

President's Report

By Mike Fenger

Friends of Ecological Reserves lost a long time stalwart Board member Tom Gillespie late in the fall of 2013 and we continue to appreciate and miss all his volunteer hours. Other Board members are stepping up to fill his shoes.

Considering FER has no staff, I am amazed at just how much this organization does to enhance the profile of Ecological Reserves. Thanks to all our supporter and members, to those who volunteer as ER wardens and the Parks Area Supervisors and Conservation Specialist staff whom we interact with to help manage BC's amazing Ecological Reserves.

Here is a short summary of what we deem to be achievements of 2013 and the first few months of 2014. This is followed by some crystal ball/visioning of where FER may head in the upcoming year.

What did we focus on in 2013?

Goal 1. Support for the Ecological Reserves Wardens Program

- ▶ We completed our first year with the designated provincial Parks volunteer coordinator, Becs Hoskin. We so appreciate this role and how much Becs has done to help FER. We wish her happiness during her maternity leave and look forward to her return. Bec's position is tangible support from Parks and recognition of the value of volunteers. Becs was also our contract monitor for a grant FER was awarded. More on the details of the Research Legacy project under Strategic Goal 2 (also see separate article on page 3).
- ▶ Garry Fletcher and Marilyn Lambert do double duty as Board members and ER wardens and they attended the Vancouver Island ER wardens spring meeting organized by Erica McClaren, Conservation

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www.ecoreserves.bc.ca



The Log

Spring/Summer 2014

The LOG is published 2 times a year by the Friends of Ecological Reserves to promote the establishment, management and maintenance of Ecological Reserves in British Columbia. *The LOG* is distributed to members, volunteer wardens, affiliates, supporters, government, friends and the enquiring public.

The views expressed in this newsletter are not necessarily those of the Friends. Articles for publication are invited. The deadline for submissions for the Autumn/Winter issue of *The LOG* is November, 2014.

Editor

Louise Beinhauer
Design and Production
L.B. Word Works

Directors

Mike Fenger, President,
Marilyn Lambert
Mary Rannie
Stephen Ruttan
Garry Fletcher
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Liz Williams
Don Eastman, Past President

Honorary Directors

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Vicky Husband
Josette Wier

Contributors to this issue:

Mike Fenger, Garry Fletcher, Brenda
Montgomery and Louise Beinhauer

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FRIENDS OF ECOLOGICAL RESERVES

PO BOX 8477 STN CENTRAL
VICTORIA, BC V8W 3S1

Email: ecoreserves@hotmail.com

Website: <http://www.ecoreserves.bc.ca>

Canada Post Agreement No: 40020740

President's Report (Cont'd.)

Specialist, BC Parks West Coast Region, one of several conservation specialists now in Parks. We believe Garry and Marilyn were able to clarify what FER is hoping to achieve and our role with respect to support for wardens.

- ▶ FER's role is to support ER wardens through input to the ER Wardens Handbook when there are revisions needed. This Handbook is posted on both the FER and Parks websites. FER also helps identify potential new ER warden candidates to Parks Area Supervisors. There are benefits to having multiple wardens for a single ER as more eyes and ears provide better insights.
- ▶ FER continues to struggle to keep the ER wardens list current and remains dependent on Parks staff to inform when there are changes to ER wardens. Wardens names are posted on the FER website but their privacy is maintained as no other contact information is posted.
- ▶ The FER website has a place for ER warden reports and it is hoped that more ER wardens will share their visits and field notes by making these available. Not all ER wardens see the need to share their ER field visits with FER. We hope that over time, all ER wardens will see the benefit of sharing their warden reports and images with FER and the benefits to the Ecological Reserve achieved through reporting and maintaining a transparent public record.

Goal 2. Support Studies of ERs

- ▶ FER continues to add existing research papers linked to ERs on our website as they become available. When the ER program disbanded and responsibility was transferred to regional Parks offices, the files for ERs were decentralized out of Victoria. This makes it harder for a provincial organization like FER to know what is being done at the ER level. FER was fortunate to obtain a grant from Parks to complete a pilot project on the Coastal Region, to obtain biological and research information from Parks Regional office files in Nanaimo. This project is nearing completion and we again thank Erica McClaren for her role in helping coordinate this project with Coastal Area Supervisors. From FER's point of view, this project has been a success on a number of levels. The work was carried out by Mike Fenger and Garry Fletcher and it gave them the opportunity to meet many Area Supervisors and discuss existing data they may have and, in that way, raise the profile of ERs and clarify the support role that FER has to government. It also provided the opportunity to speak to many ER wardens, researchers and to recruit new wardens. We are grateful.

Goal 3. Support Development of A Resilient Science-Based ER System

- ▶ Presentations were made at the 4th Bi-annual Parks Research Forum by Mike

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Coastal Ecological Research Legacy Project

By Mike Fenger and Garry Fletcher

In June of 2013, Friends of Ecological Reserves applied for funding support to work with regional Parks staff to review ER-specific files held in regional offices. The goal was to look for ER-specific information not already on the Parks website (http://www.env.gov.bc.ca/bcparks/eco_reserve/) or on the Friends of Ecological Reserves website (<http://ecoreserves.bc.ca/>).

In 2012, FER had reviewed files in the Parks Victoria office file room and found a significant number of ER-specific reports that were filed but not accessible digitally on the web. FER was encouraged that so much information had been retained over the years when there was an Ecological Reserves Program, but concerned over potential erosion and loss of this information over time. Since changes were made to the Ecological Reserves Program over a decade ago, it is no longer possible to go to Parks' headquarters file room and obtain ER-specific information as all new information is being held solely in regional Parks offices.

FER had planned to visit all regional offices in a single year but Parks wisely agreed to pilot the ER Research Legacy Project in a single region – the West Coast Region. This is a summary of that pilot project.

FER had allocated \$1,000 for this project should it be needed, in addition to the \$2,500 received from the Parks Enhancement Fund (PEF).



Mike Fenger FER, Jessie Moore (Area Supervisor) and Garry Fletcher in the Parks Black Creek Office. Jessie manages eight ecological reserves (ERs) in the Cape Scott area. Mike and Garry with Jessie's help were assessing ER information held in Parks files.

Much of the time spent by the FER team was volunteer time.

FER members Garry Fletcher and Mike Fenger worked with Conservation Specialist Erica McClaren to set up meetings with all Area Supervisors for the Parks West Coast Region. These meetings were to assess and retrieve research and ER-specific information held by Parks staff or by ER wardens as reports sent to Parks staff. This information was to be made available to FER for the purposes of inclusion on the FER website and prevent erosion of the legacy of information already accumulated from coastal Ecological Reserves.

The first meeting was attended by Erica McClaren the

FER regional contact person, and was held in the Goldstream Park office with Area Supervisors Joe Benning (9 ERs), Don Closson (5 ERs) and Zsana Tulcsik (4 ERs).

A second meeting was held in the Black Creek Parks office with Jesse Moore (8 ERs) and a third conference call meeting was held with Lucy Stefani Area Supervisor on Haida Gwaii (5 ERs).

Two working meetings with Erica McClaren were held in the Nanaimo warehouse/file room. Reports found or made known during those visits were assessed for biological information value and whether they were already on the FER or

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Parks web pages. It is estimated that over 800 reports were reviewed and that over 150 passed the "biological information legacy test" and are being placed on the FER web site by Garry Fletcher.

