

British Columbia's Ecological Reserves, Forgotten Gems?

By Jenny L. Feick, PhD

On May 4, 1971, the Government of British Columbia became the first jurisdiction in Canada to pass legislation to protect ecological reserves. May 2021 marks the 50th anniversary of the *Ecological Reserves Act* and regulations and the establishment of B.C.'s first ecological reserves (ERs).

Ecological reserves are permanent sanctuaries, located throughout B.C., selected to preserve representative and special natural ecosystems, plant and animal species, features and phenomena. The principal uses of ecological reserves are for scientific research and educational purposes. Despite their small size,¹ they protect exceptionally important features. They truly are the rare gems of B.C.'s protected areas system.

In the first two decades following the passage of the 1971 Act, the BC government created 84% of its 154 ecological reserves. The last one to be set aside was Det San near Smithers, designated in 2009 to protect rare old growth juniper. No new reserves have been established since then and five have been transferred to other levels of government.² A 2005 assessment of the condition of existing reserves 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."³ (see the article "BC Nature Supports FER" on page 5)

Starting in 2014, the Friends of Ecological Reserves (FER) proposed seven new ecological reserves to the BC provincial government (for the list, see: <https://.ecoreserves.bc.ca/2020/04/21/ecological-reserve-proposals/>). Three of the candidates that FER nominated include the rare alpine plant assemblage at Pink Mountain (see: https://.ecoreserves.bc.ca/portfolio_item/155-pink-mountain-proposed-er/), and two headwater areas on the Sunshine Coast – a small stand of huge ancient Pacific yew trees at Roberts Creek, and an old-growth Douglas fir forest containing a rare and endangered plant species (*Rubus nivalis*) at Clack Creek.

FER hoped to entice the BC government to establish a few new ecological reserves by the anniversary year of 2021 and to make a concerted effort to improve the stewardship of the existing reserves. Despite FER's periodic communications over the past seven years with BC government agencies about

worthy candidates, no new ecological reserves have been added and from the reports of volunteer wardens in the past year, the state of existing reserves continues to deteriorate due to cumulative and

Continued on page 2

Inside ...

The BC Parks iNaturalist Program	3, 4 & 5
BC Nature Supports FER	5
Summary of the FER Old Growth Management Review	6 thru 10
Funding Conservation & Stewardship Projects in ERs	11 & 12
BC Parks License Plate Project	13
Reconciliation and ERs	14
A Field Guide to Crabs	Back cover



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The Log

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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 2020/21 issue of *The LOG* is September 18, 2020.

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Continued from page 1

inter-related internal and external threats.

As reported in the Winter 2020 edition of *The Log*, the FER Board decided at their December 2019 meeting to make a renewed and concerted effort to encourage BC government officials to establish several new ecological reserves and to address management, conservation and stewardship issues in existing ecological reserves in time for the 50th anniversary of the *Ecological Reserves Act*.

At a virtual meeting on May 26 with FER, government officials explained that no mandate exists to add any new protected areas in B.C. unless the proposal is brought forward by a politician or a First Nation. The new modernized land use planning process has no requirement to seek, assess or add new protected areas. B.C. has already exceeded its international commitments for the amount of land it was to have set aside for biodiversity conservation by 2020.⁴ FER later learned that no systems plan exists for ecological reserves, neither is there any intent to develop and implement one. Nor will BC Parks develop management planning documents for the 10% of ecological reserves still lacking such direction.

On June 3rd, some of the FER Board members had a virtual meeting with BC Parks staff, who expressed a desire to improve information sharing with FER. This year, BC Parks identified ecological reserve wardens as their top priority within their volunteer program. As well, wardens can put forward proposals for conservation and stewardship projects in ERs to BC Parks regional staff to be considered for funding through the Parks Enhancement Fund. The revenues from the BC Parks License Plate Program helps support this fund. (see articles on pages 11 & 13) The

deadline for this year's project applications is June 26.

In this lead-up to the 50th anniversary of the B.C. *Ecological Reserves Act*, FER invites its members to encourage the BC government to add worthy new ecological reserves to its protected areas system, maintain the health of existing ecological reserves, promote the use of ecological reserves for science and monitoring, and support the volunteer ecological reserve wardens in their efforts to care for these special places. Express your support for a revitalized ER system in B.C. by contacting your MLA (see:

<https://www.leg.bc.ca/learn-aboutus/members>) as well as George Heyman, the Minister of Environment & Climate Change Strategy at: george.heyman.MLA@leg.bc.ca and Doug Donaldson, the Minister of Forests, Lands, Natural Resource Operations and Rural Development at doug.donaldson.MLA@leg.bc.ca.

¹ The 148 ERs still under provincial jurisdiction comprise 166,918 ha, 0.008% of B.C.'s Protected Areas System.

² Since 2002, the BC government transferred five ecological reserves to Gulf Islands and Gwaii Haanas national park reserves, becoming part of the Canadian national park system, and one ER (UBC Endowment Lands) was reassigned to Metro Vancouver Regional Parks.

³ State of British Columbia's Ecological Reserves, Report for 2005. November 2006. Sponsored by the Friends of Ecological Reserves with help from the Ministry of Environment and the University of Victoria Co-op Program, unpublished report (see <https://ecoreserves.bc.ca/2006/12/04/state-of-bcs-ecological-reserves-report-for-2006/>)

⁴ During the International Year of Biodiversity in 2010, the BC government and other Canadian jurisdictions committed to protect 17% of their land base by 2020. B.C. currently has 20% in some form of protection.

