



# VALDES ISLAND CONSERVANCY NEWSLETTER

## President's Message

Marja de Jong Westman, Biologist



We hope this wonderful newsletter provides a window into the array of topics we heard are of interest to the island community. As you pour through its pages, you'll see that the return of the Bioblitz was a highlight of the Conservancy's year.

As articles were being submitted I was reminded of both the mandate and the value of the work of the Valdes Island Conservancy as well as the words of Dr. Robin Wall Kimmerer (mother, scientist, botanist, author of *Braiding Sweetgrass*, decorated professor, enrolled member of the Citizen Potawatomi Nation), "It's a sign of respect and connection to learn the name of someone else, a sign of disrespect to ignore it. And yet, the average American can name over a hundred corporate logos and ten plants. Is it a surprise that we have accepted a political system that grants personhood to corporations, and no status at all for wild rice and redwoods? Learning the names of plants and animals is a powerful act of support for them. When we learn their names and their gifts, it opens the door to reciprocity."

As members of an island community who rely on each other, we take the time to know our neighbours, their names, their stories. As members of the Conservancy we have taken the time to reach beyond the "cabin trail" and start to get to know the peoples and the stories of the Lyackson First Nation community whose lands we have settled upon.

Together, these two communities were able to deliver a "powerful act of support" for the island's animals and plants during the Bioblitz.

The Bioblitz, for all involved, provided a platform to honour nature, to learn the names of the island's plants and animals, and to be reminded of the gifts nature delivers. Moments of engagement like this also provided the opportunity to be with each other and to hear each other's stories and I think both demonstrate and open up pathways for reciprocity.

Beyond the human connections and growing friendships across the communities of Le'eyqsun (Valdes) Island, which are to be celebrated LOUDLY on their own, the data collection of our citizen science efforts is being added once again to federal, provincial and community conservation data bases. Le'eyqsun (Valdes) Island is on BC's biodiversity radar screen. The VIC is a key contributor to that screen.

Thank you for your continuing involvement and support, Marja.

*As a biologist-lecturer-writer at Capilano University, Marja thrives on sharing her knowledge and stories of nature with both her students and islanders - many of her stories have grown up from years of observations made on Valdes Island.*



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## Mission Statement

To conserve and protect the existing biological and cultural communities of Le'eyqsun (Valdes) Island

## Vision Statement

That Le'eyqsun (Valdes) Island be recognized for its globally-significant and locally-rare biological diversity.

## Board Members

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## Newsletter Layout

Mark and Jane Bateman

We are so proud to share this newsletter with you. It is a true community effort and you will find a little of everything here: beautiful photos, joyful articles, nerdy articles, some deeper and more resonant content too – all of it food for welcome thought. The commonality is one of love: our love for this island, its beauty and all its beings. Make no mistake, among the Gulf Islands, Le'eyqsun (Valdes) Island is absolutely singular in terms of the numbers, types and abundance of species that live here.

Increasingly, the island is also faced with a changing climate, whose blade is more sharply pressing against its throat. The effects are hard to miss. This past August was the hottest on record for us in BC. Last summer saw our record-breaking heat dome, which scientists say was “virtually impossible” without human-caused carbon emissions. Whether it's the recent disappearance of the kelp forests we've seen from warming ocean water (that we are tracking with the Mayne Island Conservancy) or the sobering effects of the heat dome on the island's most fertile and unique intertidal habitat at Blackberry Point (see p.8 of Marja's Bioblitz summary), or the hotter drier summers that are seeing the trees pushed to their limits, and with Western red cedar, dying altogether.

What is clear is that all of us must move off fossil fuels much faster than we thought, electrifying how we heat our homes and transport ourselves and goods within years, not decades. With our off-grid lifestyles on Le'eyqsun (Valdes), we know the power of solar, the joys of growing our own veggies on our front decks rather than buying produce that is trucked up from California, and how to live with a lighter footprint on the land while celebrating its many gifts in return. More than most we also know the power of

community and networks to strengthen resilience. Just as trees in a forest network through their roots to support each other and build resilience to stressors (see Christina's book reviews p.22), all of us on this island are similarly stronger when we connect more and in new ways.