There was no general public involvement with the data gathering and assessment of Parks-held ER information. There is expected to be public involvement over time as people access the information on the FER website. However, this public involvement can be difficult to precisely assess. FER receives weekly web summaries of web visits. These vary, but it is normal to have 8,000+ visits weekly and the visits are primarily from Canada, US, Great Britain and China. A fairly high percentage of visits can be traced to web crawlers as they come from cities with computer centres that troll the web. However, if we discount these numbers, there remains a significant number of visits. This extension of information is consistent with the intent of the *Ecological Reserves Act* to provide research and educational materials.

Approximately ten ER wardens were contacted to learn more about what they may have in their files that could go on the FER website. After conversations with Areas Supervisors, we learned that there is an increase in the number of ER wardens including a new warden who took on multiple reserves. It was good for FER to contact wardens and clarify the role FER sees for

itself and how this supports the more formal relationship between the ER warden and Area Supervisors through their signed agreements.

FER's role supports ER wardens and Areas Supervisors but it does not supplant their work. FER sees its role as a custodian of information and an advocate for ERs. To be successful in that role, FER needs to obtain information that passes between an Area Supervisor and ER wardens. Information that ER wardens and Area Supervisors make available will be of future value. Based on the Coastal Pilot Project, a high level of sharing ER-specific data has not yet been consistently achieved.

FER did not partner with other ENGOs as this project was considered fairly specialized, and the review of government filings did not lend itself to broader participation. The project team did contact some ER wardens but this was not in a comprehensive manner. Some ER wardens contacted did not respond to requests for field reports or images.

Most of the new biological legacy information on specific ERs was obtained after there was a one-on-one meeting between the FER team and the Area Supervisors and Conservation Specialist. We felt that this was achieved as a result of being able to more fully explain our intentions and Area Supervisors agreed with the value of creating and maintaining an open web-based filing system for each ER. These meetings built a level of trust between the FER team and

CALENDAR

Victoria Natural History Society - various field trips and activities through July and August, 2014

For info:

<http://www.vicnhs.bc.ca/calendar.html>

Capital Regional District Summer Program Schedule

For further information.

<https://www.crd.bc.ca/about/events>

**BC Nature Fall Conference
September 25-28, 2014 in
Salmon Arm, BC**

For info:

http://www.bcnature.ca/wp-content/uploads/2012/06/FGM_registration_BCNature.pdf

Parks staff, not possible through initial contacts made solely by e-mails. Meeting with Area Supervisors who had responsibility for multiple reserves was especially important.

One-on-one meetings were held with Erica McClaren who coordinated the Parks side of this project and who worked to gain access for FER to Nanaimo file room reports. Erica was also able to provide technical support by digitizing older paper reports. This worked well and allowed Erica to understand the ER-specific information data base. Erica was also able to review her own digital files on ERs and provide data from that not held in the file room.

One-on-one meetings were also held with Jessie Moore in the Black Creek office. Jessie

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manages eight ERs on the north end of the Island. After that meeting, Jessie too was able to review her digital files and provide important reports not found in the file room.

A conference call one-on-one meeting with Lucy Stefani who manages five ERs on Haida Gwaii and follow-up phone calls made with Don Closson who manages four ERs out of the Goldstream office yielded similar results.

There was a belief expressed during the meetings that the research legacy information sought by FER would be held and managed through the Permit and Authorizing Bureau <http://www.env.gov.bc.ca/pasb/>. It was learned that the permitting process is not a data capture and information storage/tracking system. The permitting process is a conduit for tracking applications which are sent for approval to Area Supervisors. FER learned that there are currently 27 active research/education permits and this doesn't include the research being conducted by BC Parks staff, which, although not done under permit, should be made better known.

What Could Have Been Improved About The Project (i.e. lessons learned)

FER learned that better preplanning leading to more one-on-one meetings with Area Supervisors may improve capture of existing regionally held ER reports and is considered more likely to establish confidence and a willingness to share future



Race Rocks is a unique ER in many ways and affords unique research opportunities. Besides having a warden, Courtney Edwards serves is one of the three eco-guardians who serve a term and lives seven months on the "rock".

reports with FER. Change in sharing was partially achieved with some Areas Supervisors and some ER wardens. FER expects to see a slight increase of reporting from ER wardens and Area Supervisors and those who saw the benefit of ER-specific data capture outside of government.

The inclusion of the FER website as a data handling and

retrieval system has not yet been fully achieved. FER is fearful that there will continue to be loss of valuable data currently held by ER wardens and Area Supervisors in the West Coast Region.



Race Rocks Trip

By Brenda Montgomery

We huddled on a rainy Sunday morning, May 4, 2014, at Pearson College docks nestled in verdant and vibrant Metchosin, British Columbia. We donned personal flotation devices or floater coats and hopped aboard the motor vessel “Second Nature” skippered by Director of Operations for Race Rocks, Chris Blondeau for a short but choppy ride to Race Rocks Ecological Reserve in the Strait of Juan de Fuca.

Courtney Edwards (Race Rock’s eco-guardian) prepared a summary of the sundry critters awaiting our visit, which was read to us by Garry Fletcher, our trip leader and Race Rocks ER warden, while our boat stopped, for the purpose of pointing out a few history bytes of Pearson College (United World College), a bit about the region, William Head prison and the efforts to continue to support the preservation and natural environment of the area. Our skipper Chris encouraged us to support local businesses that contribute one percent of their profits to the critical protection of the eco reserve.

We continued on and were greeted by Courtney and scrutinized by curious elephant seals as we clambered off the good ship and up the ramp to our destination, the Great Rock, one of nine in the Race Rocks archipelago.

Garry, a modest and highly educated and experienced scientist, held our attention throughout the visit with details



Damp, but enthusiastic members of the 2014 Race Rocks field trip listening to Eco-guardian Courtney Edwards.

about Race Rocks, its critters, birds and mammals, crustaceans, even tiny fish, and their unique habits. He also gave a brief but concise history of the geology of the island, its early inhabitants who were builders of burial cairns that have been preserved.

Garry explained some of the machinery on the island, both old and new including the old fog horns and the newer solar panels, that keep the Rock alive, all while navigating our way past elephant seals who found us as interesting as we found them. Garry advised “don’t get too close if you want to keep your leg”. Perhaps it was meant as a small jest but we took this most seriously and did not seek to make friends with these large

marine mammals. We gave them a wide berth on the cement walkways.