Coming to an Ecological Reserve Near You: The BC Parks iNaturalist Project

By Jenny L. Feick, PhD

Ecological reserve wardens take note. Here is a tool to help you inventory the species in your ecological reserve and to learn the identity of some of the species you have been wondering about.

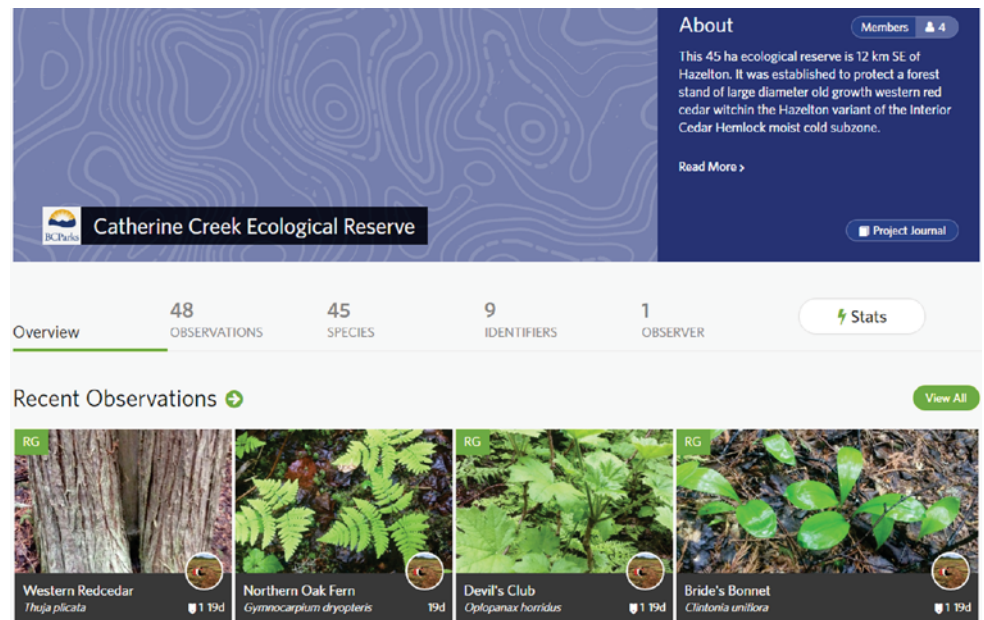
What is iNaturalist?

iNaturalist is a Citizen Science program with a website and a free app used worldwide to collect data on species abundance and diversity. It provides a place to share photo observations of wild plants, animals, and fungi. It's a superb way to learn about species identification using integrated guides and artificial intelligence.

The BC Parks iNaturalist Project

BC Parks, through the BC Parks Foundation, partnered with Dr. Brian Starzomski, Director of the School of Environmental Studies at the University of Victoria and Dr. John Reynolds, Chair of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and professor at Simon Fraser University to create the BC Parks iNaturalist Project. Partially funded through the BC Parks Living Labs and License Plate programs (see articles on pages 11 & 13), partners use the data to build inventories of biodiversity, identify areas for further study, and answer scientific questions. More eyes on the ground translate to a more accurate picture of biodiversity in protected areas, including in ecological reserves.

Project staff created polygons for almost every protected area in the system, including ecological reserves. So, any observation made in an ecological reserve gets automatically added to the project and



Screen capture of recent observations using iNaturalist program on Catherine Creek ER

amalgamated into the iNaturalist database. **The BC Parks iNaturalist Project is really pushing the limits of the current technology, though. As Dr. Brian Starzomski notes, "All but 1 ER (Meridian Road, which we don't have a kml/kmz for) have collection projects (see the text box on p. 5), but because we are restricted to 953 collection projects max within an umbrella project (i.e., the full BC Parks iNaturalist project), we haven't been able to include everything in the umbrella. We're asking iNat about increasing our limit to 1,100 or something to deal with this issue."** In the meantime, if any ER warden notices any ERs other than this one that don't have their own project, please let Sharilynn Wardrop at BC Parks know. (Sharilynn.Wardrop@gov.bc.ca)

Archival photographs (slides or prints taken before digital photography became the norm) may also be

added manually to the system, either singly or in batches. Rare species will have their locations obscured within an area of about 50 square kilometres, so occasionally observations of these species made within the bounds of an ER may appear to be outside. Researchers can have access to the actual location of such sensitive information on request.

Species lists can be downloaded for each protected area that has observations. All data are stored in the Global Biodiversity Information facility (GBIF.org) for researchers to access. Anyone can search for ERs to see what has been documented there. For example, ER wardens can see if a species has been documented in or near the ecological reserve(s) for which they provide volunteer stewardship services. If any ER warden or FER member wants to participate but feels unfamiliar with how to enter their observations, BC Parks has

Continued on page 4

prepared a simple, self-guided presentation in pdf form that shows volunteers how to use iNaturalist. To get a copy, email Sharilynn Wardrop at Sharilynn.Wardrop@gov.bc.ca. BC Parks is looking for ways to provide live training opportunities – online while there are COVID-19 restrictions, and also ideally at in-person gatherings in the future. The first webinar takes place at 3:00-4:00 pm PST, June 29 via Zoom teleconferencing and will be recorded. Anyone interested in attending or receiving a link and password to the recording should contact Rike.Moon@gov.bc.ca. Project leads are very keen on future bioblitzs, so if you have an idea for one, get in touch with Brian (starzom@uvic.ca) or John (reynolds@sfu.ca)!