Despite a pandemic hiatus, the conservancy's Bioblitz this summer was a great galvanizer of those connections (see p.5 for photos and an article on what transpired). We welcomed back many veteran Bioblitz attendees but were delighted to introduce many new souls to this biologically jam-packed and adventurous weekend event, especially those from the Lyackson First Nation, whose generously shared knowledge and perspectives (see Tyler James' piece, p.3 that shares with us not just the history of his ancestors on this land but also what reconnecting with that heritage feels like) are a profound gift that make us feel both humbled, grateful and hopeful.

**“Too many Canadians still do not know the history of Aboriginal peoples' contributions to Canada, or understand that by virtue of the historical and modern Treaties negotiated by our government, we are all Treaty people. History plays an important role in reconciliation; to build for the future, Canadians must look to, and learn from, the past.”**

The Truth and Reconciliation Commission

Let us all build for the future and learn from the past.  
Happy reading everyone!

Editors

Anne Shibata Casselman and Jason Camp



2022 Bioblitzers wander the forest on Le'eyqsun (Valdes) Island.

Photo: Marcie Welsh



Where do we come from? There are many stories of how the first people came to be. One story tells that the first people were woven from tumulh (ochre) and sluwí' (cedar bark). The creation story of the Le'eyqsun Mustimuhw tells us that we come from those who descended from the sky world. The first people climbed down a tree that reached into the heavens, the spirit world. These ancestors wanted life to flourish on the tree that brought them to this earth and asked the rodents to gnaw at the trunk until it fell over. The people sang and sang for days to keep the rodents' spirits up and asked that they be careful that the tree not break. As the tree fell, however, it did break in two. One half now known as Galiano Island and the other half now presently known as Valdes Island, or Le'eyqsun – the broken end of the Douglas-fir tree.

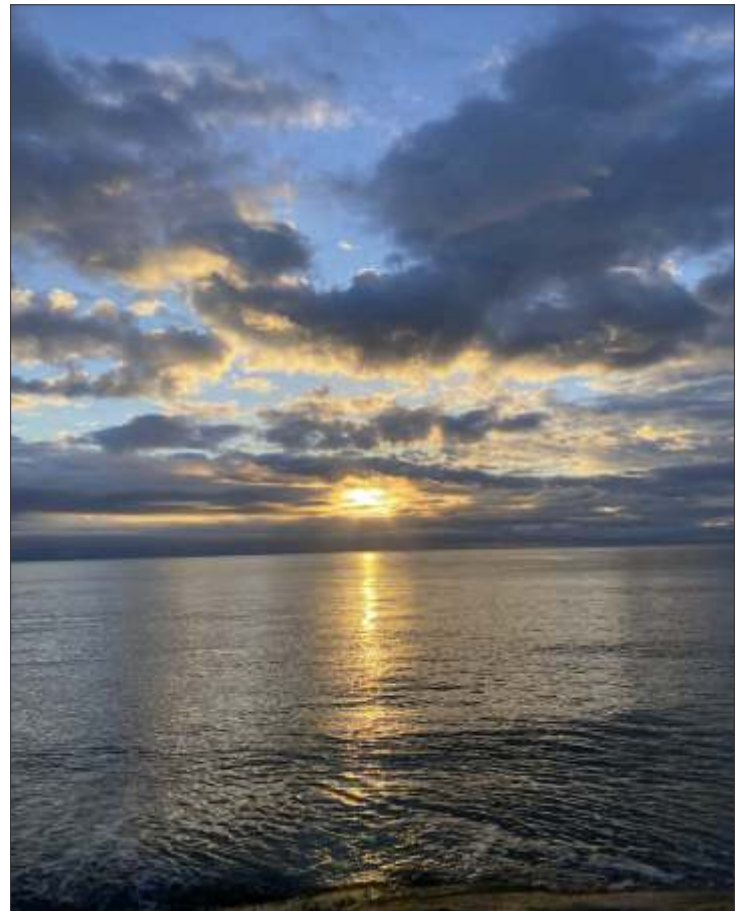
This story, and stories like this, inextricably link the people to the land, and the land to our ancestors. It is all cyclical. For all the bits of stories we carry with us, there are countless pieces that are lost to time. The further back you go, filling in these gaps can be like chasing a shadow or trying to grasp fog in your hands as your imagination tries to understand what is missing. But these stories have endured nonetheless. They have persisted through history that is told, history that is written, and history that is observed. For us to understand where we come from, we have to weave together oral history, ethnohistory, and archaeology.

