

## Friends of Ecological Reserves Annual General Meeting and President's Report

**F**riends of Ecological Reserves has been described as 'the eyes and ears' of Ecological Reserves, working in partnership with BC Parks. Wikipedia defines this kind of arrangement as '*Organizations (Parks and Friends of Ecological Reserves) may partner to increase the likelihood of each achieving their mission and to amplify their reach.*

The partnership appears to be at an all-time low and as president over the last twelve years, it is time to fully renew this, which will require some meaningful rededication from BC Parks. There has recently been 25 new staff added to BC Parks in the post-election period. These positions are a wonderful boost to Parks in general, but at least one of these new positions needs to be dedicated as a provincial ER coordinator and promoter of Ecological Reserves. The status quo is not working and has been broken for my entire time as FER president.

### A REVIEW OF MILESTONES – APRIL 2016 TO APRIL 2017

The year in review is cast in terms of the Annual General Meeting (AGM) which FER regularly

schedules for the spring of each year either in March, April or May. We have been supported year to year by the University of Victoria and appreciate Val Schaffer finding us a room in which to hold our meeting these last dozen years.

### Strategic Goal 1. Support of ER Wardens

FER was invited to the Pacific Coastal Region wardens' meeting in Nanaimo held in February 2016. We participated in the planning of the meeting as did Colin Campbell and Scott Benton from the Parks Collaborative (<http://www.elderscouncilforparks.org/what-is-the-parks-collaborative/>). FER also provided \$500 to Parks to help with this 1 ½ day regional ER wardens' meeting. (see the Spring/Summer 2016 LOG). FER had hoped to get a simpler meeting in which all ER wardens were invited to attend and all asked to provide an update of their activities. FER learned from long-time warden **Alfred Gaensbauer**, while on a field trip to Lasqueti Island, that he did not get an invitation and

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Missed 6

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Klanawa River ER Visited 9 & 10



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# The Log

Spring/Summer 2017

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

The views expressed in this newsletter are not necessarily those of the Friends. Articles for publication are invited. The deadline for submissions for the Autumn/Winter 2017/18 issue of *The LOG* is September 15, 2017.

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that he was disappointed. Al does not use computers nor email but he does respond to phone calls. Al knows Lasqueti Island ER very well, as we learned when he lead a tour for the FER Board members. (See the Spring/Summer 2016 LOG).

The format used at this wardens' meeting was that some ER wardens were asked in advance to prepare longer presentations. The longer format was informative for the selected ERs, but in the opinion of FER Board members Garry Fletcher and Marilyn Lambert and myself, this approach should not be favoured for future meetings. Garry and Marilyn are volunteer ER wardens and also FER Board members.

Another setback for FER in our goal to better support ER wardens, is because of the increased enforcement of the privacy policy by Parks. Now the names of new wardens cannot be shared with the FER board. We can no longer learn the names of new ER volunteers nor include them on the mailing list of the FER newsletter, unless BC Parks contacts them first and seeks a release. There has been talk of how to resolve this but no meaningful communications have occurred from the BC Parks "partner" on what has actually been done on

sharing new names with FER.

## Strategic Goal 2. Promote Research in ERs

The *Ecological Reserves Act* requires that researchers who plan to conduct research in ERs need a research permit and must share their findings with BC Parks. Although we support permits, the process has served to discourage some universities and colleges from field-oriented studies due to the length of time that permits were held and reviewed "140 days". Also some of the long-term research studies in ERs do not have their research results shared in a transparent way with BC Parks and not with FER so we could post the research legacy on the FER website. Either the reports are not filed or if filed, they remain the purview of the Area Supervisors.

The FER Parks Legacy project captured some of these older delinquent reports and posted them on the FER website. This tendency to not capture and share on-going research continues. FER has done its best to find and post ER-related research despite not being in the best position to know what is going on in ERs.

There are also a number of ER-specific management activities that Parks staff do in ERs such as invasive species removals and before and after monitoring, results from which Parks exempts themselves from a permit. The results of these activities are not reported. FER would like Parks to share the Parks-led restoration with FER for our posting on the website and adding to the ER Legacy.

## Strategic Goal 3. Support a Robust Network of ERs

The number of ERs has declined; some have been absorbed into National Parks while

### CORRECTION

Unfortunately our article entitled "Lasqueti Island ER Field Trip" which appeared in the 2016 Spring/Summer Log contained a rather substantial numerical error! ER Warden Al Gaensbauer has seen about 2 dozen pigeon guillemots that nest on the shoreline and not 2,000 as printed. Sorry about that, Al.

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others have had management responsibility transferred, i.e., UBC Endowment Lands now managed by Vancouver Parks. More losses may occur due to the increase in National Parks (although the southern Okanagan National Park appears a bit uncertain at this time).

Although FER supports larger protected areas as they are better able to maintain their ecological integrity, to date there has been no specific designation of ER-level protection for the ERs that have been relinquished by BC Parks and absorbed into National Parks. We had hoped for National Park zoning so that there will be equivalent ER-management and protection status within a larger National Park. This has not happened.