BC Parks temporarily suspended observations in the spring of 2020 while all protected areas were closed during the COVID-19 pandemic. However, as of May 14, observers could record their data and pictures once again.

UVic and SFU, with support from BC Parks, have hired a small team of four students to increase the number and diversity of observations in protected areas. While the work they began in May is still challenged by the precautionary measures necessary due to the pandemic, the 2020 field season will still yield useful data. For example, as of June 15, Mt. Tzuhalem ER had 475 observations of 125 species, most of which had been recently added by the BC Parks student team (check the most recent status for this ER at https://www.inaturalist.org/observations?place_id=132717).

As Dr. Brian Starzomski explains, “We are adjusting our field plans for this summer and so things are very much up in the air about how much survey work we’ll be able to get done this field season. Nevertheless, our BC Parks iNaturalist project is humming



iNaturalist photo by Thomas Barbin taken at Mt. Tzuhalem ER of a Chipping sparrow (*Spizella passerina*) on a Garry oak (*Quercus garryana*)

along. You can check it out here: <https://www.inaturalist.org/projects/bc-parks>. It isn’t just for “provincial parks” but instead covers all protected areas under provincial jurisdiction: parks, conservancies, and yes, ecological reserves. There are about 1,033 separate protected areas, though we’ve found that we’re restricted to about 960 collection projects within our BC Parks umbrella project. What this means is that while there are many projects for ecological reserves (here are three examples: <https://www.inaturalist.org/projects/tow-hill-ecological-reserve>, <https://www.inaturalist.org/projects/rose-spit-ecological-reserve>, and <https://www.inaturalist.org/projects/honeymoon-bay-ecological-reserve>), an occasional ecological reserve will get combined with its adjacent park (e.g., [Ilgachuz Range ER is combined with Itcha Ilgachuz Provincial Park](#) into one project).

We would love to see more people contributing their observations to these projects (observations are automatically included in a project whenever someone uses iNaturalist within the project boundary: no need to add your observations to a project, just to iNaturalist). The more observations we get, the better we understand biodiversity across the province. I’d love to talk more

about how ecological reserves could contribute as focal points for this.”

Dr. Starzomski has agreed to be FER’s guest speaker at their 2020 AGM, which will take place this fall. If the COVID-19 restrictions on gatherings persist, the event may have to take place virtually via Zoom teleconferencing. The upside of this is that any FER member or ER warden could participate no matter where in the province they live.

For those ERs that prohibit public visitors, the only observations that can be made would have to be done by someone who has permission to access that area: an ER warden, a scientist or graduate student with a research permit, BC Parks staff, the iNaturalist project leads, or the student crews hired for the iNaturalist project.

We at Friends of Ecological Reserves have found the links to the iNaturalist pages to be a great addition to our ecological reserves portfolios. On the FER website, Garry Fletcher has added links to iNaturalist information in each of the profile contents list on the ecoreserves.bc.ca website, for example:

<https://ecoreserves.bc.ca/portfolio-item/comox-lake-bluffs-ecological->

Continued on page 5

BC Nature Supports FER

At the October FER Board meeting, Bristol Foster reminded us that it was through the efforts of the BC Federation of Naturalists in 1969/70 that pressure was brought to bear on the BC government to pass legislation to enable the creation of the BC ecological reserves system. As a result, FER Director Stephen Ruttan, who also serves on the Board of the Victoria Natural History Society, discussed the state of the ecological reserve system with the VNHS Board in January and asked for their advice. Claudia Copley suggested that FER develop a resolution on the

current plight of the ecological reserves system that the VNHS could take forward to the BC Nature AGM planned for late May 2020 in Princeton.

In February, Mike Fenger, Jenny Feick and Stephen Ruttan prepared the resolution with oversight by the VNHS. The VNHS Board approved it and sent the resolution to BC Nature. Unfortunately, due to the COVID-19 pandemic, the BC Nature in-person AGM event was cancelled. Nevertheless, the BC Nature's Executive approved the resolution to go forward for ratification at the virtual BC Nature AGM, held via Zoom

teleconference on June 23rd and open to all BC Nature members. Once ratified, the resolution gets sent to Doug Donaldson, the Minister of Forests, Lands, Natural Resource Operations and Rural Development and George Heyman, the Minister of Environment and Climate Change Strategy for a response on their planned action.

To review a copy of the resolution, see:

<https://ecoreserves.bc.ca/2020/06/02/bc-nature-resolution-2020-001-on-ecological-reserves-systems-of-bc/>

iNaturalist cont'd. from p. 4
[reserve-er136/](https://ecoreserves.bc.ca/2020/06/02/bc-nature-resolution-2020-001-on-ecological-reserves-systems-of-bc/)

Our list of reserves is at:
<https://ecoreserves.bc.ca/ecoreserves/ecological-reserves-of-bc-by-name/>

For additional information on the BC Parks iNaturalist Project, see:
<https://www.bcparksfoundation.ca/press-room/visitors-can-now-use-their-phones-to-become-citizen-scientists-in-b.c.s-parks/>

Go directly to the BC Parks iNaturalist project here:
<https://www.inaturalist.org/projects/bc-parks>.



iNaturalist photo of Bog wintergreen (*Pyrola asarifolia*), taken at Catherine Creek ER

