

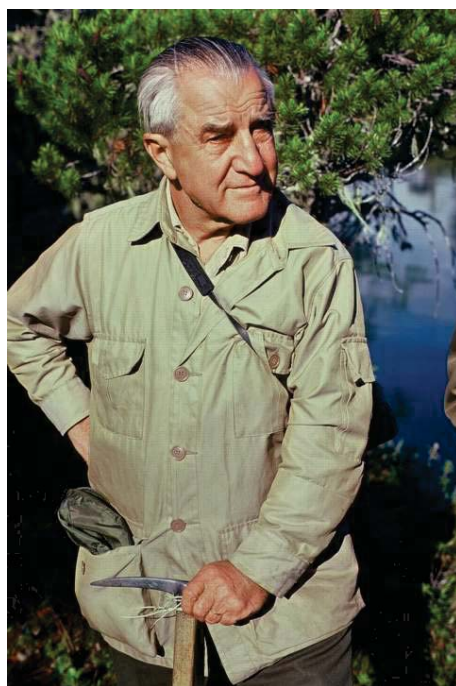
HAPPY 50th ANNIVERSARY TO B.C.'S ECOLOGICAL RESERVES

By Jenny Feick, PhD

British Columbians celebrate an important anniversary in 2021. Fifty years ago, thanks to the advocacy of Dr Vladimir Krajina, the B.C. Legislature unanimously passed the *Ecological Reserve Act*. As the first legislation in Canada to facilitate the establishment of ecological reserves, this law became the model for other provinces in Canada. The volunteer ecological reserve warden service just had its 40th anniversary in 2020 but with the pandemic, no celebrations took place.

The Friends of Ecological Reserves (FER) invite you (**see back cover**) to help them commemorate the 50th anniversary of the ecological reserves system, starting with their **virtual AGM on the evening of Friday, January 29, 2021**. Guest speaker Dr. Brian Starzomski, Director of the School of Environmental Studies and Kate McKeown, iNaturalist Project

Coordinator, both from the University of Victoria, will reveal how the BC Parks iNaturalist project underscores the importance of ecological reserves in biodiversity conservation and their importance as living labs for studying environmental change.



Top: Vladimir Krajina, considered the 'Father of Ecological Reserves' in B.C. at Haida Gwaii Bog (photo Jim Pojar).

Left: Photo taken by Laas Parnell, a student from Haida Gwaii who spent the summer in 2014 on a boat 7 hours a day in the ocean near Hippa Island, off the ocean side of the Vladimir Krajina Ecological Reserve.



Tufted puffin (*Fratercula cirrhata*)

Please see the back cover for information about the Friends of Ecological Reserves upcoming virtual AGM and lecture and how you can attend.

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

The Log

Autumn/Winter 2020/21

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.

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iNaturalist Biodiversity Surveys in B.C.'s Ecological Reserves

By Brian Starzomski, Kate McKeown and John Reynolds

iNaturalist is the most important development in biodiversity science in at least 100 years. This may sound like hyperbole – that period of time includes the explosion in popularity of birding, the advent of bioblitzs, and the invention of the helicopter – but no tool has enabled so many location and time-stamped observations of species by so many people. Simply put, iNaturalist democratizes the collection of biodiversity information and engages everyone in helping to better understand nature.

iNaturalist puts a tool for observing nature in everyone's pocket. iNaturalist is run by the California Academy of Sciences in partnership with the National Geographic Society. So far, over 55 million observations of more than 309,000 species have been submitted from around the world, by over 1.4 million people. This is a doubling of observations and participants in the past year. iNaturalist is closing in on 1 million observations in British Columbia, including more than 13,000 species.

For British Columbia's most beautiful and remarkable landscapes, found in protected areas of all types, including ecological reserves, iNaturalist allows for the development of species inventories in locations where little work may have been done before. We have joined forces with BC Parks to photo-document as many species of plants and animals as possible within our provincial protected areas. Provincial Parks staff want to know how many species are in their protected areas, including threatened species, and where they are, and how to manage protected areas to protect them.

To date ecological reserves are under-represented, and this is where our teams, and **you**, come in. Anyone can contribute observations to iNaturalist and to the BC Parks project. Observations from ecological reserves will be included automatically in projects set up with the boundaries of each individual protected area. All you



Shortspur seablush (*Plectritis congesta*) at Mt. Tzuhalem ER # 112 (Photo by Brian Starzomski).

need to do is visit, take some photos of the species you encounter, and later it's just a matter of dragging and dropping your photos into iNaturalist. We've set up iNaturalist "projects" to automatically capture your observations in every provincial park, conservancy, and ecological reserve in the province. You can find two examples of Ecological Reserve collection projects at <https://inaturalist.ca/projects/hayne-s-lease-ecological-reserve> and <https://inaturalist.ca/projects/race-rocks-ecological-reserve>. All observations from BC Parks can be found here: <https://inaturalist.ca/projects/bc-parks>. And now, for the first time, we've created an umbrella project to collect all Ecological Reserves observations in one place:

<https://inaturalist.ca/projects/bc-parks-ecological-reserves>.

You can easily drag and drop 100 or more photos into iNaturalist at a time. Any camera will work: you can digitize and upload your old slide photos, use the photos from your cell phone, or from your new-fangled digital camera. If your camera has a GPS, iNat will

Continued on page 3

automatically display your photo where you took it, and will bring the date and time with it. You don't have to type anything other than the name of the species. If your camera doesn't have a GPS, or you are uploading old photos from the film era, you can place the photo in the appropriate location just by tapping the spot on a map on the iNaturalist website. Every photo you upload to iNat will automatically be collected by the right protected area. If you're unsure what you've seen, you can ask iNat's advanced photo recognition feature for suggestions. It often gets it right! This amazing feature in iNaturalist helps us all to learn more about the many species we encounter. An especially important feature of iNaturalist is that other people can see your observation and help with the identification. When someone confirms the identification, the observation becomes "Research Grade", which increases confidence in the quality of the data. This interactive feature of iNaturalist develops and maintains a passionate community of observers and identifiers.