Our gracious eco-guardian and hostess, Courtney, introduced us to the joys of living on the Rock, of dealing with wildly changing weather, finicky machinery and equipment maintenance and breakdown, of working around wild life on the wild life’s terms and related quite a few comical anecdotes she has witnessed on a day-to-day basis. She not only battles the weather, she has to work with the fickle and unpredictable behaviour of the marine creatures both bird and mammal. She goes to work some days with a shield in one hand and a shovel in the other. She monitors the collection of

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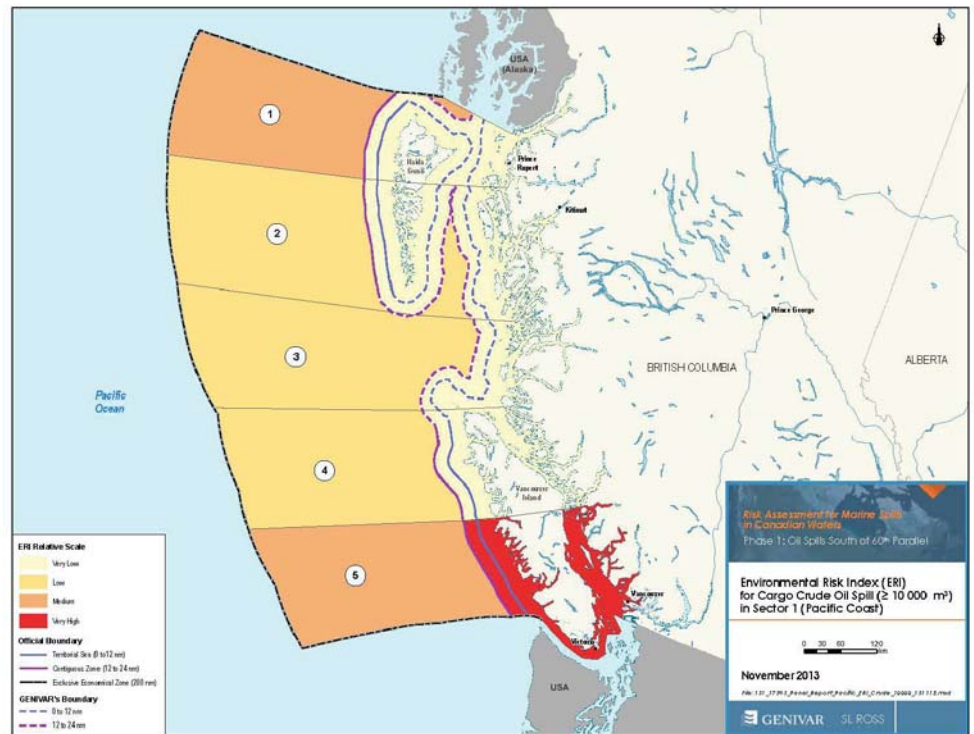
FER Gains Intervenor Status for NEB Review of Kinder Morgan's Proposed Pipeline Expansion

Information Compiled By Louise Beinhauer

The Board of Friends of Ecological Reserves has been included as one of the 400 intervenors accepted out of the 2,118 who had applied, to present to the National Energy Board at the hearings of Kinder Morgan's proposed pipeline expansion project. Our application was submitted in early February.

The Kinder Morgan pipeline expansion project proposes to twin their Trans Mountain pipeline along their existing right-of-way between Strathcona County, Alberta to Burnaby, British Columbia where possible. They will add new pump stations along the route and increase the number of storage tanks at existing facilities. The Westridge Marine terminal in Burnaby will also be expanded. This proposed expansion will result in an increased capacity from 300,000 to 890,000 barrels per day. Much of this new capacity will be diluted bitumen from the Alberta oil sands.

The Aframax tankers proposed to serve the Kinder Morgan pipeline are approximately 245m long. Tanker traffic will increase through the Salish Sea from the current five tankers per month to approximately 34. The 2013 government-commissioned risk analysis report on tanker traffic safety in Canada concluded that the area off Southern Vancouver Island is a "very high risk zone". Within this area lie 17 of the province's



The sectors with the highest overall risk from oil spills were located in the Pacific and the Gulf of St. Lawrence. In the Pacific sector, sub-sector 5 was deemed very high risk due to the large volumes of vessel traffic and bulk oil movements that occur within close proximity to environmentally sensitive areas.

Figure excerpted from Transport Canada's 2013 report entitled "Canada's Ship-Source Oil Spill Preparedness and Response Regime"

33 marine Ecological Reserves.

Friends of Ecological Reserves is very concerned for the ecological integrity of the marine reserves within this zone. Our provincial Ecological Reserves rely on science-based research and are designed to serve as baselines for environmental health on our coast. With the increase in tanker traffic that would result from the Trans Mountain pipeline expansion, these reserves, already at risk, are particularly vulnerable to irreversible ecosystem damage and extirpation of rare species from the effects of ship accidents, collisions, groundings or

accidents at terminals resulting in the release of toxic substances into the Salish Sea. Most of these marine ERs are islands that are home to colonies of nesting or overwintering sea birds, marine mammals and sub-tidal fish and invertebrates. Mitigation of accidents in these ecosystems is essentially impossible.

Four marine Ecological Reserves at the southern tip of Vancouver Island in particular, would be directly exposed to contamination in the event of a marine accident of any vessel in the Strait of Juan de Fuca. The most northerly and only

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birthing colony of elephant seals in Canada is on the Race Rocks Ecological Reserve. Race Rocks is also a winter haulout site for two species of sea lions, and a birthing colony of harbour seals. It is also prime Orca habitat. Three seabird species have nesting colonies on the island and the subtidal marine life in this Rockfish Conservation zone has extremely high biodiversity values. The risk for these rare colonies from increased tanker traffic is very high. Containment of an oil spill in adverse weather conditions with tidal currents running up to 7 knots, make mitigation of a catastrophic event in this reserve impossible. Moreover, the population of marine birds and mammals is highest in the winter months when the sea conditions are at their worst.

We believe that the value to the citizens of British Columbia and Canada of the natural capital and ecosystem services provided by these marine Ecological Reserves, as well as their contiguous marine habitats, far outweigh the dollar value of any profit for Canadian citizens from increased transport of bitumen offshore.

May 12, 2014 was the deadline for the submission of the first written information requests from Intervenor to the NEB hearings for the Kinder Morgan Trans Mountain Pipeline Expansion. FER submitted a 14-page letter with 26 Information Requests based on the following 12 concerns:

1. The size of the Marine Regional Study Area



Kinder Morgan identified Marine Research Study Area. Orange hatched area = MRSA

(MRSA).

The MRSA identified in the Stantec Consulting report was used to bound the information search and reporting on environmental values. This area is approximately half the size of the high-risk spill area identified in the Transport Canada Report referenced previously on page 7.

2. Number of environmental Indicators and lack of specificity with regard to habitat indicators.

FER agrees with the 11 indicator species selected by the Stantec Report, however we think others needed to be included. The Kinder Morgan selected indicators are: Intertidal habitat, Pacific herring, Salmon, Southern resident killer whale, Humpback whale, Steller sea lion, Fork-tailed storm-petrel, Cassin's auklet, Surf scoter, Pelagic cormorant and Glaucous-winged gull. Some indicators are linked to species at risk, i.e. Steller Sea Lion and Southern resident killer whale, and other indicators

linked to species that are culturally and commercially significant such the Pacific salmon.

There needs to be a finite number of indicator species to monitor and periodically report on through time, and there is potentially a long list of species/ecosystems to choose from. However, the choice of indicators is exceedingly important and FER believes major indicators are missing.

3. Absence of known marine bird colonies as indicators for long term monitoring and reporting of marine health.

The Stantec "Marine Birds - Marine Transportation Technical Report Volume 8b" states: "The 5 selected marine bird indicators, Cassin's auklet, Fork-tailed storm-petrel, Pelagic cormorant, Surf scoter and Glaucous-winged gull, each represent a subset of the diversity of marine bird species in the Marine RSA because they are resident or seasonal."