The written history for our territory only dates back to 1792 – when Spanish cartographers Cayetano Valdés y Flores Bazán and Dionisio Alcalá Galiano circumnavigated Vancouver Island. From their minimal interactions, there is nothing significant to note. They simply passed through the area for the purpose of mapping and returned to Spain. Many places are named for these early explorers, their crew, their ships, and even the politicians of their time courtesy of Captain G.H. Richards. In 1860, he chose to honour Valdés and Galiano many decades after their expedition instead of acknowledging the longstanding names given by the people who lived there.

Early explorers kept detailed logs that connect us to our lands and people. Notably to a Chief, who was a child when Valdés and Galiano passed through in 1792, who would rise to prominence in the early and mid nineteenth century. He was recorded extensively in the Fort Langley Journals during the seasonal migrations to the Fraser River. His name was recorded many ways, but most consistently as Shashia. "Tsosieten" would be a better attempt to

capture the Hul'q'umi'num' sound. In these journals, he accounts for nearly 60 percent of all trade with the Hudson's Bay Company.

His ability as a trader and leader would prove to be very important, not just for the people of his village, but the Salish Sea at large.



Salish Sea sunrise from Starvation Bay Photo: Mariann Seward

For countless centuries, the Lekwiltok, the people from the north, were at war with our people. They would raid the villages in the Salish territory and take women and men as slaves with them back to the north.

Leading men Tsosieten and Lexawales gathered the chiefs and devised a plan of attack that would be the last major conflict between the Salish and the Lekwiltok. This would become known as the Battle at Maple Bay. The enemy forces were led into the bay by a decoy canoe, and when they were in deep enough, all exits by land and sea were closed off. Though it is not known how many were killed, it is said that the entire bay was red with blood. The devastation was so total, that peace was the only viable aftermath. Through a potlatch and the arranging of marriages, the Lekwiltok and Salish wars ceased.

# The History of Le'eyqsun

## Continued from page 3...

For a prominent Chief such as Tsosieten, not much was written about the last of his days. Only that he died alone on Le'eyqsun (Valdes) Island. Before his end, however, there was a need for a chief. In the absence of Tsosieten, we are introduced to a young Siem by the name of Thee-o-latza. Thee-o-latza's father was murdered and so he sought revenge, and in avenging his father, he eliminated a man also wanted by the British Royal Navy. For his efforts, he was awarded a captain's uniform. A key figure for the territory, his portrait is in the famous mural in Chemainus.




Photo: Mariann Seward

Story after story, a pattern begins to form. We are descended from strong leaders and warriors. The archaeological record gives us a glimpse of the ancient battles that have taken place on the island. The artifacts of war and hunting are seemingly never ending. Arrowheads, spearheads, knives and tools made of stone or bone remain and are there to find for those who know where to look.

By looking closely at these artifacts, each village tells its own story. Cardale, or as it should be, Tth'exul, with its burial caves, war trench, and endless basalt – the material from which arrowheads are made – and strategic vantage points, is a clear base for a warrior village. Le'eyqsun (Shingle Point), with its once healthy clam gardens and spacious meadow, is an ideal village location for the general family. The remnants of ancient houses show us this. Blackberry

Point is a harvesting site for many species of sea life, and the bluffs above are a perfect safe haven from potential invaders.

Our ancestors weren't just warriors. Our people adapted. Our people endured. From waves of smallpox, conscription, reserve creation and pre-emption; to Residential School stripping current and past survivors of their, our, language and culture; to being deemed and seen as less human and therefore afforded less rights; to being dehumanized by being assigned a number and registered as "Indian." Our people endured.

As the world modernized and grew smaller, there simply wasn't enough room for the old ways of life. A way of life that remained the same for thousands of years, nearly forced out of existence in mere decades. Teachings nearly lost as the stories fell off with the theft of land and language. Individually, we still hold within us pieces of the past. Together, we can weave the gossamer tendrils of history and reconnect to the lands that once nourished our ancestors. The land they provided for us to walk, and sing, and dance, and live on. Where we come from is very much where we are going. Simply put: home. 