We have also created an "umbrella project" so that all of the observations from all of B.C.'s protected areas are gathered together and displayed along with various summary statistics. You can see the results so far at <https://inaturalist.ca/projects/bc-parks>. Or go to iNaturalist, select "Community", then "Projects", and then type "BC Parks". If you're using iNaturalist on your phone, go to "More" then "Projects" then "Featured". You'll find that the BC Parks umbrella project is one of the top featured projects across Canada.

At the time of writing, there are more than 262,000 observations of over 6,750 species of plants, animals, and fungi in B.C. parks. Want to see just birds? On the website, click on "Stats", hover your mouse over the pale blue "birds" colour on the circle, and click. Or check out mammals, insects, or fungi.

Citizen science has the potential to revolutionize our understanding of B.C.'s biodiversity. As the information



Haynes' Lease ER #100 in the southern Okanagan supports Behr's Hairstreak (*Satyrium behrii*) (Photo by Lena Dietz Chiasson).

accumulates, we will be able to get minimum estimates of the number of species in provincial parks for the first time and do statistics to extrapolate to the total number of species that may be in each protected area. We will also learn about the distributions of rare and threatened species, and iNaturalist automatically blurs their locations to protect them. These data all become important for scientists managing species. In the most recent Committee on the Status of Endangered Wildlife in Canada (COSEWIC) meeting, iNaturalist was often used to look for observations of rare and endangered species.

Our teams of iNaturalist surveyors receive valuable training to become the scientists studying biodiversity in the years to come. They are also able to experience landscapes that few in B.C. get to know so intimately. Kate McKeown, one of the student surveyors from summer 2020, describes a couple of her experiences surveying in two ecological reserves:

"Stepping into Haynes' Lease Ecological Reserve was unlike visiting any other ER in the province," says Kate. "The hot, arid landscape was filled with the songs of western bluebirds and lark sparrows, and the buzz of brown-spotted range

grasshoppers. Minding the brittle prickly-pear, we walked narrow deer trails through the grassland to the base of the rocky outcrops. Lewis' mock orange bloomed in the shade of the outcrops, attracting a western tiger swallowtail to the sweet fragrance. Further up the bluffs, roundleaf alumroot and fragile fern emerged from cool crevices. This ER was so unique that the iNaturalist team returned to it a second time this field season."

Kate says of Mount Tzuhalem Ecological Reserve:

"Mount Tzuhalem Ecological Reserve was covered in blooming camas, shortspur seablush, and field chickweed when we arrived. The multicoloured flowers attracted several propertius duskywings and ocean spray fairy moths, most of which were too busy to be bothered by our cameras. Tucked away beneath the old Garry oaks, we saw chipping sparrows and dark-eyed juncos hopping around patches of deltoid balsamroot and common woolly sunflower. As we were about to depart, an olive-sided flycatcher began singing from its perch atop a Douglas-fir, enabling us to collect one more observation for the Mount

Continued on page 4

Trev Anderson, Race Rocks Ecological Reserve Advocate, Turns 100

By Garry Fletcher, Race Rocks ER Warden

On October 22, 2020 my wife Helen and I were invited to the 100th year birthday party for Trevor Anderson, who had been the light keeper at Race Rocks when it became an ecological reserve.

Trev and Flo Anderson had arrived at Race Rocks with their family in 1966, and served at the station until they had built a boat and left to sail across the Pacific Ocean in 1982. They had been married for 70 years in 2014. Sadly Flo Anderson passed away in 2017.

I first met the Andersons in 1976. Students from Lester Pearson College in the Diving Marine Science and Biology programs started going out to the Race Rock Islands for field trips and SCUBA diving, with some even spending their project weeks studying and working at the islands. Students in the Diving and Sea Rescue Services at Pearson College developed a close relationship with these neighbours five km out at sea. After many of our dive sessions, when our students were invited into Trev and Flo's home for tea and cookies, the students would talk excitedly about the incredible sea life they were seeing under water. In the late 1970s we started to visit Race Rocks more frequently and the Andersons invited students to stay with them on project weeks.



Trev Anderson on his 100th birthday at his home in Metchosin. (Photo by Garry Fletcher)

Trev and Flo were the first to plant the seed of an idea. They urged us to see if we could get the B.C. government to establish some protection and formal recognition of the Race Rocks Area. What they could see at low tide alone was impressive enough, but if the underwater life also could be protected, that would be ideal.

In the years 1997 and 1998, we recorded the unique life underwater by logging dives from over 80 locations

throughout the Race Rocks archipelago, and by February of 1979, a highly successful workshop took place, with officials invited from the Provincial Museum, the University of Victoria, and the Ministry of Environment, Lands and Parks who were all enthusiastic and supportive of our proposal.

Throughout that year we worked at the task of formalizing our proposal, presenting it to Cabinet and lobbying to get action. Two students in diving and marine science, Johan Ashuvud from Sweden and Jens Jensen from Denmark were especially relentless in their pursuit of our goal. The proposal had to clear 11 agencies in the government bureaucracy and the Cabinet before the reserve could be proclaimed. These two students invited the Director of the Ecological Reserves Branch Bristol Foster, and the Deputy Minister of Parks Tom Lee out to dive and then kept following up with phone calls, even after hours!

Their persistence finally paid off when after a year, the shortest time any reserve proposal has ever taken, the Minister of Environment, Lands and Parks requested Prince Charles on his visit to the college as international board president (April 1980), to make the formal announcement

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iNaturalist cont'd. from p. 3

Tzuhalem Ecological Reserve iNaturalist project."

Ecological reserves are areas set aside to preserve representative and special natural ecosystems, plant and animal species, features and phenomena. They are ideal living laboratories for studying biodiversity in B.C. iNaturalist can play an important role in documenting species occurrence in these beautiful and biodiverse parts of the province, and give every ecological reserve visitor the opportunity to contribute to better understanding species

distributions across B.C. While this is noble in and of itself, iNaturalist is just plain old fun, and gives everyone the opportunity to learn more and more about the natural world in our beautiful province!

Brian Starzomski
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Cowan Professor and Director,
School of Environmental Studies,
University of Victoria.