Since the consultants reports indicate that the locations of colonies is known and shown in their reports, why are most known colonies omitted as indicators against which to measure impact and recovery? The consultants list the breeding bird colonies in the MRSA as: Pigeon guillemot, Pelagic cormorants, Glaucous-winged gulls, Black oystercatchers, Double-crested cormorants, Cassin's

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5. **Absence of resident fish and forage fish species as indicators of marine health.**

FER is pleased with the fish species chosen as indicators of marine health. However salmon and herring species are considered to be migratory, passing through the MRSA on annual migration patterns and not permanent residents. FER believes that there is a need to include a member of resident species guild to represent the health of marine ecosystems and suggest that rockfish species are appropriate resident species in need of baseline monitoring. Rockfish species (family Sebastidae) are already species of concern and the figure above shows an example of rockfish conservation areas near Victoria. FER is concerned that an oil spill may further risk recovering this species.

6. **Representing information that minimizes spill impacts in high risk zone by comparison of selected indicators to post spill to global species condition outside of the impact area.**

Environmental Impact assessments are designed to help NEB and the public clearly understand the risks to resources from this project. Deficiency in the number of indicators has been noted earlier. Given that a robust set of indicators is determined, then each indicator requires a numeric baseline be estab-

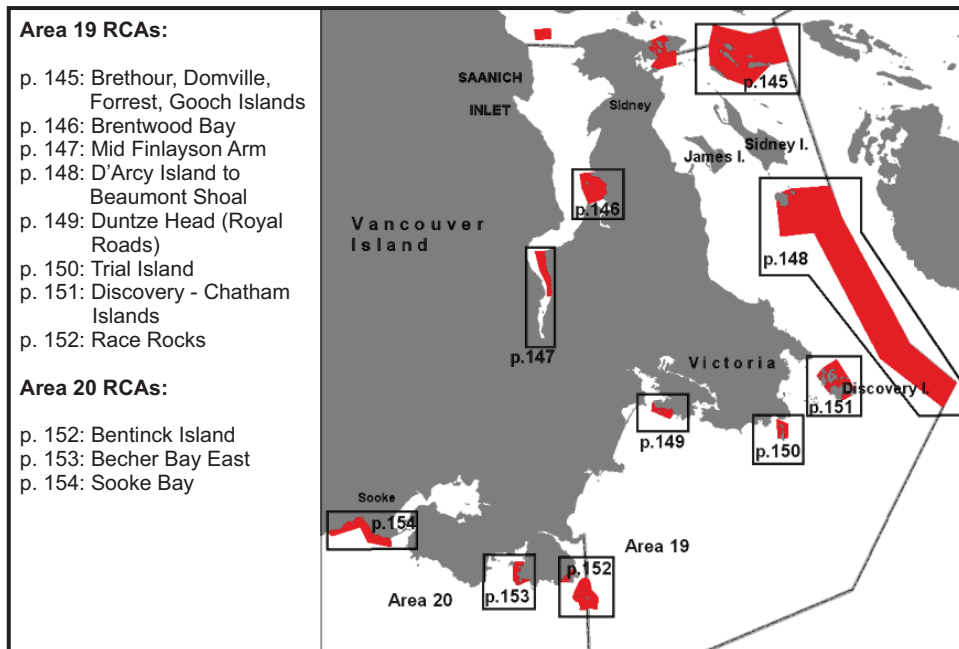
lished within the potentially high risk impacted oil spill area (see the figure on page 7). Then for the public to understand oil spill impacts, there is a need to estimate potential mortality and recovery linked to oil spill scenarios worst case and smaller spills case against this baseline.

Using the Marine Birds report as an example, FER finds the characterization of indicator baselines absent for high risk impact zone. For example the "Marine Birds - Marine Transportation Technical Report Volume 8b", provides bird counts for 237 bird species from inventories between 1962 and 2012. This information is related to inventory effort and data shows individual bird counts over a 40-year period but not the current population estimate or the

range of variability (lowest to highest population fluctuations) within that period, nor the current population or trend. This report concludes that no supplemental studies will be needed. FER cannot support that there is no need for further study in light of the absence of baselines and trends and periodic reassessment over the life of the project. It is not possible to do an impact assessment without establishing an individual baseline against which to compare impact and measure recovery without some numerical disclosure.

7. **Absence of importance of forage fish and identification of suitable micro habitats.**

Forage fish are the basis for much of the fish and sea mammal productivity in the

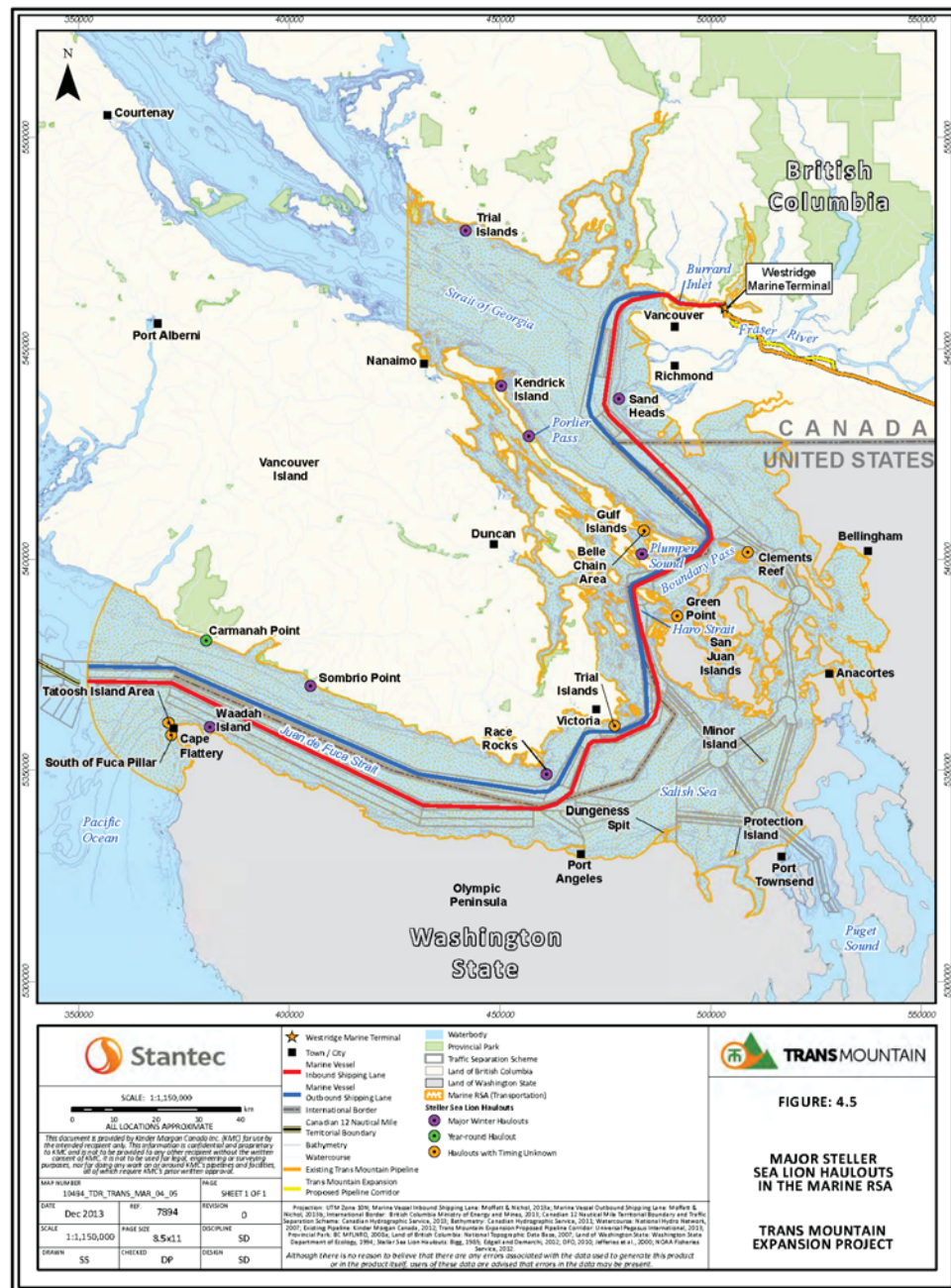


An example of Rockfish Conservation Areas (RCAs) near Victoria within high risk oil spill zone. Note that the largest RCA is directly under the tanker route and other areas associated with Ecological Reserves (Race Rocks and Oak Bay Islands ERs)