There is an absence of adequate representative sites within BC of areas designated at the ER level of protection where research and monitoring are the primary focus. It is disturbing to see only losses of ERs over time and no new additions. There are opportunities within existing parks to review options for a more complete representative ER network. There is interest for some new ERs within the existing BC Parks system from some staff within BC Parks, but no follow-up action has taken place.

FER did propose to government in 2014 that seven new ERs be designated. Meetings were held with senior Parks and Forest Land and Natural Resources Operations (FLNRO) staff. These candidate ERs do have local support and are all modest in size. FER proposed to government that there needs to be a process to evaluate all new ER proposals. No action has been taken by the BC government in three years despite promises of follow-up. Recently we learn that Mittlenatch Island has returned to BC Parks control. We think that it too is worthy of ER designation or



Redwood sorrel (*Oxalis oregana*) not yet in bloom, discovered in Klanawa ER. (see story, p. 9)

at least be assessed as an ER candidate along with other ER candidates. Government has remained silent on the FER proposal that government and the public would benefit from a process to assess areas that could potentially qualify as ER candidates and for which ER designation needs to be an option.

#### **Strategic Goal 4. Promote and Extend Knowledge of ERs**

The FER website is our best tool for open and transparent reporting on ERs. We continue to be plagued by lack of up-to-date reporting from Area Supervisors and from ER wardens as well as lack of disclosure on on-going research permits or BC Parks' lead research and restoration. The LOG newsletter has been our primary reporting and communications tool with ER wardens and Parks' staff.

#### **Strategic Goal 5. Sustain Volunteer organization**

The boat trip to visit Lasqueti Island ER was a great team building overnight trip. Thanks to these field trips, some enthusiasm can be maintained. FER Board members are, however, aging and there is a desperate need for new recruits, as is also the case with ER wardens. We face revenue shortages as we

rely primarily on membership dues and donations to pay our expenses which are mainly for the compilation and printing of the LOG newsletter.

Yes there are challenges ahead in the coming year. Perhaps the biggest challenge is getting a recommitment for a meaningful partnership with BC Parks, one that fosters a change in treatment of Parks' volunteers. This assessment of the past years is perhaps a bit bleak but the need for and the purpose of ERs has never been greater, so let's look ahead to the kind of ER system and future that would fully incorporate the purpose of Ecological Reserves as envisioned by Valdimir Krajina. ERs are natural area research benchmarks from which we can incrementally improve our understanding of how natural ecosystems can and should be managed to sustain environmental values and meet social expectations of keeping all the pieces of diversity in BC. There is so much that remains to be done so let's look ahead.

#### **IN THE FUTURE**

Here is a view of ERs, the role of ER wardens and volunteers and the role of BC Parks in a better brighter

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future. It is the kind of future which I think many volunteers and many in BC Parks would welcome. Below are some thoughts on the kind of future I believe is urgently needed and one in which I would gladly participate and continue to volunteer to create.

Creating a better future in 2017 and beyond means visualizing what a best case future may look like and insight on how to get there from here. The strategic goals for FER are sufficiently robust to hang ideas onto for a much better future for ERs and the bigger questions of environmental sustainability.

### Strategic Goal 1. Support of ER Wardens – 2017+

- **Recruitment and retaining an ER wardens for all ERs**

In the future and beginning in 2017, ensure that there is an ER warden for every ER and that they are able to make regular visits to their ERs and report monitoring information which would then be shared and posted on the FER website for other ER wardens, Parks' staff and researchers to access. The public should also have access to this information. Approximately half of the 150 ERs currently have no ER wardens or if there is a warden, the ER has not been visited in a number of years.

In future, the FER website will be THE platform to share ER information and for ER wardens to share information on their management issues. The FER website will be fully supported by BC Parks' senior management with direction to staff (area supervisors and conservation staff) to share all their information. The BC government would actively support FER and ER volunteers by enabling volunteer communications and move away from using privacy concerns to block communication between ER



Mutant Thimbleberry (*Rubus parviflorus*). Notice the two extra petals. (Discovered on Klanawa trip, see story on p. 9)

wardens and FER communications and public outreach goals.

Many ERs have long-time ER wardens who wish to retire but are reluctant to do so until there is a new ER recruit able and willing to take on their duties. FER would encourage Parks to help existing wardens find and mentor the new recruits, acknowledge existing wardens' contributions but leave them with the assurance that the years of service will be carried on and supported.

A fully developed ER warden recruitment plan should be drawn up by BC Parks. Many ERs are difficult to access and so are seldom visited. Both BC Parks and the public have little idea of what is in these remote ERs and whether or not they are maintaining their integrity or if management intervention is needed. FER believes there are benefits to BC Parks when Parks acknowledges that all ERs need to have a volunteer ER warden and if necessary, the Province provide support, aka funds to cover costs of transportation to access seldom visited ERs in order to get up-to-date information on their condition and any monitoring information.