Kate McKeown
(katemckeown3@gmail.com),
iNaturalist Project Coordinator
Kate finished her undergrad at

UVic in the spring of 2020 and worked as a field assistant for the BC Parks iNaturalist Project during the summer. Over the last few months, she has been implementing improvements for the iNaturalist Project and preparing for the 2021 field season.

John Reynolds, Tom Buell
B.C. Leadership Chair in Salmon
Conservation and Management at
Simon Fraser University. He is also
chair of the Committee on the Status
of Endangered Wildlife in Canada
(COSEWIC).

FER Weighs in on Old Growth Strategic Review Report

By Mike Fenger and Liz Williams

Background

On September 11th 2020, the B.C. government announced a potential opportunity for adding new areas of old growth forest to the existing protected areas system (<https://news.gov.bc.ca/releases/2020FLNR0058-001711>). The press release acknowledged the need for a 'new holistic approach...to protect old-growth forests' and outlined actions arising from the Old Growth Strategic Review's Panel Report (<https://engage.gov.bc.ca/app/uploads/sites/563/2020/09/STRATEGIC-REVIEW-20200430.pdf>). See page 6 of the Spring/Summer 2020 issue of the Friends of Ecological Reserves (FER) newsletter *The Log*, for FER's submission to the panel.

A key government commitment is to prioritize ecosystem health and resilience, and to enact legislation that legally establishes this priority for all sectors. Initial actions include formulating an old growth strategy with the full involvement of Indigenous leaders and other organizations, while deferring old growth harvest in nine areas throughout B.C. totaling almost 353,000 hectares.¹ Sadly these nine areas included none of the old growth candidate areas that FER has put forward since 2016, and again submitted to the Old Growth Strategic Review Panel on January 31, 2020. Longer term actions include formalizing a Three-Zone Forest Management Framework to guide forest planning and decision-making.

B.C.'s Protected Area System

Not since the expansion of protected areas in the 1990s has



Some of the Western red cedar trees in the Caycuse watershed on southern Vancouver Island exceeded 11 feet in diameter. Many were over 800 years old with some more than 1,000 years old. (photo: TJ Watt – Ancient Forest Alliance).

there been a call to review the adequacy of conserving old forests. In 1993 the government released 'A Protected Areas Strategy for British Columbia' (PAS), designed to double the amount of protected area in the province from 6% to 12%.

The PAS had two main goals (see https://bcparks.ca/conserv/cpp_p1/appendices.pdf):

Goal 1: Representativeness

To protect viable, representative examples of the natural diversity of the province, representative of the major terrestrial, marine and freshwater ecosystems, the characteristic habitats, hydrology and landforms, and the characteristic

backcountry recreational and cultural heritage values of each ecozone.

Goal 2: Special Features

To protect the special natural, cultural heritage and recreational features of the province, including rare and endangered species and cultural habitats, outstanding or unique botanical, zoological, geological, and paleontological features, outstanding or fragile cultural heritage features, and outstanding outdoor recreational features such as trails.

Land use planning tables across the province were given the task of

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Trev Anderson cont'd. from p. 4

proclaiming Race Rocks the 97th Provincial Ecological Reserve.

The day we received the information that the reserve was proclaimed by the Ecological Reserves Branch of the Ministry of Environment, Lands and Parks, the group of students who

had worked so hard on the proposal went out to Race Rocks to give the news to Trev and Flo and present them with a very unofficial looking sign.

The next week Trev and Flo asked the group of students who had worked so hard to establish the

Ecological Reserve to come out to the island one afternoon where they presented the students with medals and "The Order of Race Rocks" as recognition and appreciation for their work in creating the ecological reserve.

identifying and agreeing on new candidate areas for protection, with the aim of representing each ecosystem type, down to the biogeoclimatic subzone and variant level (see https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/ecosystems/broad-ecosystem/an_introduction_to_the_ecoregions_of_british_columbia.pdf). Needless to say, some ecosystems were over-represented (e.g. alpine tundra) whereas some remain under-represented (e.g. productive valley bottoms).

The authors of this article assert that these PAS goals should continue to guide new additions of old growth forests in need of protection and conservation today, while incorporating recent understanding of climate change and how best to sustain biological diversity. Enduring biologically diverse features such as river confluences and topographically diverse landscape intersections should also be protected.² New conservation efforts should also capture habitat for old-growth dependent species such as caribou, marbled murrelet, northern spotted owl, northern goshawks, as well as areas identified by First Nations traditional ecological knowledge keepers.

Climate Change and the Role of Forests

Given our increased awareness of climate change and the very significant role that big trees have in above-ground carbon sequestration the most immediate and obvious course of action is to stop logging large old trees and place a moratorium on their harvest across all of B.C.'s ecosystems. This advice is based on a recent study that looked at above ground carbon sequestration (AGC) and concluded, "Pooled across the five dominant species, large trees accounted for 3% of trees occurring on the inventory plots but stored 42% of the total AGC".³

The New Cabinet

The new minister responsible for Forests, Lands, Natural Resource Operations and Rural Development



Old growth stand in the Caycuse watershed on southern Vancouver Island after clearcut logging (photo: TJ Watt – Ancient Forest Alliance).

(FLNRORD) is Katrine Conroy. Her mandate letter directs that she "Implement the recommendations of the Old Growth Strategic Review in collaboration with Indigenous leaders, labour, industry, and environmental groups to protect more old growth stands".⁴ However, the FLNRORD ministry is undergoing a restructuring (downsizing) to be led by Nathan Cullen, Minister of State for Lands and Natural Resource Operations.⁵ He is directed to "create a new Ministry for Lands and Natural Resource Operations that will develop and implement land use policies that support B.C.'s goals for economic activity, environmental sustainability and reconciliation with Indigenous peoples". This restructuring may create potential challenges for environmental organizations such as FER in knowing where to put efforts and with whom to communicate.