ER iNaturalist Projects lacking links on the iNaturalist Site*

Baeria Rocks ER#24	- https://www.inaturalist.org/projects/baeria-rocks-ecological-reserve
Charlie Cole Creek ER#102	- https://www.inaturalist.org/projects/charlie-cole-creek-ecological-reserve
Meridian Road ER#78	- no link; lacks kml/kmz files (conveys 2D & 3D geographic information)
Mount Derby ER#123	- https://www.inaturalist.org/projects/mount-derby-ecological-reserve
Mount Elliot ER#125	- https://www.inaturalist.org/projects/mount-elliott-ecological-reserve
Mount Griffin ER#43	- https://www.inaturalist.org/projects/mount-griffin-ecological-reserve
Mount Sabine ER#19	- https://www.inaturalist.org/projects/mount-sabine-ecological-reserve
Mount Tinsdale ER#70	- https://www.inaturalist.org/projects/mount-tinsdale-ecological-reserve
Williams Creek ER#114	- https://www.inaturalist.org/projects/williams-creek-ecological-reserve
Woodley Range ER#142	- https://www.inaturalist.org/projects/woodley-range-ecological-reserve
Yale Garry Oaks ER# 144	- https://www.inaturalist.org/projects/yale-garry-oak-ecological-reserve

*Please see highlighted paragraph on page 3 for a full explanation.

Summary of the FER Submission to the Old Growth Strategic Review Task Force

By Mike Fenger, Edited by Liz Williams

In July 2019, the BC government appointed two independent consultants to carry out a Strategic Review of Old Growth, using a public consultation process that included town hall meetings, interviews and written submissions. FER sent a written submission in January 2020. The 16-page submission is on the FER web site at:

<https://ecoreserves.bc.ca/2020/01/31/old-growth-strategic-review-fer-submission-2/>

The review was held because: *"The government intends to provide more clarity about old-growth management and about balancing economic, conservation and cultural values."* See:

<https://engage.gov.bc.ca/oldgrowth/why-review-old-growth-management/>

History of Old Growth Management in B.C.

Some historic context of old growth management in B.C. will enable readers to better understand the FER submission. In the early 1990s, there were significant valley-by-valley protests by concerned B.C. citizens against the continued logging of old growth forests. The Clayoquot Sound protests resulted in road blocks and the arrest of over 800 citizens. This was a significant game-changer, and the government developed a number of initiatives to search for long-term solutions:

🌲 A Scientific Panel for Sustainable Forest Practices was established for Clayoquot Sound resulting in agreements by 1995 for sustainable ecosystem management in Clayoquot Sound.

🌲 An Old Growth Task Force was established with representa-



Old Growth Douglas fir © Sinisa Gavric, Dreamstime.com

tives from industry, environmental groups and government (the author of this article was on this Task Force on behalf of the Ministry of the Environment as a forester).

🌲 The BC Protected Areas Strategy (PAS) 1993 was developed pursuant to the 1987 'Brundtland Report', which called for increased global environmental conservation. The PAS described the policies and process to double B.C.'s protected areas from 6% to 12%, with the first goal being *representativeness* – to protect viable, representative examples of the natural diversity of the province.*

🌲 Province-wide multi-stakeholder land use planning tables were established. These forest district-based 'Land and Resource Management Plans' and four Regional Plans were mandated to identify and agree

on where new protected areas would be established.*

🌲 The *Forest Practices Code of BC Act 1995* ('*The Code*'), set enforceable rules for logging, road building, grazing, etc., on the forested crown land base outside of protected areas. (Prior to development of '*The Code*', government and industry negotiated industry-developed 5-year plans one at a time).

🌲 '*The Code*' provided set asides of old growth for riparian reserves, ungulate winter ranges, wildlife tree retention and some landscape level retention of older forests.

🌲 '*The Code*' was seen by the forest industry as too prescriptive, and was repealed in 2002 after a change in government.

🌲 A new 'results-based' approach was enabled via the *Forest and Range Practices Act 2002* (FRPA). Significant changes increased the ability of the forest industry to rely on their professional foresters' opinion, without the need for government foresters to check another forester's work. Government oversight and the public's ability to review harvest plans diminished. The government now states *the objectives* to be achieved, while the forest industry writes the strategies on how their harvest plans would achieve government objectives. After timber harvesting and road building are completed, the onus of proof is on government to decide whether its objectives have been met.

Continued on page 7

🌲 In July 2019, the government initiated the Old Growth Strategic Review. All submissions to the Old Growth Strategic Review Panel can be accessed at their web site [Old Growth](#). The FER submission on this web is number 117 out of 311 submissions.

* **Note:** The PAS goal of representativeness was met in part by the land use planning tables identifying areas for protection using the Biogeoclimatic zone system for Ecosystem Classification (BEC), down to the subzone and variant level. Given the multiple interests on the land base, only about 50% of ecosystems have full 12% protection province-wide, with many of the high timber-value areas substantially under-represented.

Following is a summary of the issues and recommendations provided in the FER submission.



Goldstream Provincial Park, photo by Stephen Ruttan.

Part 1. Background: Ecological Reserves as a Tool for Old Growth Conservation

This was covered in the full report.

Part 2. Augmenting the ER system

Problem: No ERs have been added to the system since 2009 thus this potential old growth conservation tool is not being effectively utilized.

FER has tried to help local environmental groups who have brought forward currently-unprotected candidate Ecological Reserves. FER has met with, and tried to influence senior government managers to set aside specific candidate areas, and to develop a consistent approach to protecting areas with high conservation-value old growth. For example, FER has brought forward three areas in the Sunshine Coast Forest District which never had a land use planning table and so never added new protected areas through the 1993 Protected Areas Strategy. After 6 years of seeking a commitment from the BC government to identify the process to establish new ERs, we shared our experience with the review panel and made the following recommendations:

RECOMMENDATION 1. Complete in the 2020/2021 fiscal year, a decision tree, a formal process with set timeline for decisions on conservation values and a legal protection for forest stands that have high conservation values. This will benefit regional government staff, ENGOs, First Nations and industry so that it is known where and under what conditions conservation values will be given precedence over forest harvesting. Communicate the process to interested stakeholders and First Nations and clearly outline the steps in the process on government websites.