- **FER-ER warden communications**

Parks to embrace the FER



Common gel bird's nest (*Nidula candida*). (Discovered on Klanawa trip, see story on p. 9)

website as the go-to platform for ER warden communications and will not continue to build a new parallel internal Facebook model. The initiative by BC Parks to host an ER Facebook page managed by an ER warden seems redundant to sharing their field notes on the FER website. The FER website has been in place for many years and has contained wardens' notes for at least the last 5 + years. Why is BC Parks developing a Facebook page for ER wardens and not working on the FER platform? In future, there needs to be a senior-level shift (ADM and regional Directors level as well as all of upper management of BC Parks) with regard to accepting and supporting volunteers and promoting staff so that they embrace what FER and ER wardens have been trying to offer. A cultural shift in BC Parks is needed.

- **Renewing and maintaining the Parks end of the partnership**

FER will work with a permanent full time BC Parks' staff ER provincial coordinator who will be responsible for ER warden recruitment, ER communications, working with Area Supervisors (who are responsible for recruiting ER wardens), capturing all permit research and restoration and management activities led by Parks. There will be, in future, a results-based approach in place that main-

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tains the integrity of the ERs and provides transparent accountability with Parks' staff of ERs and information sharing with FER and the wider public. The BC Parks ER provincial coordinator will liaise with FER and the effectiveness of ER management will be a regular part of regional area supervisor staff performance review. The coordinator's duties will include sharing ER warden recruitment with FER and promoting the posting of all parks research permit and other volunteer-led activities to the FER website.

### **Strategic Goal 2. Promote research in ERs – 2017+**

- ***Research institutions are recruited, students involved and driving ER research and monitoring***

The regional universities such as University of Northern BC, Thompson Rivers, University of Victoria, Simon Fraser, UBC and all the regional colleges have professors and lecturers who will take students to ERs to teach environmental monitoring and carry out undergraduate natural history studies and who will add to the legacy of research in BC's natural areas and who will post their results on the FER website so there is an incremental and continuing addition to natural areas knowledge. Parks will adopt a new approach to reach out and work with researchers in colleges and universities to expedite research permits so that students can do field research within the term periods available to them and get credit for adding to natural areas understanding. This inclusion and interest in ERs and natural areas research by research institutions, will be centered on parks. BC Parks will make it clear that they understand the importance of natural areas research and want to encour-



Comox Bluffs Ecological Reserve

age this research and need partners. BC Parks will facilitate research in ERs but needs help from researchers.

- ***Major threats to ER ecological integrity posed by industrial development to fund baseline monitoring***

FER participated as an intervenor in the Kinder Morgan pipeline twinning proposal managed by the National Energy Board. Nineteen Marine ERs are at risk. We were not impressed with the lack of effort on the part of BC Parks to contribute to the intervenor process. BC Parks will, in the future, look at matters that will affect its protected areas and shorelines with extreme care and concern. We had to carry the concerns of the public in pointing out to the National Energy Board that there is not adequate baseline monitoring, nor inventory of shorezones, nor research on oil spills to restore these ERs and all impacted marine environments between them. Once the FER

proposal is adopted, the BC government will work with Kinder Morgan and the those contracted to ship Dilbit, to establish a permanent Marine Research and Endowment Fund along the line FER proposed to the National Energy Board. In future, the risk bringer will be made to address the environmental baselines, monitoring and research as these are part of doing business and this should not be borne solely by BC citizens. In future the understanding of the marine environment must be borne by those placing it at risk. There will be an established Marine Research, Monitoring and Inventory program so that the Canadian public is not solely responsible for marine oil spill-related research and monitoring as is the case at present.

### **Strategic Goal 3. Support a Robust Network of ERs – 2017+**

- ***Too Few ERs in 2017***

As of 2017 there are less than 150 ERs and the number has been

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# ER Warden Laurie Rockwell's Commitment to Nature will be Sorely Missed

By Garry Fletcher

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**S**adly, G. Fletcher's profile of Laurie Rockwell, "An Exemplary Ecological Reserve Warden," published in "The Log, Autumn/Winter 2014", requires an update. In February 2017, after twenty-five years of service as an Ecological Reserve warden, Laurie stepped down from the position because of deteriorating health. He died in early March.

During those twenty-five years, Laurie rarely missed his monthly hike through Trout Creek Ecological Reserve #7, keeping a record of birds heard and seen, plants observed, the state of fences, signs of human activity and other relevant observations. Those records reveal steadily advancing mastery of plant species, common and rare, that occur in the ER. Laurie's detailed and meticulous notes were faithfully reported to BC Parks Staff and posted on the FER website. As Fletcher noted, "The efforts of Ecological Reserve Wardens like Laurie go a long way in providing the level of Citizen Science that would be valuable in every Ecological Reserve."

Biologist Orville Dyer, newly retired from BC's Ministry of Forests, Lands and Natural Resource, recently said, "I greatly value Laurie's commitment to nature and his consistent help with protecting it. He is a great advocate for parks, ecological reserves and other natural places that conserve the ecosystems and species that he clearly loves."