Highlights from the Old Growth Strategic Review (the Merkel & Gorley Report)

Some highlights include:

"Our strategic review of the management of old forests led us to conclude that despite the good intentions and efforts of many people, including government personnel associated with forest

management, development and implementation, the overall system of forest management has not supported the effective implementation or achievement of the stated and legislated public objectives for old forests. This has not come about because of any one group or decision, but through a pattern of many choices made over several decades, within an outdated paradigm.

Our underlying assumption is that the government feels it is in the public interest to conserve long-term ecosystem health by maintaining forest biodiversity, so this priority will therefore be the foundational goal of any new strategy."

The Merkel and Gorley Report calls for a paradigm shift in forest management and a move from current practices to something more aligned with a sustainable future. Currently, the legislation requires that non-timber resources such as biodiversity are not to unduly constrain timber values.

The authors see the following language changes as positive. Going from:

- 'Manage for timber subject to constraints' TO 'Manage for ecosystem health';
- 'Old forests are renewable' TO 'Old forests are non-renewable in

Continued on page 7

many cases’;

- ‘Old forests can be created through agriculture methods’ TO ‘Old forests are the result of complex landscape ecosystems’;
- ‘Forests exist to provide value to humans’ TO ‘Forests have intrinsic value for living things’;
- ‘Forests can be fully understood’ TO ‘Forests and ecosystems will never be fully understood’.

The Merkel and Gorley Report recommends a four-phase process to develop and implement a new old growth strategy. The strategy consists of immediate actions in the first six months (and if the six months is counted from September then the implementation of phase 1 needs to occur by Feb. 2021), near-term actions over six to 12 months, mid-term actions over six to 18 months and long-term actions over 18 to 36 months. The B.C. government will need to review existing land use plans, engage local communities with First Nations as an equal partner, and make land use decisions on removing some areas currently in the Timber Harvesting Land Base.

Initial actions in addition to the immediate deferment of 353,000 hectares include:

- engaging the full involvement of Indigenous leaders and organizations to review the report and work with the Province on any subsequent policy or strategy development and implementation;
- beginning work to address information gaps, update inventory and improve public access to information, and bring management of old forests into compliance with existing provincial targets and guidelines;
- involving industry, environmental groups, community-based organizations and local governments in discussions regarding the report recommendations and the future of old-growth forests in B.C., and the social, economic and environmental implications for communities.

There needs to be a strong caution on the implementation of



Old growth stand in the Caycuse area before and after clearcut logging (photo: TJ Watt – Ancient Forest Alliance).

Recommendation 3 of the Report, that future conservation is best achieved through a Three-Zone land use planning system that includes: protected forests, converted forests, and consistent forests.

1) Protected Forests will largely be left alone. It is unclear in the report if protected areas, including ERs are in this group or if the Report addresses areas outside of existing protected areas. There has been a tendency to count existing protected areas as well as commercially low productive low volume older forests towards conservation.

2) Converted Forests are defined as forest areas that are already being logged or are intended to be logged from their natural state to convert to intensive management. A reasonable interpretation of this zone is one where environmental values are not maintained and timber has priority – a sort of tree farm and intensive agri-forestry zone. This type of conversion represents most of the forest harvesting to date and there is a need to restore old forest attributes in these areas if biodiversity is to take precedence.

3) Consistent Forests are forests and forest landscapes managed for ecosystem health and biodiversity by using planning and



practices that result in the attributes reasonably consistent with those of original forests and forest landscapes.

It is unclear that this Three-Zone system is consistent with the previously stated goals of first sustaining biological diversity and then meeting timber objectives.

Renewed government to government partnerships could positively increase the conservation of remaining old-growth forests. However, First Nations are expected to seek increased access to harvesting and economic opportunities. The forest industry understands it will be required to forgo harvesting old-growth forests in some areas. The B.C. government has already approved harvesting of old-growth stands with 500 year old+ trees, and there are well documented examples of current ancient forest harvesting.⁶ Unless included in the deferred 353,000 ha, there will be continued logging of the biggest trees in cut blocks approved before the new Old Growth Strategy is in place. A moratorium on the continued logging of old and ancient trees in approved cut blocks is urgently needed. The Ancient Forest Alliance has been bringing attention to this

Continued on page 8

issue (called talk and log) while government continues to permit logging of ancient forests. However, a moratorium could require the B.C. government to compensate industry.

See recent Ancient Forest Alliance images:

<https://www.ancientforestalliance.org/>

FER's Conclusions

FER will benefit from reaching out to other environmental groups to provide a consistent message on the conservation of old growth and ancient forests. Since this is the 50th year since the *Ecological Reserve Act* was passed it is hoped that there will be new ERs added to the existing system as part of an enhanced provincial conservation network. It is doubtful that First Nations will turn over management on any new areas solely to BC Parks in their traditional territories. The current BC Parks designations and boundaries could change through the reconciliation process.

FER together with BC Nature has developed a resolution to present to the B.C. government on the expansion of the ER system and the management of the existing ERs. The resolution hopes to influence government to designate three old-growth patches on the Sunshine Coast (Roberts Creek, Clack Creek and Dakota Bowl) as ecological reserves (see Table 1 in FER's submission to the Old Growth Strategic Review at: <https://ecoreserves.bc.ca/2020/01/31/old-growth-strategic-review-fer-submission-2/>). It also advocates increasing and facilitating research in existing ERs through partnerships with universities, colleges, research institutions, ENGOS, and Indigenous peoples. It is hoped that traditional ecological knowledge (TEK) studies and completed baseline biodiversity inventories will be periodically done, updated, communicated and used to inform land uses, management practices and climate change adaptation strategies across the broader landscape.

There is no longer a Forest Research Branch in FLNRORD but there are regional forest ecologists who advise on operations as needed.



Old growth stand in the Caycuse watershed on southern Vancouver Island before and after clearcut logging (photo: TJ Watt – Ancient Forest Alliance).

Government's lack of staff with ecological knowledge to shape provincial policy is troubling as there may be no consistent provincial criteria available to apply to old growth conservation at regional and local levels. Since 2014, FER has advocated for an orderly process to evaluate additions to protected areas. The need for this has never been greater — to inform what may be the best options for old growth conservation.