*Tyler James is a descendant of Thee-o-latza. He was born and raised in the Cowichan Valley but his family lineage is from the T'eet'qe' village on Le'eyqsun (Valdes) Island. He currently works as the Cultural Records Coordinator for Lyackson First Nation.*



Left to right: Brian Hurst, project manager; Tyler James, author; Karyn Scott, consultant; Mariann with grandmother Jennifer Jones; behind - Frank Conibear  
Photo: Warren Warttig





Bioblitz 2022 participants gather at Starvation Bay.

Photo: John Reynolds

## An Island's Natural Legacy

Islands are like laboratories of evolution. They are isolated. Species which are on an island breed with those of their own kind often with little emigration and immigration of individuals from other locales. Volcanic islands such as those of the Galapagos and the Malaysian archipelagos which captivated both Charles Darwin and a parallel-thinking natural historian Alfred Wallace, are particularly grand laboratories as these islands emerge naked and then are populated by chance. The first species which get there often undergo speciation and radiate out into more and different species.

Continental islands such as Le'eyqsun (Valdes), while now isolated has not always been, and has in the past been connected to the mainland but its populations of species still show some of the dynamics of isolated populations which Darwin and Wallace observed in their volcanic laboratories.

### So where are these ideas leading? Why is the Bioblitz on Le'eyqsun (Valdes) Island so important?

A comprehensive review of the **Status of Biodiversity in British Columbia, Taking Nature's Pulse, 2008** listed 23 major findings and captured them under the following categories: ecosystem diversity, genetic diversity, special elements of biodiversity, threats to biodiversity, and knowledge and capacity. Every time I review

this all-encompassing document, I am reminded of the value our Bioblitz effort and the rich landscapes of Le'eyqsun (Valdes) Island. [http://www.biodiversitybc.org/assets/pressRelease/s/BBC\\_StatusReport\\_Web\\_final.pdf](http://www.biodiversitybc.org/assets/pressRelease/s/BBC_StatusReport_Web_final.pdf) Austin, M. A. et al. 2008. Taking Natures Pulse: The Status of Biodiversity in BC – Biodiversity BC

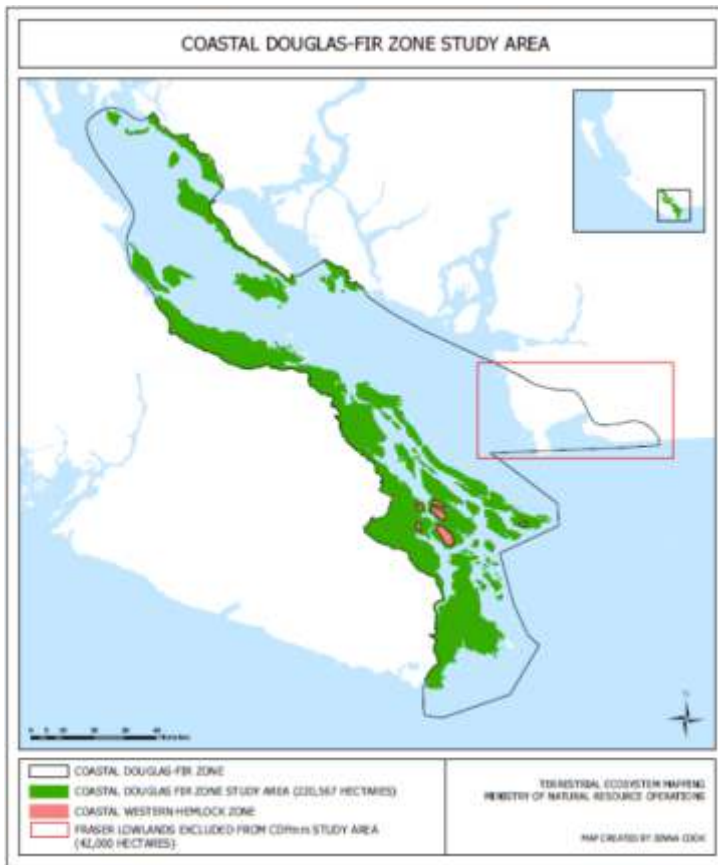
### Of the report's 23 major findings, the following relate closely to Le'eyqsun (Valdes) Island:

