry-based study of badgers in Canada.

Badgers are live trapped and implanted with a radio transmitter. The badger is then returned to its burrow. It can now be tracked using a radio-telemetry receiver from a fixed-wing aircraft and then on the ground to the burrow. Information collected includes movement rates, home range size, birth rate, causes of death, and habitat use patterns.

To date, 31 badgers have been radio tagged from Radium Hot Springs to Cranbrook. Female home ranges averaged 65 km², while males averaged 540km². These home ranges are 10 to 200 times larger than in other areas studied in the United States. The population in the East Kootenay, especially in the area north of Canal Flats appears to be very low. Of the eight adult females radio tagged, only four have reproduced over the course of the study. Twelve of the radio-tagged adult badgers have died. Cougars, coyotes and roadkills have been the causes of mortality. The oldest badger in the study was an 11-year old male. One male moved from the valley bottom into alpine territory on at least three occasions. In a search for food and mates, badgers can use hundreds of burrows within their home range.

Because badgers use valley bottoms for habitat, they can often be found on privately owned land. Therefore, the

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"The American Badger..." continued from page 10
 co-operation and stewardship of land-owners is essential in order to ensure the continued existence of the badger in the East Kootenay ecosystem. Ground squirrels are a primary food source for badgers. Reduced shooting and trapping of these rodents will help to maintain a healthy badger population.

If you see a badger or fresh digging activity, please contact Nancy Newhouse (project co-ordinator), at 250 342 3205—e-mail: sylvan@rockies.net.

Nancy Newhouse has been project biologist for the East Kootenay Badger Project since 1995. The project is an interagency initiative of the Columbia Basin Fish and Wildlife Compensation Program, Kootenay National Park, East Kootenay Environmental Society, Tembec Industries Inc., and Forest Renewal BC.

Nancy has also been involved in other wildlife conservation projects including roadkill mitigation, riparian research, and wildlife viewing programs.

Adopt-a-Badger

A \$75 donation to The Land Conservancy of BC will assist in the protection of badger habitat in the grasslands of the Rocky Mountain Trench, specifically in the Wycliffe property near Cranbrook.

A tax receipt will be issued.

Call TOLL FREE ~ 1-888-738-0533
 or visit the TLC website at
www.conservancy.bc.ca



PHOTO: © TIM McALLISTER

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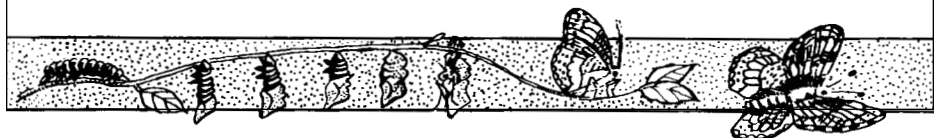
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The Friends of Ecological Reserves relies on the support of members and friends to carry out the work of the society. Individuals can make donations or bequests to our address.

Tax receipts are issued for donations of \$20 or more.
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Tepid Hotsprings

The Kootenays are wild and rugged; places of extremes, and in such a part of the world mediocrity may not generally be considered a commendable attribute. In the case of two 'thermal springs' however, mediocrity seems to be what has preserved the red-listed species inhabiting them.

Near Little Wilson Lake (~20 km from Nakusp) high up on a steep, scree-covered slope there emerges a thermal spring which is both mediocre in temperature and rate of flow. The year round water temperature is ~32°C and the volume of heated water is small. Prior to logging, the springs must have been surrounded by a majestic cedar forest, evidenced by the remaining stumps. Now the location is a very unstable slope with shifting shale everywhere you step. Around the three vents where the warm water emerges people have tried to build small pools but they are small, muddy and full of algae.

Just outside the boundary of Top of the World Provincial Park near Fort Steele is another 'warm spring'. The main outlet fans out down a slight slope, turning and pooling along the way until it falls over a tufa edge into Wildhorse Creek. In the winter when everything else is covered by deep snow there is a frosted green area of about 1/2-acre here. The temperature of the springs here is 27°C—too cool to make it really worthwhile to take your clothes off. This spring has also been clear-cut logged, but appears to have recovered.

The red-listed dragonfly nymph, *Argia vivida* (Vivid Dancer) has been found at both these sites although the populations are very small. In both locations they share the habitat with the Riffle Beetle whose larvae and adult stages are both aquatic. Both sites are fairly difficult to get to, and

have little attraction to the bathing public. Had they had higher temperatures or larger rates of flow the habitat may have been destroyed by now.

Most of the remote hotsprings in southern British Columbia are attracting increasing numbers of visitors. Invertebrate populations, such as *A. vivida*, in the springs are at risk when bathing pools are dug and water redirected. Many of the springs in the Kootenays have been transformed into commercial developments and local people have informally developed others (St. Leon and others). Ram Creek (ER#26) has a road running through the middle of it giving it accessibility, which may destroy its value.

Thermal springs at Little Wilson Lake and Wildhorse Creek are on Crown land and currently have no protected status.

I am grateful to the Friends of Ecological Reserves for their support of my project, *The Hotspring Invertebrates of British Columbia*. I am in the middle of making my fourth and final trips to the various sites and will wrap up this part of the project in April 2002. Thank you very much!