It is likely that FER members interested in old forest biodiversity will have the opportunity to engage, and we hope our volunteer efforts meet with more success than we have received from government over the last decade or more. The last Ecological Reserve (ER) was established in 200. Despite other opportunities during the significant expansion of protected areas in the 1990s (see **table on page 12**), few new ERs were added. Given future uncertainty thanks to galloping climate change, B.C. needs to add new long term ecological benchmarks now. ERs remain a key conservation piece to help safeguard biodiversity values and inform resource management decisions. Support the FER Board in urging the B.C. government to use this new old growth initiative over the next four years to significantly

increase the number of ERs that protect ancient forests.

Footnotes:

¹ A map of these temporarily deferred areas can be found at: https://news.gov.bc.ca/files/Old_Growth_No1.pdf. It is anticipated that after local planning is complete some of these areas may be permanently removed from the Timber Harvesting Land Base (THLB).

² The concept of enduring features is further clarified at:

https://130ncw3ap53r1mtmx23gorrc-wpengine.netdna-ssl.com/wp-content/uploads/sites/69/2019/08/newclimate_report.pdf in the report by Dr Jim Pojar entitled *A New Climate for Conservation. Nature, Carbon and Climate change in British Columbia*.

³ Mildrexler, D, LT Berner, B.E. Law, R.A Birdsey, and W. R Moomaw 2020. *Large Trees Dominate Carbon Storage in Forests East of the Cascade Crest in the United States Pacific Northwest* https://www.frontiersin.org/articles/10.3389/ffgc.2020.594274/full?utm_source=fweb&utm_medium=nblog&utm_campaign=ba-sci-ffgc-largest-trees-store-disproportionately-more-carbon-carbon-capture.

⁴ Mandate letter for Minister responsible for Forests, Lands and Natural Resource Operations accessed December 2020:

<https://www2.gov.bc.ca/gov/content/governments/organizational-structure/cabinet/cabinet-ministers>.

⁵ Nathan Cullen's mandate letter can be found at <https://news.gov.bc.ca/files/FLNRO-Cullen-mandate.pdf>.

⁶ Ancient Forest Alliance article in the *Manchester Guardian* accessed Dec. 2020 <https://www.theguardian.com/world/2020/dec/02/canada-forests-clearcutting-ecosystem>.

Field Trip to the San Juan River Estuary Ecological Reserve

By Mary Rannie

For the members of the FER board who drove the two hour west coast road from Victoria to Port Renfrew, it was a day greatly anticipated. Garry and Helen Fletcher, Marilyn Lambert and I had never visited the nearby San Juan River Estuary, ER #141.

From May to October its newly named warden, Ron Laidman, and his wife Diane Moran, run the Remote Renfrew Riverside Retreat on the north bank of the estuary's river. From the moment we met, our hosts for the day made us feel welcome and relaxed on their vast property which features gigantic Sitka spruce stumps hosting other trees, an ancient thick-trunked holly, impressive driftwood gates created by Diane, and fun places made by Ron to sit and enjoy the forest.

They are kept busy keeping track of the 17 elusive Roosevelt elk, seven wolves, and the four cougar that also live there. In the river, they have seen seals, green sturgeon (transients) that can reach 6.5 feet in length, cutthroat trout, and Chinook salmon.

Ron and Diane took time from their busy days (made busier during Covid-19) to lead us on a walk, which they do daily, up the river road for a view of the ER's features. Two ER signs identify entry points to the protected area, with its 11–12 1/2 foot tides, shifting banks and log jams. Garry took many photos to submit to iNaturalist (inaturalist.org), a citizen science program to record the occurrence and diversity of flora and fauna in a given area. For information on the iNaturalist program in BC Parks and protected areas, (see page 2) and the 2020 Spring/Summer issue of *The Log* (<https://ecoreserves.bc.ca/wp-content/uploads/spring-summer-2020-colour-final.pdf>).

Two main ER plots plus a third tiny parcel, make up this uniquely shaped ER, preserved for its red-



Above: canoe along the river bank.

Below: Mary at the high water level marker on the road by the reserve. (Both photos by Garry Fletcher)



listed, tooth-leaved monkey-flower orchid. Endemic to B.C., and hard to find, it has been reportedly spotted as recently as the summer of 2019. Much of the ER is accessible only by water and abuts Pacific Rim National Park.

When Ron and Diane returned home, their friend and neighbour, Kevin Neish, guided us via canoe and kayak up the river. We enjoyed his commentary and knowledge of every aspect of the area.

The First Nations Pacheedaht Band, who use the estuary for an annual two-week food fishery, are well aware of the ER designation. Evidence of occupation of a fishing camp was noted on a peninsula jutting into the river. Along with Ron, Diane and Kevin, the Pacheedaht Band oversees this reserve.

BC Nature Mobilizes Support for Ecological Reserves

By Jenny L. Feick, PhD

In late February 2020, the Victoria Natural History Society (VNHS) on behalf of the Friends of Ecological Reserves (FER) brought forth a resolution on ecological reserves to BC Nature. The membership of BC Nature passed the resolution at their virtual AGM on June 23, 2020.

Harry Crosby, the new president of BC Nature, later requested that the resolution be modified to address a mathematical error he noticed before he would send it to the B.C. government for action. As months had passed since the resolution was written, the Board of FER advocated sending a new version that highlighted that 2021 is the 50th anniversary of the *Ecological Reserve Act* (https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/96103_01) and that incorporated updated information based on further analysis of the current state of ecological reserves. At their Board meeting on December 1, 2020, the VNHS agreed to send the revised version of the resolution to BC Nature.

The BC Nature Board approved this new version of the resolution at its December 10 meeting. Early in the New Year, BC Nature sent the resolution, along with a cover letter requesting action to the B.C. government. George Heyman, Minister of Environment and Climate Change Strategy, Kelly Greene, Parliamentary Secretary for Environment, Katrine Conroy Minister of Forests, Lands, Natural Resource Operations and Rural Development, and Nathan Cullen, Minister of State for Lands and Natural Resource Operations will receive the action request and resolution, with a copy going to Premier John Horgan.