Along with his ER duties, Laurie carried on yearly monitoring of conditions in Sunoka Provincial Park. He conducted a long-term study of Grey Flycatcher migration and breeding behaviour, and yearly owl surveys for Birds Canada, as well as contributing to the BC Breeding Bird Atlas. A passionate birder, he co-ordinated Christmas Bird Counts and enjoyed offering courses and tours to

beginning birders, especially children.

Laurie was a charter member of the Summerland Environmental Science Group. He promoted the Earth Day planting of native trees and shrubs, and enabled their survival by combating weeds throughout the season. The natural world lost one of its staunchest supporters with Laurie Rockwell's passing.



# Friends of Ecological Reserves Represented at International Migratory Bird Day and BioBlitz

By Louise Beinhauer

This year's International Migratory Bird Day (IMBD) was held on May 13 at Fort Rodd Hill. In past years the IMBD was held at Beaver Lake, but the change of venue was due to a combined Migratory Bird Day and a Family BioBlitz Festival which was sponsored by Parks Canada.

The BioBlitz participants observed and identified as many plants and animals as possible in 24 hours within the 54 hectares of Fort Rodd Hill. The count gives Parks Canada a better idea of regional biodiversity, but also helps people to learn about nature and conservation.

The IMBD Festival is sponsored by the Rocky Point Bird Observatory and participants were able to go on guided bird walks and visit displays from different conservation groups, many of which provided pamphlets, maps, etc.

Stephen Ruttan and I set up the Friends of Ecological Reserves display and spent a chilly day talking to many interested and interesting people. We had visits with Environmental Studies students, artists, other conservation or environmental group members and families on an outing.

We are always very happy to attend this forum which gives us a great opportunity to provide the public with more



Louise Beinhauer at the Friends of Ecological Reserves display at IMBD.



The welcoming arch at the newly dedicated Garry Oak Learning Meadow. The arch was carved by Tsawout First Nation carver, Tom LaFortune.

information on Ecological Reserves. We handed out a great many of our 'ERs of British Columbia' map and brochure

and there was quite a bit of interest in our beautiful placemats, especially the Garry

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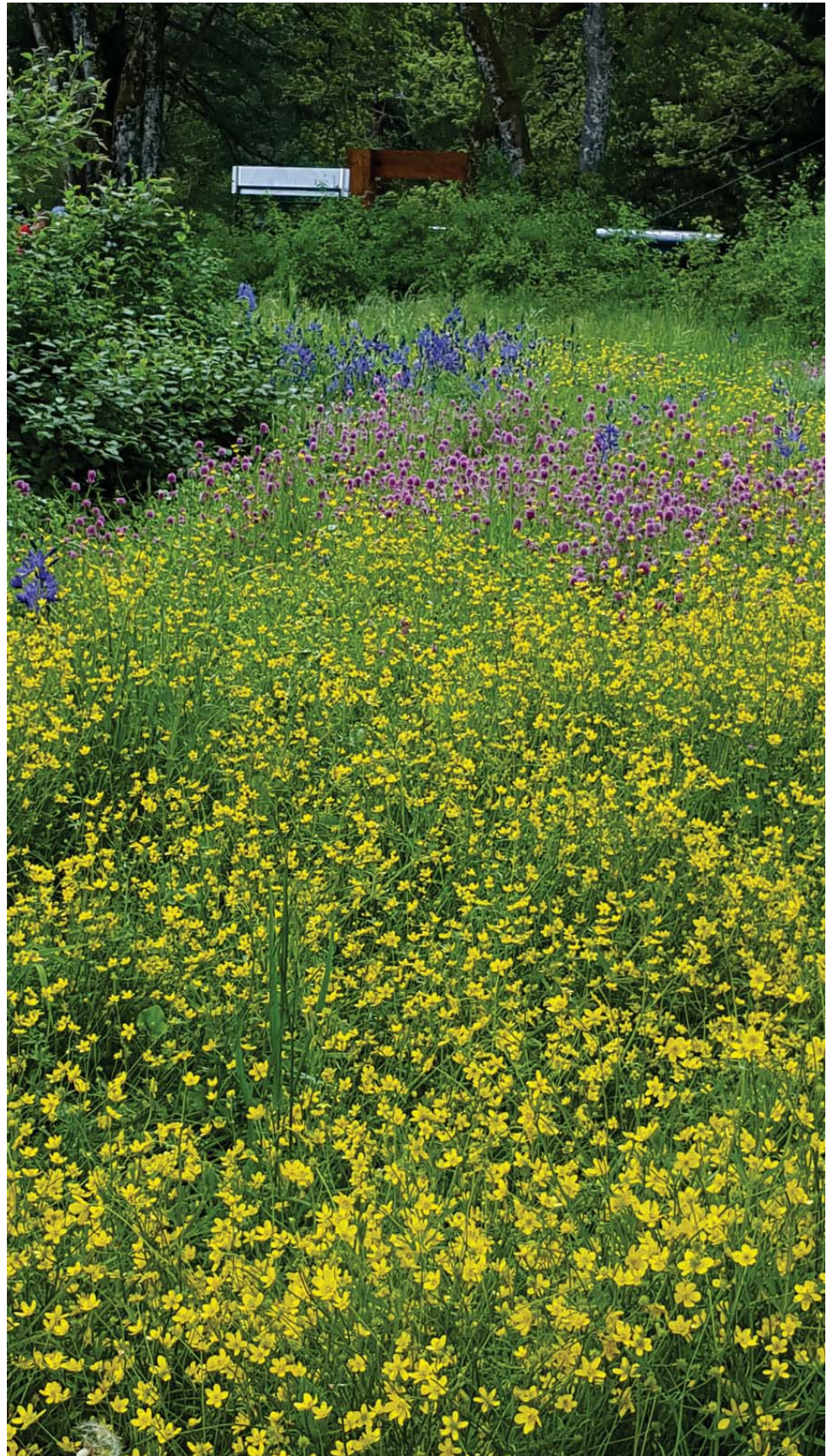