- #1.** At the broad scale, four biogeoclimatic zones, representing 5% of British Columbia's land base, are of provincial conservation concern. The four zones include 3 dry forests and one grassland zone.
- #4.** The Coastal Douglas-fir biogeoclimatic zone is the rarest biogeoclimatic zone in British Columbia and is of great conservation concern.
- #6.** Significant areas of wetlands in British Columbia have been converted or degraded, particularly in the two Major Drainage areas of greatest conservation concern.
- #18.** Alien species are seriously impacting British Columbia's biodiversity, especially on islands and lakes.
- #19.** Climate change is already impacting British Columbia and is the foremost threat to biodiversity.
- #22.** Gaps in our knowledge of biodiversity in British Columbia create major challenges for effective conservation action. There is little local taxonomic expertise and many existing experts have retired and not been replaced. As elsewhere in the world, an "extinction of experience" is occurring.

### Looking closer to the application of these findings:

- Le'eyqsun (Valdes) Island is in BC's rarest biogeoclimatic zone and one of the three dry-forest zones assessed as being of conservation concern - the Coastal Douglas-fir (CDF) zone. Viewing the map you'll realize its small footprint. It makes up 0.3% of the province's total area. Some of its associated ecosystems have lost 75% of their former area.

<https://www.cdfcp.ca/about-the-cdfcp/>



The Garry oak ecosystem, centered primarily on warm steep south facing slopes and coastal rocky outcrops is one of the CDF's ecosystems which is significantly diminished in size with a mere 5% left in its original condition. Historically this system was maintained by the use of fire by the First Nations to promote the growing of edible crops and prairie-like landscapes for hunting ungulates.

- [https://stewardshipcentrebc.ca/PDF\\_docs/GOERT/Guides/GOERT-restoration-booklet-c2.pdf](https://stewardshipcentrebc.ca/PDF_docs/GOERT/Guides/GOERT-restoration-booklet-c2.pdf)

- The "lakes" of Le'eyqsun (Valdes) Island, as islanders refer to them - the South Beaver Pond and Long Lake in the north, as well as

the important postage stamp ponds mid-island and at Blackberry point, like other wetlands are biologically diverse and productive ecosystems and are disappearing in vast areas of the province. The pond at Blackberry was full of tadpoles of the Pacific Chorus Frog at the time of Bioblitz. The waters were nearly vibrating due to the tadpole tails! These wetland landscapes will be critical to the survival of many species as we live through climate extremes.

- Islands, because of being isolated and surrounded by what can be barriers to movement (expanses of ocean for a garter snake, or newt, or a lichen or a flowering meadow plant) are often home to distinct subspecies which possess genetic recipes which separate them from others of their kind.
- Glacial history and small population sizes of species on islands such as Le'eyqsun (Valdes) further contribute to the evolution of distinct subspecies.
- Disturbed sites such as those which have been subjected to logging and human habitation are often vulnerable to introduction of non-native species, some of which can outcompete native species and become invasive. Human activities on Le'eyqsun (Valdes) have contributed to the introduction of non-native species and although invasive species such as broom, holly, periwinkle, burdock, and tansy ragwort have been identified on Le'eyqsun (Valdes), with effort they could at this time be easily eradicated.



European holly  
*Ilex aquifolium*



Pacific Chorus Frog  
(tree frog),  
*Pseudacris regilla*



- Climate change marked by the shifts in both the seasonal pattern and values of temperature and rainfall is triggering changes in the survival and distribution of species which are adapted to previous climate regimes. Species, while inherently adaptable, don't always survive such changes especially when the changes occur over short time scales. Overall and at a continental level, we are seeing a movement northward of species. The diversity of and connections between the relatively intact landscapes of Le'eyqsun (Valdes) Island (with the exception of logged areas with monoculture plantings) are just the kind of natural spaces which can support survival and movements of both animal and plant species during periods of climate change.
- There are many gaps in our knowledge of what species exist where and in what numbers in British Columbia. Past studies have shown that only ~3800 species have been assessed of the total 50,000 estimated to be here. Citizen science efforts like the VIC Bioblitz contribute to the data banks used by scientists to assess species and overall assist in conservation efforts both at a local and federal level. The efforts of conservation groups will help but of critical significance and importance is to honour and acknowledge the knowledge keepers in First Nation communities who hold much of the knowledge and have done so historically. This traditional ecological knowledge bank and practises supported the survival and success of First Nations on this coast.