BC Nature, VNHS and FER are requesting a meeting with Ministers Heyman and Conroy in the first quarter of 2021 to discuss the



Pulling Broom on Griffin Island (Oak Bay Islands ER #94) with Bristol Foster (2nd from right), first Director of the Ecological Reserves program, with some of the first Board members of the Friends of Ecological Reserves, Peggy Frank (far left) and Sue Carr (far right) – June 27, 2019 (Marilyn Lambert photo).

recommendations in the resolution and encourage action to address the plight of British Columbia's ecological reserves in this 50th anniversary year of the *Ecological Reserve Act*. FER members can bolster these efforts by contacting their MLA and Ministers Conroy and Heymann about the value of ecological reserves in representing the diverse ecosystems of B.C., protecting significant biological and geological features, serving as living laboratories for scientific research, monitoring, and education, and as repositories of Indigenous ecological knowledge.

Resolution 2020-001 - Ecological Reserves System of British Columbia

WHEREAS in 1971, the British Columbia Legislature gave unanimous approval to the *Ecological Reserve Act*, thus becoming the first province in Canada to formalize, acknowledge the benefits of, and give permanent protected status to ecological reserves; and

WHEREAS the *Ecological Reserve Act* of 1971 enabled the creation of 148 Ecological Reserves across B.C. as part of a Protected Area system specifically to protect representative examples of the ecosystem types in B.C. as well as rare species and special features of biological and geological importance, for scientific study and educational purposes; and

WHEREAS, the B.C. government holds primary stewardship responsibility for the B.C. Protected Areas system, including Ecological Reserves, and that all British Columbians currently derive economic, social, cultural, health and environmental benefits from these areas; and

WHEREAS an assessment of the condition of existing reserves in 2005 raised "concerns that the ecological values of many individual reserves are at significant risk and a more proactive approach to managing the reserves is required to reverse this trend;" and

WHEREAS climate change,

Continued on page 11

WHEREAS climate change, increased resource activities and expanding human populations place greater pressures and create greater uncertainty on the sustainability of the species and ecosystems in Canada's most ecologically diverse province. Reducing uncertainty can be aided over time if there is a sustained monitoring and research program in its protected areas, including Ecological Reserves, so that adaptation strategies are informed by scientific understanding of trends and thresholds; and

WHEREAS the original concept behind Ecological Reserves was that science-based approaches are a fundamental key to understanding how to sustain B.C.'s natural ecological and bio-diversity, and so, with today's awareness of climate change effects on nature, Ecological Reserves remain relevant today, and are now even more urgently needed; and

WHEREAS most Ecological Reserves were specifically designated as research and monitoring sites, these activities have not been consistently pursued by government or promoted to universities and colleges in the last 40 years, i.e., since the early 1980s; and

WHEREAS there are approved management planning documents for 126 (85%) of B.C.'s Ecological Reserves, there has been little to no implementation by BC Parks of these Ecological Reserve guidance documents since the 1980s, and thus, instead of serving as natural area benchmarks in research and monitoring studies, Ecological Reserve volunteer wardens report that most Ecological Reserves are suffering environmental degradation from a variety of external and internal threats due to lack of maintenance and stewardship actions; and

WHEREAS, the B.C. government initiated a volunteer warden system in 1980 to assist BC Parks in effectively managing and protecting Ecological Reserves in accordance with the objectives of the *Ecological Reserve Act* and Ecological Reserve Regulations and that in 2020,

approximately 25% of current Ecological Reserves (35 out of 148) lack any volunteer warden; and

WHEREAS traditional land use by Indigenous Peoples is generally permitted in Ecological Reserves, stewardship actions by Indigenous Ecological Reserve wardens and Indigenous groups are welcomed, and Ecological Reserves provide opportunities for the maintenance and application of Traditional Ecological Knowledge (TEK) and co-management, therefore the establishment of new Ecological Reserves in collaboration with Indigenous Ecological Knowledge Keepers and maintenance of existing Ecological Reserves by Indigenous wardens could help support the B.C. government's efforts to implement the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP); and

WHEREAS no systems plan for Ecological Reserves in B.C. exists and the current 148 Ecological Reserves do not form an adequate network of study areas to represent the diversity in B.C.'s Ecoregions and Ecological Zones; and

WHEREAS new discoveries of significant botanical, zoological and geological features and rare or endangered native plants and animals in their natural habitat are still being made, a clear process is needed to set aside specific areas of land to create a more robust Ecological Reserve system that incorporates newly discovered significant areas and features and helps the Province meet its provincial, national and international commitments for biodiversity conservation, species at risk protection, and Indigenous stewardship; and

WHEREAS the total area of land set aside for the 148 Ecological Reserves in B.C. is 112,543 ha in terrestrial reserves plus 51,731 ha in marine reserves, comprising 0.008% of the BC Parks Protected Area System, and that individual Ecological Reserves tend to be small, they do not alienate large tracts of land from

economic development. However, they protect ecologic, biologic and geologic resources of great environmental value and their placement can be strategic so that they contribute to provincial environmental goals related to biodiversity and heritage conservation, climate change action (mitigation and adaptation), Indigenous stewardship, and evidence-based policy. Thus, the long-term comprehensive benefits of protecting these resources exceed the short-term economic gain from development that would destroy these resources; and

WHEREAS setting aside additional Crown lands as Ecological Reserves would increase the probability of sustaining ecosystems currently in B.C. and limit irreparable biological losses in a period of rapid climate change, an expanded world-class Ecological Reserve system could help the B.C. government achieve biodiversity conservation commitments, inform climate change adaptation strategies and augment Indigenous stewardship opportunities; and

WHEREAS, the Friends of Ecological Reserves (FER) presented to the B.C. government a list of worthy candidate Ecological Reserves in 2014 with a reminder in 2017, none of these areas have been officially added to the Ecological Reserve system; and

WHEREAS, May 2021 marks the 50th anniversary of the *Ecological Reserve Act* and regulations and the establishment of B.C.'s first ecological reserves, thus making it an ideal opportunity to designate additional Ecological Reserves.