Oak Meadow one.

Parks Canada has spent five years transforming a 1-acre piece of lawn into a beautiful Garry Oak meadow. We were treated to the grand opening of the meadow around noon. Chief Thomas of the Esquimalt First Nation gave us a brief history of the Lekwungen people and their customs and practices, all tied to the land and waters of southern Vancouver Island, which go back thousands of years. After his welcome, we enjoyed an invigorating performance by the Esquimalt singers and dancers.

The final part of the ceremony was an introduction of the artist who created the archway, carver Tom LaFortune of the Tsawout First Nation. He gave a brief explanation of the figures carved in the archway. The top piece depicts wildlife that can be found in the meadow and the two figures, male and female, represent the people. The archway took him two and a half months to construct. He also explained the significant importance of a Garry Oak meadow to his people. It was a place to hunt deer as well as to gather camas bulbs.

The audience listened in rapt attention to the speeches and performances and clapped when the ribbon was cut. I later took the time to wander through the beautiful meadow.



Buttercup, sea blush and camas on display in the Garry Oak Learning Meadow.



# Klanawa River Ecological Reserve Visited

By Stephen Ruttan

Every year the board of the Friends of Ecological Reserves tries to visit a reserve it has not seen before. This year, after scanning maps of southern Vancouver Island, we decided to explore the Klanawa River Ecological Reserve. Although somewhat remote, and only accessible by logging roads, it was a possible one-day trip.

Preparation for this trip included contacting the logging company, Western Forest Products, for information on the condition of the roads. It was a good thing we did. After determining that we were a legitimate group, WFP's officials sent us a map that we could access on our various devices. It showed us which roads were still maintained and useable, and which should be avoided.

So early on the morning of Saturday, June 10<sup>th</sup>, we assembled at the Helmcken Park-and-Ride. Rick Page picked us all up at 7:00 am, and we headed up-island in his Toyota RAV. There were five of us including Rick: Liz Williams, Garry Fletcher, a friend and ex-warden, Dean Rebneris and me.

We had several hours of travel ahead of us as the reserve is between Bamfield and Nitinat Lake, just a few kilometres from the West Coast Trail. Going in via Lake Cowichan, the reserve is only 77 kilometres from Yubou, but it's all logging roads, sometimes fairly rough. A few kilometres east of Yubou we were thrilled to see some elk by the side of the road.



Second growth forest at Klanawa Ecological Reserve

By late morning we arrived at the reserve. We weren't sure at first how we would hike in as there was no obvious trail. Eventually we saw what seemed to be faint game trails at one spot, so we headed in. We walked through some second-growth for a while, until we got closer to the river. Then we got to the old-growth.

The reserve protects a ninety hectare patch of old-growth forest, that stretches for two kilometres along the Klanawa River. The primary reason for establishing this reserve was to protect redwood sorrel (*oxalis oregana*), an understory plant that is rare in British Columbia. We discovered that, while it may have very limited distribution in this province, it is certainly not rare at this site. In fact, at many places it grows in great profusion.

The river was fairly low, so we were able to walk along the

exposed river bed. It was a pleasant and peaceful scene. The river is quite gentle along here, and when the water is higher it might be possible to kayak along the river.

Back in the forest we spent some time exploring. At one point Garry discovered a bear den. Close to the river it looked like there were some game trails. But we saw no wildlife.

After a few hours of meandering around the reserve, we headed back to Victoria. We stopped off at the Flora Lake Recreation Site on the way back. It is probably better to describe it as a former recreation site. It is obviously unmaintained now; in fact the bridge to it has been taken out, and you have to ford a stream to get to it. But we made one interesting discovery. Garry found some redwood sorrel, so maybe the plant has a somewhat

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wider distribution than has been previously thought.

It was about supper time by the time we got back to the Park'n Ride. It had been a successful day's outing. We were happy to see that the reserve is essentially undisturbed, and is doing its job of protecting redwood sorrel, and of course the old-growth forest it lives in. In a heavily logged landscape, that is something to be truly thankful for.



L to R: Garry Fletcher, Liz Williams, Rick Page and Dean Rebneris along the Klanawa River.