**Question: So what did we contribute and how did we fill in the gaps this year?**

**Answer: Much and with laughter and energy!**



Andy Lamb surfaces from the deep. Photo: Tony Westman

During the Bioblitz's two days, over 900 observations captured over 400 species! Under the tutelage of John Reynolds, Ecologist SFU and Chair COSEWIC (Committee of Endangered Wildlife in Canada), all participants were encouraged to take pictures of every life form seen – from slime molds, mosses and lichens on fallen logs, to unique minute flowering plants and ferns in the meadows, to woodpecker nests in the trees along the blue trail, to moths lured to a bed sheet hung at night in the forest to beasts brought up from the deep by scuba divers.



Geoff and MacKenzie, Geologists; Margo and John, Biologists returning from Blackberry Point. Photo: MDJW

A group of over 40 souls which included islanders from Shah Point to beyond Starvation Bay along with several members of the Lyackson First Nation and LFN staff, a representative from Mosaic Forest Management and on and off the island biologists and geologists participated this year. The moments in nature together were enhanced by much laughter and chatter at both a community lunch and dinner.

Both this year's Bioblitz project and Le'eyqsun (Valdes) Island have their own iNaturalist sites. The iNaturalist platform is a very functional way for islanders to share their sightings and useful to scientists who are looking to check on the distribution and occurrence of species in BC. <https://www.inaturalist.org/projects/valdes-island-biodiversity>

This year's blitz project data can be located by going to iNaturalist then selecting the menu choices of community; projects; Le'eyqsun(Valdes). Here is a direct link to the species information: <https://www.inaturalist.org/projects/valdes-le-eyqsun-island-bioblitz-2022?tab=species>

**Key observations:**

**In the forests:**



Dense understory of the blue trail forest

Photo: Mariann Seward

The second growth forests on the crown land behind the cabins on the island's eastern shore now have characteristics of old growth forests and boast very high levels of biodiversity. The more recently clear cut and monoculture planted white pine forest blocks do not. There are profound differences in the complexity and biodiversity of forests related to their disturbance regimes. Take a minute to look at this video which visually explains this.

<https://www.youtube.com/watch?v=y-eC8Hti5OI>

The less intrusive selective horse-logging which occurred many years back allowed the maintenance of the forest's understory and critical underground fungal networks now known to support regrowth and maintenance of forests via their mycorrhizal networks.



*Plants made the step onto land some 470 million years ago and likely could not have made that step without the support of fungi. Symbiotic relationships between the two assisted both. Recent research indicates that the relationship is more critical than originally imagined and should inform current forestry practices and restoration of forest landscapes. The Mother Tree project as articulated by Suzanne Simard may be of interest to you.*

*[https://suzannesimard.com/research/?doing\\_wp\\_cron=1659417170.0031280517578125000000](https://suzannesimard.com/research/?doing_wp_cron=1659417170.0031280517578125000000)*

**On the shores:**

The intertidal areas of Le'eyqsun (Valdes) had low species diversity compared to findings of other years. The heat dome of last summer which aligned with the lowest tides of the year, wiped out millions of intertidal animals. Of particular note, the normally bursting-with-abundance shorelines of Blackberry Point looked desperate. I was crawling around on my hands and knees looking for the usual suspects and instead of finding 10s to 100s of species I found one of each of so very few. All the rough piddocks, the boring rock clams, were absent and likely boiled in their rock holes last summer.



Layers of rock at Blackberry Point and cliff erosion Photo: MDJW



### In the meadows:



Group studying botanicals on our island meadow. Photo: M Welsh

The coastal bluffs and meadows filled with unique assemblages of lichens, mosses, ferns and wildflowers were robust and once again delivered high levels of diversity. The community trail network meanders through several of these designated sensitive ecosystems.



Cascade parsley fern *Cryptogramma cascadensis*, rare in BC  
Photo: MDJ W



Sea blush *Plectritis*  
Photo: MDJW



Yellow monkeyflower *Erythranthe Guttata* MDJW

### Along the logging roads:

The highest number and greatest diversity of non-native and invasive plants were noted along logging roads. Of particular concern is the Scotch broom now becoming more abundant on the west side of the island particularly in the area of Blackberry Point.