Be it resolved that BC Nature urges the B.C. government put in place a clear process to add new Ecological Reserves to the system with a schedule for management plan completion and implementation established where gaps exist in ecosystem representation or significant biological (botanical, zoological, genetic) or geological features; and

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Be it further resolved that BC Nature urges the B.C. government to establish immediate (2021) and long range targets to establish additional Crown lands as Ecological Reserves to represent and protect fragile ecosystems, culturally modified ecosystems and features, rare and endangered species, and significant biological and geological features, in this period of rapid climate change; and

Be it further resolved that BC Nature urges BC Parks to commit to maintaining the current system of Ecological Reserves by completing and implementing approved Ecological Reserve management plans in a timely fashion; and

Be it further resolved that BC Nature urges the B.C. government to facilitate research in Ecological Reserves by forming partnerships with universities, colleges, research institutions, ENGOs, and Indigenous peoples to get research projects, TEK studies, and baseline biodiversity inventories completed, periodically updated, communicated and used to inform land uses, management practices and climate change adaptation strategies across the broader landscape; and

Be it further resolved that BC Nature urges BC Parks to support the volunteer stewardship efforts of Ecological Reserve wardens as well as ENGO and Indigenous partners in Ecological Reserves by taking action to address threats to Ecological Reserves that they identify, providing opportunities for training and communicating, and supporting specific stewardship projects with in-kind support and where possible, funds.

Submitted to BC Nature by Philip Lambert, President of the Victoria Natural History Society, president@vicnhs.bc.ca.



The B.C. government has established no ecological reserves since 2009 when Det San Ecological Reserve (ER #154) was designated to protect 5.8 ha of old-growth juniper on open slopes near Smithers. Det San is the local First Nations name for the juniper. (Photo by volunteer warden Adrian DeGroot)

Government Contacts

Honourable Katrine Conroy
Minister of Forests, Lands, Natural
Resource Operations and Rural
Development

and
Honourable Nathan Cullen
Minister of State for Lands and
Natural Resource Operations
Mailing address:

PO Box 9049 Stn Prov Govt
Victoria, BC V8W 9E2
Their email address is:
FLNR.Minister@gov.bc.ca.
The Minister's Office phone number
is: 250-387-6240.

Honourable George Heyman
Minister of Environment and
Climate Change Strategy
and

Honourable Kelly Greene
Parliamentary Secretary for
Environment

The address for George Heyman and
Kelly Greene is:

PO Box 9047 Stn Prov Gov
Victoria, BC V8W 9E2
Their email address is:
ENV.Minister@gov.bc.ca.
The Minister's Office phone number
is: 250-387-1187.

Ecological Reserves in B.C. Established by Decade

Decade	# Established	Cumulative Percentage	# Transferred to Other Agencies
1971-80	101	66%	0
1981-90	29	84%	0
1991-00	20	97%	0
2001-10	4	100%	6
2011-20	0	97%	0
TOTAL	154 established		148 remaining

We Want You! Call for Board Members

- Are you interested in nature and enjoy learning about natural areas?
- Are you intrigued by the diversity of ecosystems and life forms in British Columbia, including rare plants and animals?
- Would you like to help foster the stewardship of British Columbia's ecological reserves, and enhance the system of B.C.'s ecological reserves?
- Would you like to support the use of ecological reserves as living laboratories to document biodiversity, monitor environmental and climate change, and help inform provincial government decisions on significant ecological, biological and geological features?
- Do you have three to ten hours to volunteer each month?
- Can you attend a two-hour virtual meeting once a month using Zoom teleconferencing?

If so, consider joining the Board of Directors for the Friends of Ecological Reserves (FER). FER currently seeks dynamic, committed, bright, team-oriented candidates 18 years and older from anywhere in B.C. As of the end of January 2021, five vacancies exist on the Board.

Ecological reserves provide permanent sanctuaries throughout B.C. that protect representative and special natural ecosystems, plant and animal species, features and phenomena. Ecological reserves primarily serve scientific research and educational purposes. Ecological reserves are the gems of B.C.'s protected areas system. For more information about the importance of ecological reserves, see the FER website at: <https://ecoreserves.bc.ca/ecoreserve/about-ecoreserves/>.

The Friends of Ecological Reserves (FER) is a volunteer based, not-for-profit charitable organization. FER works closely with BC Parks staff to support ER wardens and to encourage BC Parks to allocate



Board members and guests looking out from the Tea House on a field trip to San Juan Ridge Ecological Reserve (photo by Fred Beinhauer).

funding to the management, conservation and stewardship of ecological reserves. FER promotes the ecological reserves system in B.C. and the need to add new reserves to address gaps. It raises public awareness about ecological reserves within B.C. and procures funds to:

- foster research and monitoring in ecological reserves;
- support volunteer wardens and the warden function within ecological reserves;
- prepare and circulate a regular newsletter to inform FER members on current issues in ecological reserves; and
- educate the public regarding the important features of ecological reserves, including conservation of ecological, biological and geological features.

Roles and Responsibilities of the Board

FER is a registered Canadian charity, and a not-for-profit organization under the B.C. *Societies Act*. The Board is accountable for ensuring

that the FER is managed in accordance with applicable federal and provincial laws and its membership's wishes. These responsibilities include:

- Establishing and maintaining a framework of delegation and internal control.
- Monitoring financial management and performance.
- Establishing and pursuing a strategic direction in keeping with the FER's Mission, Vision and Values as articulated in its Strategic Plan, see: (<https://ecoreserves.bc.ca/about-friends/strategic-plan/>).
- Evaluating and improving the performance of the Board.
- Promoting and supporting the FER, its members, and the volunteer ER wardens.

Responsibilities of Individual Board Members

As individuals and collectively, Board Members are responsible for:

- Creating a positive, fun, open,

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respectful, collaborative and action-oriented organizational culture.