**President's Report cont'd. from p. 5**

shrinking as BC Parks off loads ERs to other agencies and does not add new ERs to the ER network. Considering that BC has Canada's highest natural diversity through the happy circumstances of oceanic and continental driven climates interacting with a complex mountainous and plateau landscape, it is odd and inadequate to have less than 150 ERs to benchmark this complexity. The total amount of BC in protected areas is approximately 15 per cent when both National and Provincial Parks are considered. Within the BC Parks system, ERs make up about 1/10th of one per cent. It is impossible to have a credible ER network with this small amount of the land with the ER designation. In future, BC Parks and the provincial government will set a goal of one per cent of the current BC Parks system to be re-designated as ERs. That is a ten-fold increase in the size of the ER system and can be achieved entirely within the current parks system.

- ***A new goal for ERs of 1% set within the existing Parks system by 2020, a ten-fold increase***

BC government will direct BC Parks to achieve a goal of not less

than one per cent of the existing Parks systems as ERs. BC Parks together with FER and others will set criteria for adding new ERs within Parks and designate these by 2020. Candidate areas will be selected by staff and others to determine the best areas within Parks as candidates. BC will truly become a global leader with regard to Ecological Reserves system management and ER representation appropriate to BC's diversity. Where needed, new ERs will also be designed to protect the most vulnerable and rare ecosystems.

- ***The assessment process established for new ERs in Parks also assess areas outside of Parks***

Government will accept and work with FER and others on a process to assess ER candidates outside of the current Parks system. FER and others in government will agree on the criteria to establish new ERs on crown land and decisions will be made on the candidates that have been presented to government by FER in 2014. (See the list of candidates on page 14 and the back page of this edition of the LOG.) FER would need some funds to participate as the level of involve-

ment would be beyond what is reasonable for volunteer time alone.

The criteria set for new ERs within the Parks systems will become the standard that can be applied to new areas outside of the Parks system. In future, new candidate areas potentially suitable as ERs will be evaluated based on their ecological merit weighed with social and economic considerations and a decision on accepting or rejecting areas is made in an open and transparent manner

- ***Consultation and new working relations with First Nations.***

Inclusion of First Nations and roles in protected areas management are evolving and an increased management role is needed and sought with FNs. To date the role of ER wardens and monitoring by FN has lagged with regard to ERs. The role of FNs as wardens and watchmen has taken place in some protected areas and to a very a limited extent within ERs. In the future, a better stewardship model will be one that FNs can embrace because it aligns so strongly with their conser-

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vation values. In future, FN will be proponents for existing and new ERs and will share cultural knowledge and take a monitoring role. In future, the FN in the boardest sense (all FNs and most FN individuals) will have a clear understanding of their right to access traditional resources within ERs. A new relationship with FNs means that benefits and values and the FN access to ERs are known and become more fully supported by FNs, the public and BC Parks. In future, ERs will become a designation embraced and promoted by FNs.

#### **Strategic Goal 4. Promote and Extend knowledge of ERs – 2017+**

- *A well maintained and enhanced FER website able to capture both government and volunteer ER related information*

The FER website will become the primary tool to communicate between ER wardens, the public and BC Parks' staff. The FER board believes that it is in the government's and the public's interest to support an organization such as FER. Greater involvement in ERs by those who volunteer on behalf of Ecological Reserves and are driven by an environmental interest and concern will be motivated to act in the public interest. This passion and interest are a valuable asset and it would behoove government to tap into this level of commitment from volunteers.

The FER website will be well maintained and accurate and up-to-date should anyone want to find out the history, monitoring, research and management issues of any ER, or in the broader context, what is happening across the ER system. The FER website will be informed by government but retained outside of government providing some additional trans-



San Juan Estuary Ecological Reserve

parency.

- *BC Parks financially supports FER in an agreement to maintain the FER website*

In future, the FER website will provide the most up-to-date information and the site will be relevant and current. A memorandum of cooperation would guide the actions of BC Parks' financial support levels and the obligations of FER on information sharing and posting. Government has downloaded some of its ER obligations but knows the information on ERs will be well maintained even though it is outsourced to an NGO. There will be some financial support from government to FER to support the information platform accessible to government but outside of government.

#### **Strategic Goal 5. Sustain Volunteer organization – 2017+**

During the transition between BC Parks and FER towards a greater role for FER in managing the ER system, there needs to be some bridging funding provided to FER to get the ER communications system functioning effectively (data capture) and to work with the new

BC Parks' provincial ER coordinator as well as work with First Nations and others to clarify the benefits of ERs and natural areas research. The transition to a new management system means that in addition to funding for a dedicated ER provincial staff member, that there will be sufficient funds for FER to help transition to a new management model that ensures volunteer ER wardens get the needed support from BC Parks.

Above are our ideas on Ecological Reserves and how to move forward from 2017 and into the future, and the actions and attitudes needed to fully support ERs and fulfill the intent of the *Ecological Reserves Act*.

There will always be a need to add knowledge on how to balance conservation practices with the needs of development and it will always be a balancing act. Let's learn from our ecosystems what their limits are and when our practices and plans are unsustainable. Let's get back on track.