RECOMMENDATION 2. During 2020/2021, while the decision making process is being developed, defer from harvesting or further development any areas currently identified by FER and other partner organizations. A deferral of development for these candidate areas of old growth is absolutely necessary to de-escalate local conflicts. A deferral will signal both to government staff, First Nations, and the public that the BC government is serious about old growth conservation and will not continue to log contentious stands, thus precluding the opportunity for conservation.

Continued on page 8

RECOMMENDATION 3. Seek input to the development of the decision process on candidate ERs from non-government conservation biologists and First Nations knowledge keepers as well as government staff and ensure the participants conduct themselves professionally and report in an open and transparent manner.

Part 3. Legal and Policy Issues

Problem: BC's current legal and policy constraints give formal precedence to timber's value over all other forest values.

3.1 The Government Actions Regulation

The 2002 FRPA lists non-timber values that are old-growth dependent. These values include: Biodiversity, Cultural Heritage, Fish/Riparian, Recreation, Visual Quality, Water Quality, Resource Features, Soils, and Wildlife. However, all non-timber values become subservient to the timber value by the wording of the Government Actions Regulation 2 (1), which states that the Minister must be satisfied that "*The order would not unduly reduce the supply of timber...*" and that "*the benefits to the public ...would outweigh any material adverse impact... on the delivered wood costs...*" See: http://www.bclaws.ca/civix/document/id/loo66/loo66/582_2004#section2

RECOMMENDATION 4. Amend the Government Actions Regulation by removing Section 2 Limitation on Actions because it places priority on timber at the expense of conservation of nine other old growth forest dependent values.

3.2 The 6% policy limit for non-timber values

Under the 1995 *Forest Practices Code of BC Act*, a policy was developed that restrained the impact of non-timber values (including old growth retention, riparian areas, wildlife trees, species at risk, etc.) to 6% of the 1995 Allowable Annual Cut (AAC). This policy was carried forward to the 2002 *Forest and Range Practices Act* (FRPA). The question of whether a 6% impact is sufficient to sustain non-timber values has not been tested nor reported on. To keep within this 6% impact limit, constraints on some of the biodiversity measures were dropped for Old Growth Management Areas (OGMAs) through assigning a '*biodiversity emphasis option*' (high, medium or low) in order to limit timber supply impacts.

RECOMMENDATION 5. Remove the 1990s 6% impact limit applied to the implementation of the *Forest Practices Code* and inform implementation of old growth retention using criteria that test the current condition of older forests and the vulnerability and sustainability of non-timber values within the context of landscape unit plans.

RECOMMENDATION 6. Review the landscape unit emphasis designations and change retention levels through the use of conservation science to reset OGMA retention into the Timber Harvest Land Base where a conservation assessment deems non-timber values warrant a rebalance towards conservation.

3.3 Biased Timber Supply Review Process

The Timber Supply Review Process (TSR) does not require reporting on the sustainability of all nine non-timber values, despite Section 8 of the *Forest Act* that requires consideration of other constraints on the amount of timber available for harvesting. The TSR process uses a data package and modelling assumptions to periodically forecast AAC and set harvest levels. The AAC determination is then supported by a rationale clarifying how and why the rate of harvest was set. This is a sound forest harvest management process. However, to sustain healthy, old growth forest ecosystems, the process must be amended to also require reporting on the vulnerability/sustainability of non-timber values, and not treat non-timber values simply as a constraint on timber harvest. The absence of reporting and forecasting on the state of non-timber values is an institutionalized timber bias inherent in the current TSR process.

RECOMMENDATION 7. Provide Ministerial direction to BC government staff and contractors or licensees completing Timber Supply Reviews that these periodic reviews requiring the use of timber data to complete a credible assessment of the state of all forest values and their vulnerability as a result of various harvest level forecasts, as is consistent with the intent of the *Forest Act*, Section 8b.

Continued on page 9

Part 4. Climate Change Effects on Old Growth Old Growth Forests

A recent report to the Council of Forest Ministers endorsed the need for vulnerability assessments as part of sustainable forestry. The report concluded that *"Although climate has some positive aspects, such as increased tree growth in some parts of Canada, these benefits are outweighed by the potential negative effects."* These negative effects include increased insect outbreaks, fire disturbances, drought, changes in snow pack and runoff, and diverse impacts on fish and water supplies and biological diversity etc. In B.C., there is no baseline information on potential extinction of genetic resources in forest ecosystems without vulnerability assessments. Expansion and monitoring of the current parks and protected areas, including ERs is needed.

RECOMMENDATION 8. Augment the ER system with exemplary examples of the variety of old growth forests that exist in B.C. Set a goal that 1% of the 57 million ha of Crown forest be designated as ERs. This is an 800% increase in the forested areas now in ERs. An expanded ER system is a provincial insurance policy limiting irreparable biological losses, and fostering the knowledge acquisition and adaptation needed due to accelerated climate change effects on all forests.

RECOMMENDATION 9. The BC government must invest in baseline monitoring in all ERs and make periodic re-measurements to understand ecosystem changes, and then develop adaptation strategies based on the monitoring results.

Part 5. Old Growth Management Areas (OGMAs)

Problem: Incomplete Implementation of Old Growth Management Areas.