Salish Sea and Strait of Juan de Fuca. The continued health and maintenance of their habitat is critical as these species are the base of the food chain. Of particular concern on the beaches of the ERs are two species, Pacific Sand Lance (*Ammodytes hexapterus*) and surf smelt (*Hypomesus pretiosus*). http://www.dfo-mpo.gc.ca/CSAS/CSAS/status/2002/SSR2002_B6-09_e.pdf Their population levels and habitat condition together determine the condition of salmon, rock fish, many marine bird species and other marine mammal species. To learn more about forage fish and their role visit. <http://www.lenfestocan.org/en/topics/small-pelagic-species> FER is concerned with the recovery of forage fish and what has been learned since the Exxon Valdez's spill. The shore zone mapping may be at too coarse a scale to identify many of the smaller suitable habitats.

8. Marine mammal breeding colonies.

Marine mammal breeding colonies exist in considerable numbers but are not mentioned. Reference by the consultant is to numerous sea mammal haul-outs only. Within a short distance of proposed tanker routes are several breeding and pupping colonies of harbour seals. They haul-out on shallow intertidal areas from the Oak Bay Islands to Race Rocks. The only



Steller Sea lion haulout sites in the Marine RSA (from the Stantec "Marine Birds - Marine Transportation Technical Report Volume 8b")

pupping colony for the Northern Elephant seal in Canada started in 2009 at Race Rocks Ecological Reserve, after extirpation early in the 20th century. The significance of allowing this species, with such a limited range, to re-establish and the responsibility to protect this species is considerable. FER

believes that these colonies need to be included as indicators as top predators are a good indicator of marine health.

9. Recovery and removal of species impacted by an oil spill and human safety.

FER is aware that recovery of oily birds is extremely

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low and bird experts recommend that recovery of birds post oil spill is not warranted. There has been a publically-held belief that marine birds that are oiled can be successfully cleaned and will recover. A report on the Gulf oil spill concluded that well-meant public efforts to save a specific individual wildlife animal actually prolonged suffering of that individual as death was not avoided. The study concludes "According to serious studies, the middle-term survival rate of oil-soaked birds is less than one percent," Gaus says. "We, therefore, oppose cleaning birds." <http://www.spiegel.de/international/world/gulf-of-mexico-spill-expert-recommends-killing-oil-soaked-birds-a-693359.html>.

10. Numeric baselines for all indicators and specific numeric mortality estimates link to worst case spill and smaller spill scenarios for species indicators.

The Oil Spill report (B19-14_V8B_TR_8B7_01_OF_24_ERA_MAR_SPILL_-_A3S4K7) also notes that the absence of baseline information in advance of the Exxon Valdez's oil spill made the recovery estimate difficult. We concur and believe it is the role of the National Energy Board and Kinder Morgan to put these in place and link probable



mortality (impact) to selector indicators and define recovery and provide an estimate of recovery within the impact areas. We do not believe baseline work and mortality estimates are frivolous as they are needed to prepare properly for an oil spill. Much detailed planning and forecasting is needed pre-project approval.

11. Involvement of ENGOs with continued monitoring and citizen oversight during the life of the project.

The residents living along the tanker route have increasingly been providing greater amounts of baseline data on natural ecosystems through

NGOs like FER. Ecological Reserve wardens provide extra eyes and ears for BC Parks. The best established monitoring/research in the 17 marine ERs along the tanker route is found at Race Rocks ER website (http://ecoreserves.bc.ca/portfolio_item/race-rocks-97/) which is supported partly by Pearson College. Pearson College uses the Ecological Reserve as a student lab and supports an award-winning Race Rocks website (<http://www.racerocks.ca/wp/home/>). Baeria Rocks ER (http://ecoreserves.bc.ca/portfolio_item/024-baeria-rocks/) is linked to the Bamfield

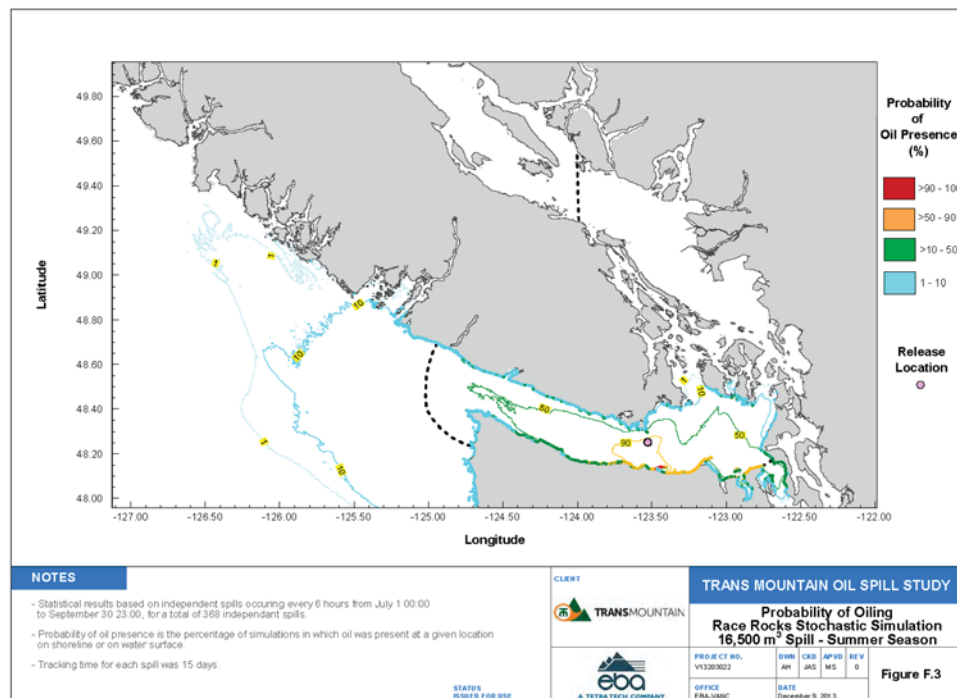
Continued on page 13

Marine Field Station (<http://www.bms.bc.ca/>), another research-oriented NGO.

More NGOs are taking on responsibilities for environmental monitoring and research. FER knows that governments will retain authority in legislation over natural resources, but both provincial and federal agencies have steadily decreased funding over the decades for monitoring. This trend is not expected to change over the next few decades, so that NGOs who have the interest and expertise, will to the extent possible, continue to provide a monitoring role and ideally this role could be formally expanded. Large projects like Kinder Morgan's pipeline expansion must include support for long-term monitoring in their business plans and look to cooperative science-based NGOs as practical, cost effective approaches as part of their monitoring obligations. The consultants for Kinder Morgan did not identify an ongoing role for Kinder Morgan in long-term monitoring. There is a role for Kinder Morgan, and a monitoring framework is needed to define that role and identify partners.