*Table of candidate ERs on page 14*



# Invasive Species and Ecological Reserves Biodiversity at Risk, and Best Practices for Prevention

By Sue Staniforth, Education & Outreach Manager, Invasive Species Council of BC

**I**nvasive species are a serious **Issue** world-wide, representing the second greatest threat to global biodiversity after habitat loss, and costing governments and communities tens of millions of dollars in control efforts.

British Columbia – truly “Super Natural BC” – is home to more species of plants and animals than any other province, including 72 per cent of Canada’s land mammal species, 50 per cent of Canada’s amphibian species, 60 per cent of Canada’s plant species and 70 per cent of Canada’s nesting bird species.

BC’s ecological reserves are areas selected to preserve special natural ecosystems, plant and animal species, and often serve to protect rare and endangered plants and animals in their natural habitat. Invasive species negatively impact lands and ecosystems across BC, and ecological reserves can be especially affected, due to their unique and rare ecosystems and great biodiversity.

Invasive species have four main characteristics:

1. They can be prolific seed producers/reproducers:
2. Seeds / young spread easily and effectively
3. They can quickly establish and thrive on disturbed, open ground, spreading and displacing native plants;
4. They usually lack natural pathogens or predators that



Hound's-tongue (*Cynoglossum officinale*) burrs on boot. Hound's-tongue is a biennial to short-lived perennial, and is considered noxious under the *BC Weed Control Act*. Hound's-tongue is found on dry pasture, roadsides, and logged forestland. Found primarily in the southern interior of BC, it is a major concern in the Kootenay, Okanagan, Thompson, and Cariboo areas. (Photo by L. Scott)

control their populations in countries of origin.

## SOME IMPACTS

Invasive species can have severe impacts on ecosystems: they compete directly with native species, reduce or alter habitat for native organisms, lead to erosion and water siltation, increase fire hazards and can have significant impacts on human health. For example, spotted knapweed in Glacier National Park eliminated seven rare and uncommon plant species in just three years. Almost half of all seabird colony collapses world-wide have been caused by introduced species

such as rats and cats.

Invasive plants have serious impacts on agriculture, reducing crop quality by replacing and tainting target crops, injuring livestock, and reducing their market value.

Invasive plants also cost the forest industry millions of dollars a year, as they out-compete tree seedlings in reforestation areas, making reforestation an expensive challenge.

Invasive species impact the urban environment: invasive fire ants and knotweed are serious issues that reduce value of your

*Continued on page 13*



property. Invasive plants contaminate gravel pits, can break down concrete and asphalt, and block site lines along roadways.

Recreational impacts include increased costs for removal and treatment in parks, park closures due to plants such as puncturevine on trails and Eurasian water-milfoil which makes water bodies unsuitable for fish or swimming.

Many First Nations have suffered the loss of traditional food and medicinal plants, due to invasive plants displacing native species.

### VECTORS OF SPREAD: HOW DO THEY GET AROUND?

Invasive species have many vectors, or methods by which they travel and establish themselves, the major one being through human activities. Gardeners inadvertently plant invasive plants that escape cultivation or get dumped into parks. Seeds and plant parts cling to vehicles, equipment, camping gear, clothing and pets, and boats can transport invasive mussels and other aquatic invasive species from one water body to another.

Quite a few ecological reserves are open to the public, for non-consumptive, observational uses, that – even when done unintentionally – can lead to the introduction and spread of invasive species to sensitive natural areas.

### RESOURCES AND PROGRAMS

The Invasive Species Council of BC (ISCBC) is a charitable organization that works province-wide, helping to coordinate



Common burdock (*Arctium minus*) is a tall, invasive biennial herb known for clinging burs that were not only the inspiration for Velcro, but also for lowering the health and market value of livestock. Considered regionally noxious under the *BC Weed Control Act*, common burdock is found in the Bulkley-Nechako, Cariboo, Columbia-Shuswap, Fraser-Fort George, Kitimat-Stikine, North Okanagan, Okanagan-Similkameen, Peace River, and Thompson-Nicola regions. (Photo by J. Rundall, Nature Conservancy)

and unite a wide variety of concerned stakeholders in the struggle against invasive species in BC. Education outreach and training programs focus on behaviour change in gardeners, outdoor recreation enthusiasts, First Nations, resource industry and horticultural professionals.

Changing behaviour programs are based in the social psychology and environmental fields, and came about because many awareness, education and incentive programs provide information to effect behaviour change which affected people's awareness of issues, however did not change their behaviours. Behaviour change programs, or community-based social marketing, have been shown to be successful and are rooted in several key strategies:

- Identifying barriers and benefits to a behaviour
- Designing a strategy using

behaviour change tools,

- Piloting the strategy with a small group of target community, and
- Evaluating the impact of the program once implemented

Province-wide changing behaviour programs include **Clean Drain Dry** – aimed at boaters and anglers, **PlantWise**, focusing on gardeners and the horticultural industry, **Don't Let It Loose** – aimed at pet owners and the pet and aquarium trade, and **Play Clean Go**, a program focusing on outdoor recreationists. Check these programs out further at <http://bcinvasives.ca/resources/programs>

### HOW CAN YOU HELP? ACTIONS TO TAKE BEST MANAGEMENT PRACTICES

Ecological reserve wardens, government staff, volunteers and

*Continued on page 14*



### Invasive species Cont'd. from page 13

field workers are critical “eyes on the ground” to assist with invasive species identification, reporting, monitoring and removal. Baseline data on the biodiversity of existing ecological reserves is key to enable proper monitoring and early detection of invasive species, in order to be able to respond rapidly.