Sue Salter

Butterfly Conservation in the Garry Oak Ecosystem

People who live on southeastern Vancouver Island cannot fail to notice that it's not like the rest of Canada. The mild winters and dry, sunny summers draw people like a magnet. However, all these people leave little space for the multitudes of plants and animals that also rely on this semi-mediterranean climate, such as our heritage tree, the Garry Oak. Thanks to the important work of various individuals and groups, the

plight of the tree itself has become fairly public knowledge. However, the associated complex of coastal bluff, maritime meadow, vernal pool, grassland, rock outcrop, and transitional forest remains critically threatened.

One group of animals that traditionally has been overlooked, neglected, or ignored in conservation planning is the insects. This is no small omission, considering that insects form the vast majority of known animal species, and are responsible for many vital ecological functions. The Garry Oak ecosystems of southeastern Vancouver Island and the gulf islands are home to several red- and blue-listed butterflies, including the Island Blue (*Plebejus saepiolus insulanus*), Island Marble (*Euchloe ausonides*), Dun Skipper (*Euphyes vestris*) and Taylor's Checkerspot (*Euphydryas editha taylora*), a subspecies of Edith's Checkerspot (see photo). At least one of these insects has already been extirpated, while the status of the others remains poorly known. With generous support from the Friends of Ecological Reserves, as well as other concerned organizations, I am beginning research at the University of Victoria with the goal of securing the future of these butterflies in the Garry Oak ecosystem.

In working to conserve these butterflies, the first step will be to locate any existing populations. By studying natural populations, we hope to determine the exact features of suitable habitats, so that they may be identified, expanded, maintained, or created. In the case of species that no longer occur in Canada, such as the Island Marble, this information will have to come from populations that still survive in Washington state. Reintroduction will then be the only alternative.

Once populations have been located or established, we will need to implement a plan to protect them for the future. This is likely to become

Continued on page 15

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RESEARCH REPORTS (continued)

Continued from page 12

something that the whole community may participate in. The public can be educated about the importance of the insects in the area, as well as the potential threats to their continued survival. As many of the remaining fragments of Garry Oak ecosystem are on private land, we need to work closely with local landowners to establish stewardship programs. It is likely that many populations of the butterflies will need human help in order to persist. This may be in the form of habitat maintenance (i.e. controlling invasive species) or

monitoring of butterfly numbers. When people learn of the rare treasures in their neighborhoods, I am confident that they will take pride in ensuring the survival of our endangered butterflies.

While the Garry Oak ecosystem is one of the most critically threatened in Canada, it is also a recognizable and well-loved symbol of our area, and one that many people will not watch disappear without a fight.

James Miskelly, Victoria

James is one of the 2001 recipients of FER's research funding program.



ssp. luestherae



ssp. editha

Edith's Checkerspot



Dun Skipper

Funding for Research

Each year, the Friends of Ecological Reserves welcomes applications for funding in support of biological and ecological research projects related to ecological reserves in British Columbia. The application 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 2001 should be received by April 1, 2002.

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

Websites of Interest

BioGems: the new National Resources Defense Council (NRDC) website that provides opportunities to explore—and take action to protect—remarkable natural areas in North and Central America. These extraordinary regions, from Alaska's Arctic National Wildlife Refuge to Costa Rica's Gulf of Nicoya, share a common trait: each is critically endangered by commercial exploitation, yet in each case, well-focused citizen action can turn the tide. This is a visually compelling and easy to navigate site, offering video clips, slide shows and much more. It also includes several features that allow you to extend your reach as an activist. You can contact government officials and corporate decision makers directly by sending letters and faxes from the site. In addition, you can send stunning electronic postcards that will inspire others to learn more and join the fight. <http://www.savebiogems.org>



West Coast Environmental Law: empowers citizens to participate in forming policy for, and making decisions about, protecting the environment. From the local to international level, WCEL supports the right of the public to have a voice in how we share our earth. Since 1974, WCEL

has provided free legal advice, advocacy, research and law reform services. Through its Environmental Dispute Resolution Fund, it has given over \$2,000,000 to hundreds of citizens' groups across BC to help them solve environmental problems in their own communities. <http://www.wcel.org>

The Georgia Basin Futures Project: is a five-year research project of UBC's Sustainable Development Research Institute that is combining expert knowledge and considered public opinion to explore pathways to sustainability. The Project is exploring how in the next 40 years, we as citizens can learn to live within the limits of natural ecosystems, while improving human well being in the Georgia Basin region on the west coast of British Columbia. The Project aims to increase the level understanding of how complex ecological, social and economic systems interact and to discover new ways of achieving a sustainable future for the region.


Using QUEST, a computer simulation, people from all walks of life will be enabled to construct alternative futures of the Georgia basin and view the trade-offs and consequences of their choices, showing each person

how their consumer and policy preferences affect the Basin's future over the next 40 years. GB-QUEST will be available after the November 28 public launch of GBFP's Community Engagement activities at Science World in Vancouver. <http://www.basinfutures.net>



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