Scotch broom *Cytisus scoparius* Photo: MDJW

More than 150 invasive non-native species exist in the CDF. Yellow broom originated in the Mediterranean. Besides outcompeting native plants it increases the intensity of wildfires.

<https://www.natureconservancy.ca/en/what-we-do/resource-centre/invasive-species/scotch-broom.html>

### Going forward:

It would be of scientific value to conduct a detailed annual survey of Blackberry Point's marine life to note the changes in species diversity and abundance, perhaps gaining insight into potential recovery of the intertidal in light of climate change. This project could be in collaboration with a local university, the Lyackson First Nation, the VIC and likely could be grant supported.

We will communicate with Mosaic Forest Management in regards to the observations of the occurrence of broom and perhaps consider an organized effort of invasive species removal with their support.

This second-growth Douglas Fir ecosystem along with its Garry oak meadows on Le'eyqsun (Valdes)



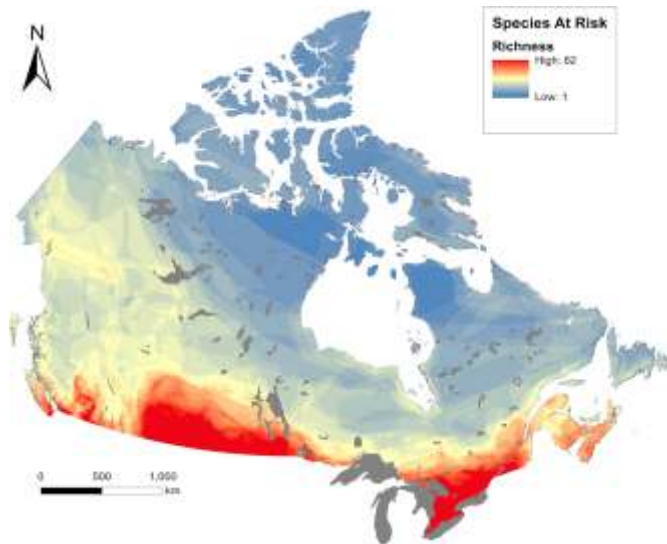
Island are of significant ecological value given the rarity of the ecosystem in the Province. Islanders are encouraged to not create new trails in the island's forests and along the coastal bluffs or meadows and continue to use the ones present.

[https://stewardshipcentrebc.ca/PDF\\_docs/GOERT/Guides/GOERT-restoration-booklet-c2.pdf](https://stewardshipcentrebc.ca/PDF_docs/GOERT/Guides/GOERT-restoration-booklet-c2.pdf)

The citizen-science effort of the annual Bioblitz is a signature event for the Conservancy and clearly important to islanders while contributing much to the data banks being built to document biodiversity in the province.

The information islanders have collected over the last several years has now been captured and help inform a large project – Valdes Island Biodiversity. Click here to see the wealth of life of the island. [VIC biodiversity data visualization](#)

BC is Canada's most biologically diverse province. This diversity is supported and generated via its complex landscapes, large size, expansive coastline and resulting variations in climate regimes, and as is the case for other areas of Canada, the greatest species diversity is in the southern regions.



Range overlap of species at risk within Canada (data from ECCC 2016c). Southern Canada, with the greatest numbers of species at risk, coincides with the most developed areas. <https://www.facetsjournal.com/doi/10.1139/facets-2017-0102>

If you were to superimpose a map of human population density there would be an almost direct alignment to these same areas. The map above shows the outcome of the overlap. If we focus on our home sites, you'll note the hotspots of southern Vancouver Island and the Gulf islands. The rich biodiversity in the area has sustained human populations and provided the basis for societal structure and cultural and economic practises for at least 10,000 years.

### AND where does all this land with each of us?

We know that the collection of east coast cabineers are as diverse as the plants in the island's meadows and the animals along its shores. We also know all islanders do tend to be attracted to the island for its natural spaces. While not expecting everyone to engage full on in keeping species list, your weighing in here and then adding your pics to iNaturalist can add surprisingly much and address the "extinction of experience" identified as a critical issue.