Wardens, visitors and field workers can limit the introduction and spread of invasive species by applying best practices and management techniques. The ISCBC has many tools and resources online, including a guide to Best Management Practices for Parks and Protected Areas. Then Council also runs identification, management and treatment workshops

### REPORTING

A main action you can take is to report any major infestations.



Zebra (*Dreissena polymorpha*) and quagga mussels (*Dreissena rostriformis bugensis*) are fingernail-sized, freshwater mollusks that can easily attach themselves to objects and other organisms. They can clog pipes of water treatment and power plants, disrupt ecosystems with large monocultures, are difficult to remove and non-native to British Columbia. Zebra and quagga mussels are an ALERT SPECIES—currently they have not become established in Oregon, Idaho, Washington, Montana or British Columbia—prevention is key! (Photo by Megan Eplett)

Download the **Report-a-Weed** and **Report-a-Species** apps for your mobile phone – these are

also excellent identification tools to have in the field.

<https://www.for.gov.bc.ca/HRA/invasive-species/index.htm>

There is also an online IAPP Map display, a reporting form, and a hot line:

- Report-Invasives BC apps for iPhone and iPad or Android
- Report-A-Weed BC apps for iPhone and iPad or Android
- The Report-a-Weed tool in the online IAPP Map Display application
- Our online report form
- Report suspected invasives: [www.reportinvasives.ca](http://www.reportinvasives.ca) or (Toll free) 1-877-855-3222
- Invasive Mussel Reports: BC Conservation Officer Services Hotline: 1-877-952-7277

### STAY INFORMED!

Join the ISCBC – it is FREE and links you to a wide range of resources, workshops, experts and stakeholders. [www.bcinvasives.ca](http://www.bcinvasives.ca)

### President's Report Cont'd from page 11

### CANDIDATE ECOLOGICAL RESERVES

Candidate ER Name	Rationale for Conservation	Approximate Size
<b>'Roberts Creek Ancient Forest Headwaters'</b> Sunshine Coast	Unique associations of yellow-cedar ( <i>Chamaecyparis nootkatensis</i> , Yc) and western yew ( <i>Taxus brevifolia</i> , Tw).	30 ha area between two existing Wildlife Habitat Areas (WHAs).
<b>'Dakota Bowl Bear Sanctuary'</b> Sunshine Coast	Subalpine mix forest stand of Yellow-cedar ( <i>Chamaecyparis nootkatensis</i> ), Silver Fir, and Mountain hemlock ( <i>Tsuga mertensiana</i> , Hm) high concentration of black bear dens.	80 ha.
<b>'Clack Creek Forest Gallery'</b> Sunshine Coast	Largest known patch of the endangered, native plant Snow Bramble ( <i>Rubus Nivalis</i> ) a blue listed plant species, along with 2 other robust patches. Candidate between two proposed WHA to protect the blue-listed Coastal Tailed and Red-Legged Frog	18 ha.
<b>'Pink Mountain Alpine Plateau'</b> 180 km north of Fort St John	Protect highest concentration of red and blue listed species in central and northern BC unique to this deep soil limestone ridge.	4,200 ha an area approximately 1/3 of the Pink Mountain (PM) alpine ridge adjacent to current PM Provincial Park.

*Continued on back cover*



# FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central, Victoria, BC V8W 3S1

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## 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  
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Shipping, Handling and Postage for Orders \_\_\_\_\_ \$4.00

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## Table of Candidate Ecological Reserves (Continued from page 14)

Candidate ER Name	Rationale for Conservation	Approximate Size
<b>'One Mile Creek'</b> 8 km north of Princeton	Protection of very significant Eocene (about 50 million years old) lakebed shales with extremely well preserved fish, feathers, insects, flower, fruits, seeds, etc.	< 2 ha
<b>'Falkland'</b> , on Estekwalen Mountain, <b>west of Falkland.</b>	Protection of very significant Eocene (about 50 million years old) lakebed shales with extremely well preserved fish, feathers, insects, flower, fruits, seeds, etc.	10 ha
<b>'Horsefly River'</b> near town of Horsefly	A very significant Eocene (about 50 million years old) lakebed shales with extremely well preserved fish, feathers, insects, flower, fruits, seeds, etc. Fossils are exposed along river banks due to erosion & undercutting by the Horsefly River.	The site is estimated at 30 to 50 ha

Looking north along the steep west side of Pink Mountain.



# The Log



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