12. Chronic oil spill hazards to ERs.

It has been recognized that the threat to marine ecosystems from chronic oil spills has had a large cumulative



Model # 1 - probability of oil presence after a spill in the summer time at Race Rocks.

impact. For a better understanding of chronic oil access:

(<http://www.earthpace.com/index.php/about/our-projects/37-chronic-oil-pollution>)

FER is concerned with the current estimate of the chronic oil pollution associated with shipping and the increase in oil pollution that will likely be added by tanker traffic from the Kinder Morgan project.

As Friends of Ecological Reserves prepare for our Intervention at the National Energy Board hearings for the Kinder Morgan Trans Mountain Pipeline Expansion Project, we have been made aware of sources of research that have been carried out for environmental assessment (<https://docs.neb-one.gc.ca/ll-eng/llisapi.dll?func=ll&objId=2393350&objAction=browse&viewType=1>). One set of docu-

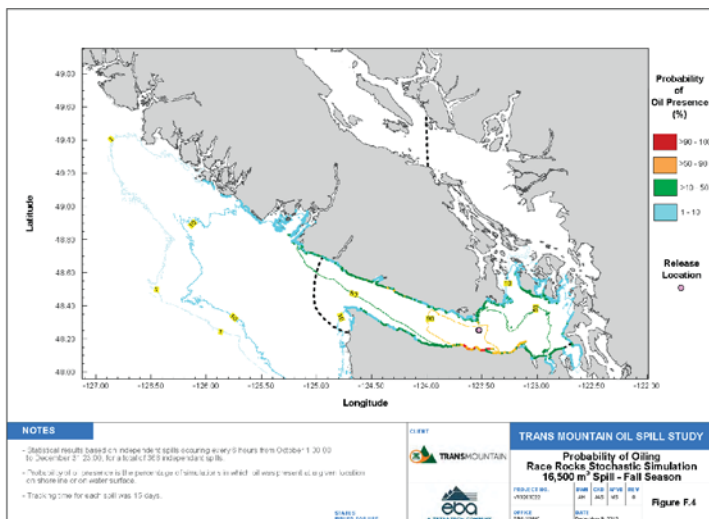
ments provides examples of models showing spill scenarios at various locations along the tanker route. The example above in Model #1 shows a model of a spill scenario for Race Rocks Ecological Reserve in the Strait of Juan de Fuca in the summer time.

On the following page is the model for this same oil spill, but in the winter time at Race Rocks (Model #2). Also shown are two models for an oil spill occurring in Haro Strait. Model #3 shows the probability of oil reaching various locations and Model #4 shows the time it will take for the oil to reach those shores.

Lastly, Model #5 shows the average thickness of oil spilled in the Strait of Georgia after 48 hours.

These are just a sample of the graphs and charts provided for each site and for each season. They are based on wind condi-

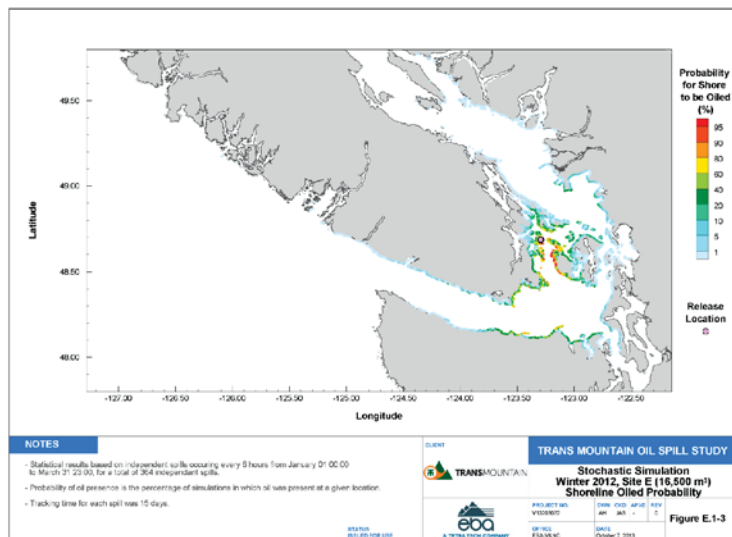
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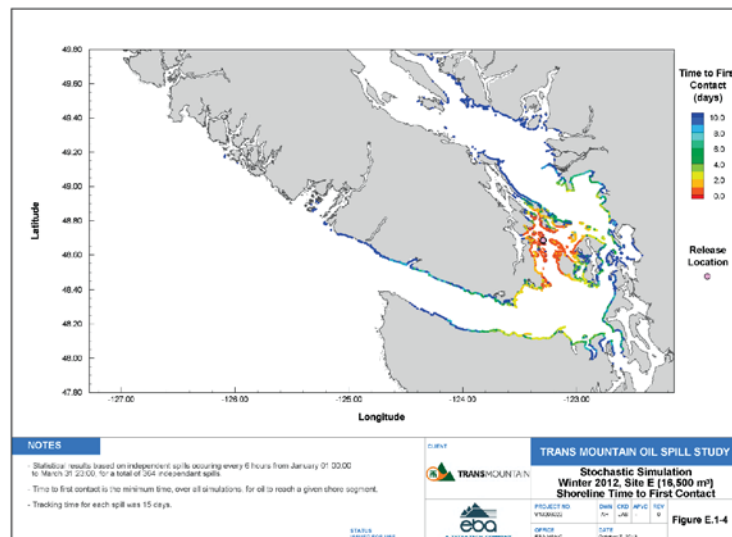
Model # 2- probability of oil presence after a spill in the fall season at Race Rocks.

tions present at the time of the simulation. These models show the vulnerability of our marine Ecological Reserves.

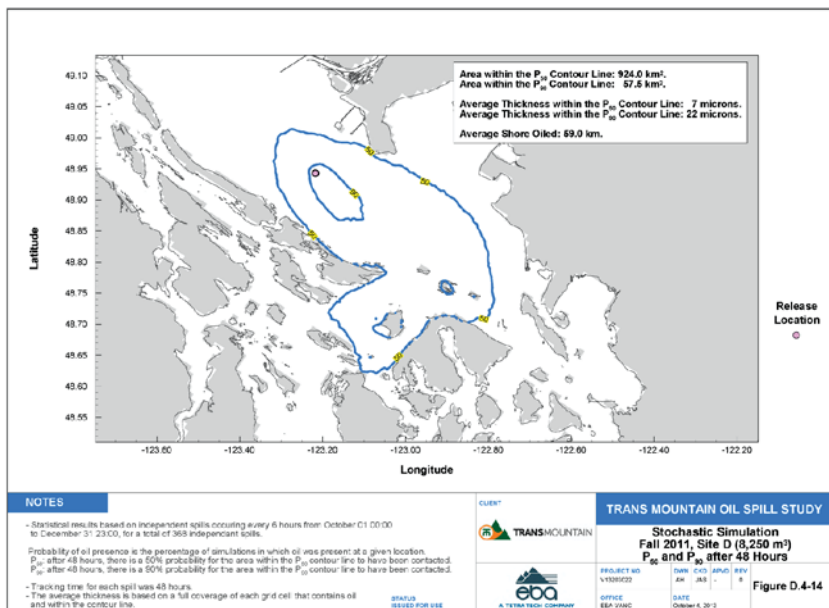
Members of the Friends of Ecological Reserves who have concerns about the effects of chronic and catastrophic oil spills on the marine Ecological Reserves on Southern Vancouver Island are encourage to contact us with their concerns at: ecorserves@bc.ca or garryf (use the @ sign) gmail.com.