In 2012, the Forest Practices Board noted in its special investigation report "Conserving Old Growth Forests in BC" that there was uneven implementation of OGMAs and that over a decade had passed and government orders were still pending in some areas. A 2013 report by the University of Victoria Law Department noted that the *"Protection of Old Growth"* was a long-term government commitment that had stalled during implementation. At that time, less than half of all proposed OGMAs had been legally established to protect biodiversity. In addition, the forest inventory has also become unreliable for both timber and non-timber management decisions.

RECOMMENDATION 10. Implement the recommendations of the Forest Practices Board 2012 report and develop an OGMA inventory and tracking system and enter all current OGMAs and their condition into this system. Maintain the OGMA registry and provide periodic summaries for Landscape Units.

RECOMMENDATION 11. Require improved province-wide forest inventory consistent with the recommendations of the British Columbia Forest Inventory Review Panel. Expedite the updating of forest cover to support forest management decisions including those linked to old growth management and conservation so that decisions made about all forest values are reliably informed.



Continued on page 10

“In the early 1990s, there were significant valley-by-valley protests by concerned B.C. citizens against the continued logging of old growth forests. The Clayoquot Sound protests resulted in road blocks and the arrest of over 800 citizens. This was a significant game-changer, and the government developed a number of initiatives to search for long-term solutions.”



1993 Clayoquot: Clayoquot Sound logging protesters gather at daybreak at the Kennedy River Bridge in preparation for another day of confrontations with loggers and RCMP enforcing a Supreme Court injunction, 1993. MARK VAN MANEN/*Vancouver Sun*

RECOMMENDATION 12. Require that government report which regions and areas have not completed government orders to establish spatial OGMA. Seek a commitment from government that there will be completion province-wide of all spatial OGMA within the 2020/2021 fiscal year and that these be made known on the government website [Old Growth Management Areas-Legal-Current](#).

RECOMMENDATION 13. Require that government complete an assessment in 2020 of non-spatial OGMA orders and provide direction to staff that OGMA be spatially identified and made legal and shown on the website [Old Growth Management Areas-Legal-Current](#).

Part 6. Standard Operating Procedures and the Professional Reliance Approach

Problem: *Standard Operating Procedures and the Professional Reliance Approach enable logging of old growth even when designated as OGMA.*

The absence of government oversight and use of “professional reliance” by government on industry foresters is flawed and needs to be changed. It is unrealistic and unfair to expect industry foresters to meet both their employer’s financial goals and provincial aspirations for conservation and retention of old growth in OGMA. It puts company foresters and consultants in a conflict of interest. Based on the results of the past dozen years, using a professional reliance approach to conserve old growth in B.C. in areas where there are non-legal OGMA mapped, and also in areas with non-mapped OGMA relying on forest cover summaries, does not achieve provincial old growth conservation objectives.

RECOMMENDATION 14. Replace the approach of professional forester reliance linked to decisions on changes in OGMA and old forest retention during harvest planning and layout with a more effective system involving provincial government and/or independent third party oversight.

The FER submission was prepared by Mike Fenger and Jenny Feick and is on the FER web page <https://ecoreserves.bc.ca/2020/01/31/old-growth-strategic-review-fer-submission-2/> and all 317 submissions are on the Old Growth Task Force web page at <https://engage.gov.bc.ca/oldgrowth/written-submissions/>.

Conservation and Stewardship Issues in Ecological Reserves

By Jenny L. Feick, PhD

Project Funding Opportunity for ERs Analysis on Ecological Reserves

Ecological Reserve wardens were invited to submit proposals for conservation and stewardship projects to regional BC Parks staff to be considered for funding through the Parks Enhancement Fund, which the BC Parks License Plates program funds. BC Parks issued the call for proposals on June 5. The deadline for submitting was June 23rd. The following link was posted on the FER website:

<https://ecoreserves.bc.ca/2020/06/05/bc-parks-enhancement-fund-potential-funding-for-ecological-reserves/>.

At the June 3rd virtual meeting that FER had with BC Parks, James Quayle, Manager of Conservation, said that BC Parks would welcome proposals to address conservation and stewardship issues from ER wardens for Park Enhancement Fund projects funded by the BC Parks License Plate Program. ER wardens should connect with their local BC Parks contact to discuss project ideas to address the issues they recently identified to FER, e.g., mark boundaries of ERs, remove alien species, restore habitat, educate adjacent neighbours about ERs, fill specific information gaps, etc. License Plate Program proposals are generated internally by BC Parks staff, but are often written in collaboration with partners and volunteers.



Fallen fence at Mount Maxwell ER #37. Photo taken by Jenny Feick during our spring 2019 FER field trip.

Board Members Conduct a Gap Analysis on Ecological Reserves

To help inform their meetings with BC government officials, six of the FER Board members researched specific information on the BC Parks and FER websites and developed an Excel spreadsheet. Information sought included the presence of approved management planning direction documents, the dates of each, and management issues identified in them; the existence, dates and topics of scientific research papers and monitoring reports on the FER website; the existence of ER warden reports on the FER website, which ERs currently have wardens, and whether FER has contact information for them. Ecological reserve wardens, FER members and others described current

issues in emails, phone calls or in person.