- Adhering to the bylaws, policies, and procedures of the organization.
- Reading and familiarizing themselves with the five goals in the FER Strategic Plan, actions FER takes to advance these goals, and progress made and obstacles faced in meeting these goals.
- Attending a majority of all Board meetings in person or via teleconferencing to provide insights and share knowledge to support the ER system and further the management, conservation and stewardship of ecological reserves in B.C. This includes:
 - Reading the minutes and agenda, and completing action items assigned prior to the meeting, and being prepared to speak on his/her agenda items at the meeting or to email an update.
 - Doing the background work he/she commits to do and reporting to the Board at the next meeting on progress made and obstacles faced.
- Participating in or leading at least one of the FER's projects or initiatives (e.g., writing an article for the FER newsletter, *The LOG*)
- Participating in, organizing, or hosting at least one of FER's events (field trips, social get-togethers) each year.
- Acting selflessly in seeking solutions that are in the best interests of the FER and ecological reserves in B.C.
- Participating in discussions to set FER Board policy, make decisions, and identify actions.
- Pursuing opportunities to improve the camaraderie and performance of the FER.

Special Qualifications

FER seeks candidates to join the Board who have one (or more) of the following areas of interest/expertise:

- Interest in and experience in

fundraising

- Expertise in recording minutes
- Understanding of and expertise in environmental policy analysis
- An interest in and experience with collaborative leadership
- Experience in organizing and implementing special events and commemorations
- Experience in working with government land management agencies
- Interest in and knowledge of Indigenous law/policy, traditional ecological knowledge, Indigenous culture, cultural resources and traditional use, and First Nations engagement
- Interest in and experience in land use planning, protected areas management and systems planning, biodiversity conservation, ecological land classification, ecological restoration
- Interest in and knowledge of biological and geological features, species at risk, fossils
- Knowledge of and experience in ecological inventory, monitoring and research methods
- Knowledge of the natural history of British Columbia
- Awareness of the ecological reserves of B.C. and experience in visiting at least one

Term: Two (2) Years with the option to renew

Compensation: Although Directors serve as volunteers and receive no financial remuneration benefits include fellowship, learning experiences, opportunities to visit ecological reserves, and pride in contributing to the greater good.

Time Commitment: Usually 3-5 hours per month. In 2021, 6-10 hours per month due to commemorations planned for the 50th anniversary of the *Ecological Reserve Act*.



White marsh marigold (*Caltha leptosepala*). (Photo by Eric Kolb at San Juan Ridge ER posted on iNaturalist website)



FER Board members take part in a field trip to Lasqueti Island ER (photo by Louise Beinbauer).

Candidate Selection Process

Interested candidates should submit their names and qualifications **by Wednesday, January 20, 2021** to: Friends of Ecological Reserves of B.C., Attention: FER Board of Directors Nomination Committee 2021 via Email:

ecoreserves@hotmail.com

or via the FER website at:

<https://ecoreserves.bc.ca/contact/> or in writing to: Box 8477, Victoria, BC V8W 3S1.

The FER Board of Directors Nomination Committee will review all applications, contact interested persons, and present qualified candidates to the Society's membership for their consideration and selection at the Annual General Meeting, which will take place virtually using Zoom teleconferencing on the evening of Friday, January 29, 2021. Interested candidates can also declare their intent to put their name forward as a Board member at the AGM (see back cover for more information). There are currently up to five (5) open positions out of a potential total of twelve Directors on the FER Board.

FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central, Victoria, BC V8W 3S1

☐ Renewal for 2019 ☐ Renewal for 2020 ☐ New membership

Membership Category

☐ Individual: \$20 ☐ Student/Senior: \$15 ☐ Family: \$25 ☐ Institution: \$25 ☐ Sustaining: \$60

NAME (please print) _____ Date _____

ADDRESS _____

_____ Postal Code _____

PHONE (____) _____ E-Mail _____

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

I/we enclose Payment for:

____ year(s) membership \$ _____

Donation \$ _____

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

TOTAL ENCLOSED: \$ _____

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

I am interested in volunteering for:

- ☐ Assisting with Field Trip organization
☐ Contributing articles/photos to *The LOG*
☐ Fund-Raising ☐ Telephoning ☐ Other

Please apply my donation to:

- ☐ Land acquisition projects
☐ Scholarships for post-graduate research
☐ Where most needed

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Friends of Ecological Reserves AGM

January 29, 2021

7:00 - 9:30 pm

The Friends of Ecological Reserves (FER) will be holding their Annual General Meeting on Friday, January 29, 2021 via Zoom teleconferencing. The business portion of the meeting will start at 7:00 pm. **Please see below for Zoom login information.**

The year 2021 is a special one for us! It's the 50th anniversary of the passing of the *Ecological Reserve Act* and the creation of the first Ecological Reserves in British Columbia (**see story on page 1**). We welcome any suggestions that you might have to help us celebrate this important year. Suggestions can be made during the Zoom meeting or by sending us an email at: ecoreserves@hotmail.com or by mailing us at: P.O. Box 8477 Stn Centre, Victoria, BC V8W 3S1.

We have also put out the call for new FER Board members and would love to have you join our team (**see story on pages 13 and 14**).

Starting at 7:30 pm, our guest speakers Brian Starzomski and Kate McKeown from the BC Parks iNaturalist project will discuss new tools for surveying biodiversity in protected areas and show how we can all contribute to an explosion in data for understanding species around British Columbia. Brian and Kate will take us on a tour of how to use iNaturalist, feature some of the results from the BC Parks iNaturalist project and will show many biodiversity observations from the community of observers around the province including many discoveries from ecological reserves.

The Board of the Friends of Ecological Reserves is inviting you to a scheduled Zoom meeting

Topic: FER AGM and talk on the iNaturalist program by Brian Starzomski and Kate McKeown

Time: Jan 29, 2021 07:00 PM Pacific Time

Join Zoom Meeting:

<https://us02web.zoom.us/j/85448701306?pwd=ZHFFZGRQVU1oSHBCSW9lbDdiaFFndz09>

Meeting ID: 854 4870 1306

Passcode: 092322

One tap mobile

+15873281099,,85448701306#,,,*092322# Canada

+16473744685,,85448701306#,,,*092322# Canada

Find your local number: <https://us02web.zoom.us/j/85448701306?pwd=ZHFFZGRQVU1oSHBCSW9lbDdiaFFndz09>

Return Address

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The Log



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