Model # 3 - probability of shore to be oil after a spill in the winter time in Haro Strait



Model # 4 - time to first contact after a spill in the winter time in Haro Strait



Model # 5 - average thickness of oil spilled in the Strait of Georgia after 48 hours.

Fenger and Garry Fletcher (see last Winter LOG 2013). The presentation for FER was prepared by Mike Fenger and Jenny Feick and explained what a new conservation vision for BC would include. We remain concerned that the network of protected areas are not suitably linked and won't carry BC's biological diversity through climate change and accelerated development pressures. Our vision included First Nations at the same strategic planning table as others making a living off the same land base, and resource management decisions made at a local level with those who have lived a life time in their local landscapes. This is considered to be the best model for sustaining both local economies and ecosystems.

- ▶ Sadly there is nothing new to report on Marine Protected Areas from last year. The federally lead processes continue to be frustratingly slow. No new marine protected areas have been added to the existing one percent on the west coast of BC even though there has been a decade-long Federal government goal to expand to ten percent. FER was involved with both the Race Rocks and Scott Island consultation processes – both now complete – and we are waiting to hear from the Federal government about their consultation with First Nations.
- ▶ There have been no new terrestrial ERs added to the Ecological Reserves system

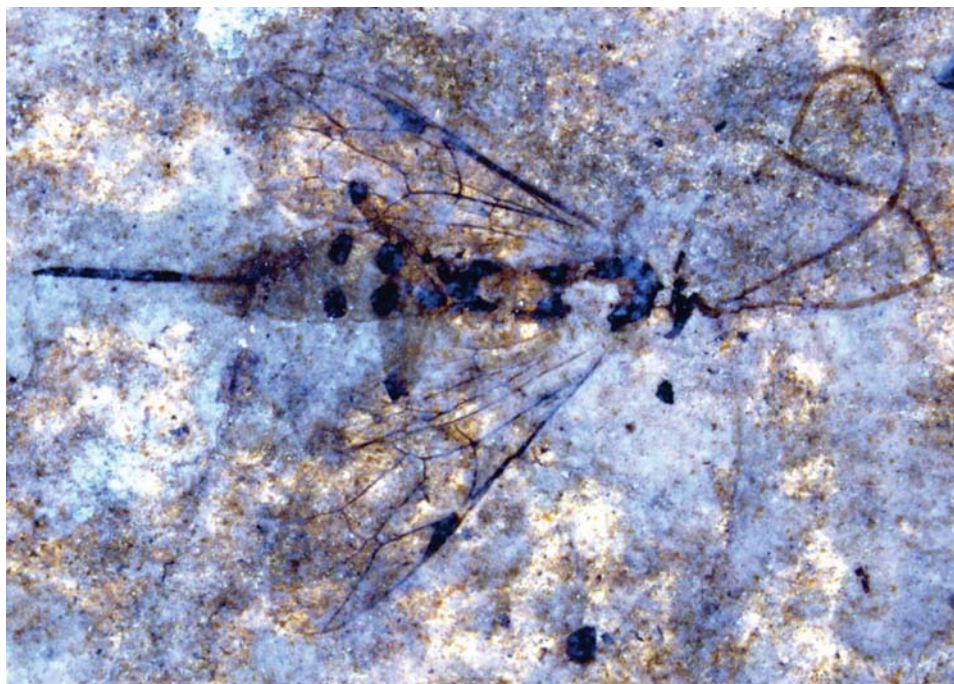


Image of a fossilized Ichneumonidae provided by Dr. Bruce Archibald who was the guest lecturer at the 2014 FER Annual General Meeting

but Garry Fletcher did make a field trip to the Sunshine coast to look at an ER candidate and we are optimistic that this site will become a new Ecological Reserve some time in the near future.

Goal 4. Raise Awareness of the Value of Ecological Reserves

- ▶ Our most useful asset to help raise awareness of ERs is the re-designed FER website completed in 2011. Garry Fletcher, with his knowledge of outreach for the Race Rocks website, has applied his talent and energy to posting hundreds of new articles to the FER website. The FER website is now becoming a significant resource for researchers and the public with regard to knowledge and baseline information on the 150 ERs in BC. Readers please take a look at the FER website <http://ecoreserves.bc.ca/>.

Changes are being made daily thanks to Garry. He is looking for help from wardens and others to continue to add to this ER resource.

- ▶ We successfully produced two issues of the newsletter the LOG thanks to Louise Beinhauer our LOG editor.
- ▶ FER has applied for intervenor status on the scheduled NEB Kinder Morgan hearings that would affect a large number of ERs in the Strait of Georgia and the Juan de Fuca Strait. We were granted intervenor status and have applied for participant funding support. Since we have no paid staff, we needed help to engage in the National Energy Board review process. (see separate article on p. 7)
- ▶ We again hosted a public speaker for our annual general meeting and this time we were able to draw from a well known fossil expert, Dr.

Continued on page 16

Bruce Archibald. FER notes that there are already a few ERs whose primary purpose is to protect fossil sites and our invitation to Dr. Archibald is to begin dialogue on whether more fossil sites are suitable candidates for ER status.

Goal 5 Sustain A Nurturing and Effective Organization

- ▶ We were able to get many FER Board members out in the field and thanks to Stephen Ruttan for his efforts in this regard. Our field trip account to Galiano Island ER was written up in the 2013 Winter Log. Our annual Race Rocks field trip is always popular with members and a source of new memberships as well. See page 6 for the write up about the May 2014 trip.
- ▶ We thank Habitat Acquisition Trust (HATs) for the use of their board room to hold our monthly board meetings. FER remains a small NGO with no regular staff and no office space.
- ▶ Thanks also to the summer west coast beach barbeque hosted again by Garry and Helen Fletcher.

What is the path ahead in 2014? Here are some of possible directions for the FER board in the up-coming year but the real direction and commitment will be discussed and decided on at the monthly Board meetings.

Goal 1. Support for the ER Wardens Program

- ▶ Work with BC Parks to continue to increase the number of ER wardens with the goal of having at least one warden in



Just a few of the FER Board members and guests attending the annual summer BBQ on the beach, hosted by Garry and Helen Fletcher. L to R: Val Hignett, Garry Fletcher, Michael Brinsmead, Jeanne Murphy and Liz Williams.

all ERs. We hope that we will get the opportunity to work closely with interior Parks Region Areas Supervisors in the same way afforded to FER by the Coastal ER Legacy Project.

- ▶ We hope to explore more fully, funding opportunities to help wardens training and data collection and to be in a position to help support researchers focused on ERs.
- ▶ FER will continue to encourage regional ER warden and Area Supervisor meetings to build stronger relationships and sort out ER priorities for management and research opportunities.
- ▶ Other activities to be decided (TBD).

Goal 2. Support Studies In ERs

- ▶ It takes funds to support researchers and FER hopes to find new sources of funding to enable ER-specific research. Sometime a small amount of funding can make

the difference in obtaining new data on an Ecological Reserve. FER hopes to be in a position to offer assistance to those who choose to add to the research legacy of specific ERs.