Ian Hatter led the quality control and analysis of the spreadsheet data. Based on the data analysis, Jenny Feick wrote a summary report that was sent to BC Parks, which is on the FER website (see *Ecological Reserves Management Issues Summary* at: <https://ecoreserves.bc.ca/2020/06/22/ermanagement2020>

Management, Conservation and Stewardship Issues in Ecological Reserves

In addition to summarizing the management issues found in management planning documents on the BC Parks website, the *Ecological Reserves Management Issues Summary* provides a list of the current most pressing stew-

Continued on page 12

ardship and conservation issues in ecological reserves identified to FER by ER wardens in 2019/20.

FER sent the summary of these issues to BC Parks on May 28. Unfortunately, little time was given on June 3rd to discuss these issues in any depth. Jenny Feick quickly reviewed the list of the six issues mentioned most often by ER wardens (see 'Top Issues' text box), as well as what FER recommends BC Parks give priority to addressing based on analyzing the management planning documents and warden feedback (See Prioritized List text box).



ER warden Matt Fairburn's crew removing invasive species from Trial Island ER # 132

Top Issues Identified by Ecological Reserve Wardens 2019/20

1. **Boundary Issues** (lack of defined boundaries, shifting boundaries, unmaintained fence and lack of signage, need for boundary adjustments or buffers to protect ERs from shifting boundaries due to natural processes and adjacent land use)
2. **Invasive Plants** (threats to natural vegetation)
3. **Issues with BC Parks** (lack of knowledge of the purpose of ERs, of natural and cultural resources in existing ERs, the need for better compliance and enforcement, the inability of rangers to issue tickets for violation of the Ecological Reserve Regulations, the need for more resources for BC Parks to support ERs; and improved transmission of monitoring information from BC Parks to volunteer ER wardens.)
4. **Internal Threats** (garbage dumping, tree cutting and other; vandalism, illegal camping; helicopter training landings and recreational fixed winged planes landings, shore use by Indigenous peoples and the public)
5. **External Threats:** (e.g., boat traffic, build-up of debris washing down from the upper road; feral domestic animals)
6. **Forest Health** (fire and pine beetle damage)

FER's Prioritized List of Management, Conservation and Stewardship Issues

FER recommends that priority be given to addressing the following issues in existing ERs:

1. Solving Boundary Issues, including signs and fences
2. Addressing Internal Threats, including trespass and removing alien species
3. Negotiating with FLNRORD on Mechanisms to Address External Threats
4. Filling information gaps
5. Addressing First Nations Interests
6. Enhancing BC Parks Stewardship Actions (partnerships, monitoring and reporting, communications, information sharing, compliance and enforcement)

Those present at the meeting on June 3rd concluded that by solving the first priority issue (boundary issues), many of the internal and external threats would be reduced or eliminated. Jenny Feick noted that mitigating external threats would also require negotiations with FLNRORD to reduce negative effects on ERs from development taking place near or adjacent to them.

A Sure-Fire Way to Generate Funds to Help Conserve Ecological Reserves

By Jenny L. Feick, PhD

All of us can contribute directly to increasing the funds available for conservation and stewardship projects in protected areas, including ecological reserves, through the [BC Parks License Plate Program](#), a partnership between BC Parks and ICBC.

The next time you renew your ICBC insurance or register a new vehicle, consider purchasing one of the three beautiful license plates depicting scenes from B.C.'s protected areas. The designs include the spirit bear, an elusive white version of black bear found on the coast; the snow-capped Purcell Mountains symbolizing the province's interior region; and Porteau Cove overlooking Howe Sound. Available at Autoplan broker offices throughout B.C., the specialty license plates cost \$50.00 for the initial purchase and \$40.00 for each annual renewal.

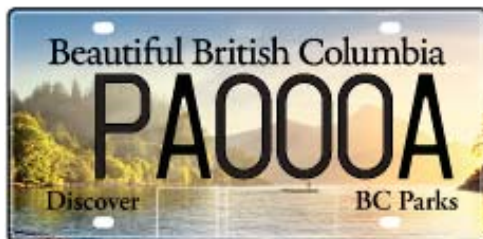
All net proceeds from the sale and renewals of BC Parks plates are re-invested back into the protected areas system through the [Park Enhancement Fund](#). These funds support diverse projects related to conservation, community engagement and education, and Indigenous



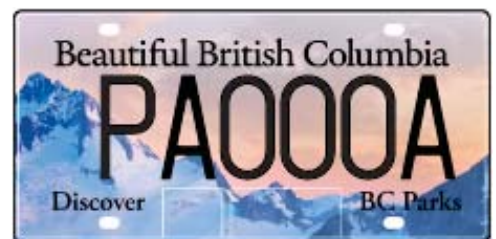
Friends of Ecological Reserves members Ian Hatter and Jenny Feick supported the BC Parks License Plate Program. Appropriately, they chose the Purcell Mountains plate as they like to spend as much time as possible hiking in the mountains.

relations. To date over 180,000 plates have been sold. The revenue has funded more than 220 projects involving 160+ community partners and over 40 First Nations partners. Most funds go to conservation work and to date, the majority support ecological restoration, reducing wildlife-human conflicts, and mitigating park visitor impacts. Projects have taken place in several

ecological reserves, including Mt. Tzuhalem (ER#112 on Vancouver Island), Sartine Island (ER#11 in the Scott Islands), and Trout Creek (ER#7 in the Okanagan). More projects could take place if BC Parks area supervisors and regional conservation specialists receive proposals for Parks Enhancement Fund projects from ER wardens (see article on page 11).