- ▶ It is hoped that our application for intervenor funding in the National Energy Board Trans Mountain Expansion Project hearings meets with success. We are concerned about the increased risk to the 17 Marine Ecological Reserves along the proposed tanker route and how best to respond to a potential oil spill.
- ▶ There are many quiet donors who have supported FER over the years and we are thankful to them. We especially wish to thank those behind-the-scenes-donors for their faith and continued support. We also need to find new sources of funds to channel to researchers willing to add to field studies to be able to

Continued on page 17

fresh water and works within the parameters of a sustainable and eco-friendly environment. She collects valuable data and is an asset to the work and life on the Rock. Lester Pearson College (UWC) hires and funds the support of an eco-guardian for Race Rocks as part of its commitment to managing the facilities and the reserve at Race Rocks. Courtney adapts to her rugged but very interesting environment on a rock in the middle of the racing and raging torrents of the Strait of Juan de Fuca.

A young eagle provided interesting and comic relief by chasing and being chased by the gulls and vying for the best lookouts on the Rock. Naturally, the eagle prevailed.

In small groups we climbed to the top of the lighthouse where Courtney answered questions



and told us more stories about the now automated lighthouse.

On the ground Garry gave mini-talks about various aspects of the Rock. He showed us an old decommissioned cannon that had been salvaged from a dive and once thought to have been used as ballast for a ship. For such a small rock there are many stories and simply not enough time.

We were only on the Rock for about 90 minutes but it was a thoroughly enjoyable and interesting trip. Thanks to FER and Pearson College for making this type of experience possible. Thanks also to FER Board members for their important contribution to the care and maintenance of our Wet Coast ecology and heritage.

"President's Report...." continued from page 16

increase understanding of basic ecosystem functions. FER believes it could efficiently allocate funds to ERs if provided resources in the order of \$250,000. That kind of funding would enable us to manage appropriate baseline data to underpin an ER's research. We dream, of course, to be in a position to add data needed for understanding existing ERs and what may be needed to carry the biological legacy into an uncertain future.

- Others actions to be decided.

Goal 3. Support Development of A Resilient Science-based ER System

- FER will continue to work with

larger conservation organizations with similar goals of improving marine and terrestrial protected areas.

- FER hopes there will again be collaboration with Environmental organizations working on common problems.
- Others TBD

Goal 4. Raise Awareness of The Value of Ecological Reserves

- Continue our newsletter the LOG and our Annual General Meeting and our annual public lecture series.
- Maintain the website and add reports and images as these are made available and encourage wider use by wardens and Area Supervisors.
- Others TBD.

Goal 5. Sustain A Nurturing and Effective Organization

- Increase membership and build a larger operating budget.
- FER intends to remain volunteer run and aims to stay at a size that does not require staff.
- We are so thankful that Liz Williams has joined the FER Board as she brings considerable experience to the table.
- Continue to plan our field trips to ERs and to have a sense of fun in the course of volunteering.
- Others TBD.

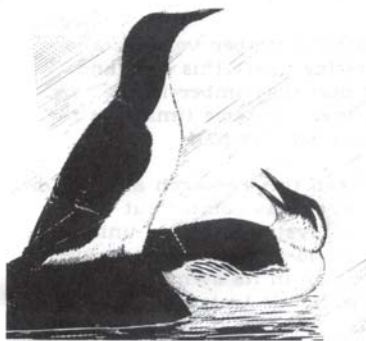
Thanks for your time and support to the members, donors and ER wardens and the Board members.

Irony 'Blast From The Past'

By Louise Beinhauer

While I was preparing this Spring/Summer 2014 edition of the Log, I had asked the FER Board for some suggestions for additional articles. I knew I was going to come up a bit short this issue. Our Accountant Michael Brinsmead suggested that I go back in our files and re-print an article from an old edition of the Log.

I thought this was a brilliant idea, and began looking through the archived paper versions of the Log for 1989. This was the second year of the Log that I could find and it was produced well before computer word processors and layout software were common place. The President at that time was Vicky Husband. As you can see from the reproduced page contained here, the "ironic" or maybe I should say "unfortunate" coincidence was the subject of these two articles from March 1989. I don't know who wrote them as there is no attribution, nor do I know who illustrated the articles. Whoever you are, thank you!



OIL SPILL ON THE WEST COAST!

On January 3, 1989 oil from a sinking barge off Washington began washing up on Vancouver Island's southwest coast. At first it came in like thick gooey patties, splattered across the beach. Loons, auklets, murrelets, cormorants, and many other diving sea-birds washed ashore in almost indistinguishable globs of tar. Later, the oil came in as slicks or small globlets covering logs, rocks, and whole sections of beach. The oil-spill that we have dreaded for years, but hoped would never happen was coming ashore on our west coast doorstep.

I went out to help with the clean-up on the week-end of January 9th. As usual, the surf, sea-air, and rugged landscape of Pacific Rim took one's breath away with its wildness and grandeur. However, close inspection of the beach with patches of oil interspersed and spread over logs, near streams, and washing in with every tide was positively frightening.

What was happening to the sea-birds wintering off the west coast? What about the grey whales that migrate and feed off the bottom of Long Beach? Would the oil spill reach the most vulnerable of all creatures, the sea otter? What about all the inter-tidal animals and plants?

Only time will tell us the true impact of this "minor spill". Surely it has affected everyone and every living thing on the west coast in some way. If only it opens our eyes to the dangers of offshore oil drilling, the need for a comprehensive contingency plan, and the dangers of tanker traffic off our stormy shores, then maybe this oilspill is a lesson to be learned from. Oil and water don't mix! Keep the federal and provincial moratorium on offshore oil exploration in place!

Oil in Ecological Reserves



The oilspill impacted every Ecological Reserve on the west coast of Vancouver Island, including Baeria Rocks, Clelland Island, Checleset Bay, Solander Island, Sartine Island, Beresford Island, and Triangle Island. These reserves were set aside to protect sea-bird colonies and it is fortunate that the spill did not occur during the breeding season, but estimates of birds killed ranges from 30,000 to 100,000. This will significantly affect our sea-bird populations, especially Common Murres (estimated that 17,000 were killed) which are particularly vulnerable to oil.

Jane Watson was at the Checleset Bay sea otter colony where they found a dead oiled female sea otter. Oil had washed up on many of the reefs and islands which the sea otters raft up in winter. Battle Bay, Gull Island, the Acous Peninsula, and the Bunsby Islands were among the areas significantly affected. It is not known as yet if there was more sea otter mortality due to the spill. Jane is putting in funding requests to do another population survey this year.

FRIENDS OF ECOLOGICAL RESERVES MEMBERSHIP FORM

Box 8477 Stn Central, Victoria, BC V8W 3S1

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☐ New membership

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☐ Where most needed

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Bodega Ridge Find

While enjoying a hike along Bodega Ridge, Galiano Island on June 2nd, we came across this flower in a gravelly patch close to a magnificent stand of Manzanitas. We have tentatively identified it as a variant of *Clarkia amoena* also known as Farewell-to-spring. If somebody else can verify this, or make another suggestion, it would be appreciated. Email Louise Beinhauer at lbeinhau(use the @ sign)telus.net.

Have a great summer!



The Log



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

Email:
ecoreserves@hotmail.com
Website:
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