The three license plates available; Left: Porteau Cove
Right: Purcell Mountains
Below: Kermode (Spirit) Bear



Reconciliation and Ecological Reserves

By Jenny L. Feick, PhD

On November 28, 2019, British Columbia became the first jurisdiction in Canada to enact legislation implementing the United Nations Declaration on Indigenous Peoples (UNDRIP). The legislation creates a framework for reconciliation in B.C. One of the provisions is the requirement for all projects on Indigenous territories to receive consent from those communities. The *Declaration on the Rights of Indigenous Peoples Act* compels conversations with Indigenous peoples about projects that will affect them, including protected areas.

The Friends of Ecological Reserves (FER) recognizes and respects the First Nations within whose traditional territories ecological reserves exist. FER acknowledges that much of B.C. remains unceded land and appreciates the graciousness of the Indigenous hosts in areas containing ecological reserves.

Even though British Columbia's *Ecological Reserves Act* of 1971 does not explicitly address traditional Indigenous use of ecological reserves, FER supports this use as long as the activities do not permanently destroy the values for which the reserve was established. In other Canadian jurisdictions in Canada such as Saskatchewan, Manitoba and the territories, more recently written legislation provides explicit guidance on Indigenous use of ecological reserves. For example, in Manitoba, Indigenous use of ecological reserves is allowed unless it compromises conservation, in which case there is



British Columbia has become the first jurisdiction in Canada to pass legislation implementing the United Nations Declaration on Indigenous Peoples (UNDRIP). The legislation, dubbed Bill 41, passed the committee stage and third reading at the B.C. legislature unanimously on November 26, 2019, to cheers and applause from MLAs on both sides of the house. The legislation requires that Indigenous peoples are included in all decision making that impacts their rights.

a consultation process to address that perceived conflict.

Reconciliation may provide opportunities for additional ecological reserves identified by traditional Indigenous knowledge keepers for their Indigenous Traditional Ecological Knowledge (TEK) values. FER welcomes opportunities to meet with Indigenous peoples interested in discussing how ecological reserves could be used as refugia for Indigenous TEK.

FER seeks partnerships with First Nations interested in protecting sites that First Nations believe have significant Indigenous TEK values. FER and BC Parks welcome Indigenous people as Ecological Reserve wardens, as members of FER, and to serve on the FER Board of Directors. The FER Board plans to meet with Indigenous groups to explore these and other topics of mutual interest and listen to their views.



This is a Culturally Modified Tree (CMT) protected from harvest. The Pacheedaht consider their history recorded in CMTs, and conserve small areas of large cedars, such as this one, for future cultural uses. (Photo from The State of Canada's Forests Annual Report 2018)

FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central, Victoria, BC V8W 3S1

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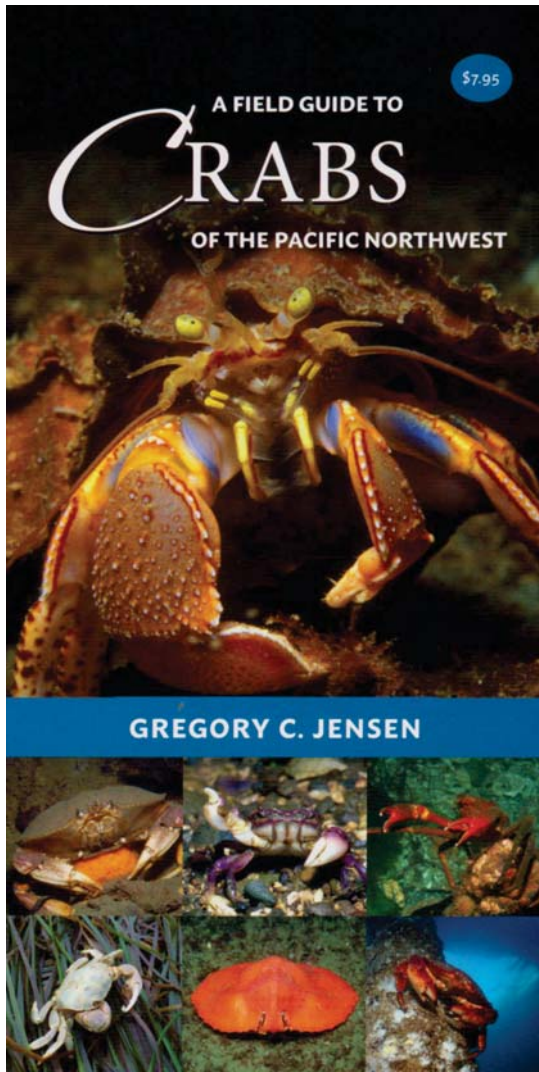
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 37" x 9" 8-fold pamphlet with 61 colour photos

The Pacific Northwest is home to over ninety species of crabs, many of which are easily accessible to scuba divers and beachgoers of all ages. *A Field Guide to Crabs of the Pacific Northwest* provides a convenient source of information about these fascinating creatures, whether you are in the water or exploring the beach with your family.

Identifying almost fifty species of commonly-observed crabs is made easy by the vibrant pictures and detailed descriptions, while extra notes provide intriguing information about crab behaviours and habitats. This guide also includes information on harvesting crabs responsibly, with clear guidance on the differences between males and females.

The author of this guide, Gregory C. Jensen, is a marine biologist and wildlife photographer, and has a wealth of information to share.

SOME CRAB FACTS

- Crabs describe two major groups of crustaceans– the Brachyura group, which includes the famous Dungeness crab and the Anomura group, including hermit crabs and king crabs.
- Decorator crabs attach seaweed to themselves for camouflage.
- Male Dungeness crabs will embrace and carry around a female for up to two weeks before mating.
- While most crabs molt annually, fast-growing juveniles can molt several times a year.

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