<https://www.inaturalist.org/projects/valdes-island-biodiversity>



2022 Bioblitzers explore the meadow. Photo: M Welsh

One islander's observations this past year triggered a pilgrimage of scientists to the island in search of the satinflower (*Olsynium douglasii*) and our finding of the poison oak (*Toxicodendron diversilobum*) at Blackberry Point has now got the botanical world in a tither.

Looking forward to your engagement in any way you walk your path on the island.



Special thanks to Dan White seen here with his wife, Brenda, who once again assisted with getting islanders to and from the Bioblitz sites!

Photo: Rob and Marcie Welsh





# The Geology of Le'eyqsun (Valdes): Look closer at the island's rocks and you'll find a story millions of years in the making

Geoff Reith

If you could travel back in time 80 million years before the present, many things would be different along the Pacific Coast of North America compared to today. For one, Le'eyqsun (Valdes) Island and the Georgia Strait would not exist at this time, but rather, a different body of water called the Nanaimo Basin would be found in similar configuration to the present-day Georgia Strait. How Le'eyqsun (Valdes) Island came to be (along with the other Gulf Islands) is a tens of millions of years long but interesting story, and some of the evidence of this story can be seen in the rocks present on the island today. See Figure 1 to understand and visualize the geologic timescale and what 80 million years means.

Jan	Feb	Mar	Apr	May	Jun
Jan 1 <sup>st</sup> - Earth Forms (4.5 billion years ago)	Feb 25 <sup>th</sup> - First life (single cell)	Mar 4 <sup>th</sup> - oldest known rocks			
Jul	Aug	Sept	Oct	Nov	Dec
				Nov 28 - First fish	Dec 1 <sup>st</sup> - oldest known insects Dec 2 <sup>nd</sup> - first land animals Dec 13 <sup>th</sup> - first dinosaurs Dec 14 <sup>th</sup> - first mammals Dec 24-26 <sup>th</sup> - age of the rocks on Valdes Island Dec 26 <sup>th</sup> - the dinosaurs go extinct Dec 31 <sup>st</sup> , 5 pm - oldest hominid Dec 31 <sup>st</sup> , 11:45 pm - first modern human Dec 31 <sup>st</sup> , 11:59:59 pm - present

Figure 1- The geologic timescale over a calendar year. This is a useful way to visualize the age of the Earth and major events that have occurred during the last 4.5 billion years. January 1st represents the start of the Earth 4.5 billion years ago and December 31st 11:59:59 pm is the present.

The rocks of Le'eyqsun (Valdes) are a type of rock called a sedimentary rock. These rocks form from grains of sediment (materials like sand, gravel, silt, or clay) that become stuck together or lithified as that material is buried deep underground. Sediment tends to accumulate in certain environments: places like beaches, rivers, or deep oceans. When you find a sedimentary rock, it is possible to determine which environment its sediment was originally deposited in. The island's rocks are mainly a type of sedimentary rock called sandstone with some layers of shale (Figure 2). Previous researchers have determined that the sand and clay that originally made these rocks was deposited in the deep waters of the Nanaimo Basin between 95 and 65 million years

ago. This time overlaps with the age of the dinosaurs, but the island does not have dinosaur bones, although some dinosaur bones have been found in rocks in the San Juan Islands, which are geologically similar.

At Blackberry Point, alternating layers of sandstone and shale are visible on the beach. The sandstones tend to be beige colour and will have a rough texture (like sandpaper) while the shales tend to be dark grey and break into small flat pieces. These alternating layers were deposited on the ocean floor in the deep waters of the Nanaimo Basin from turbidity currents. Turbidity currents are periodic, rapid downhill movements of water and sediment, typically flowing underwater from shallow coastal areas down to deeper waters. These currents carry the sand, silt and clay to deeper waters and leave the sediment in distinct layers. Once the current has reached the deep water, it slows down and the heavier sand will settle out first followed by the lighter/less dense clay and silt material. This pattern can be observed at Blackberry Point, where layers of beige coloured sandstone sit beneath layers of grey coloured shale representing a single flow of a turbidity current (Figure 2). This pattern is then repeated with another flow of the turbidity current creating another layer of sandstone and shale. These turbidity current flows occurred for millions of years in the Nanaimo Basin (between 95 and 65 million years ago) creating a thick package of sediment that eventually turned into rock, forming the bedrock of the island.

How the rocks went from being buried deep under the ocean 65 million years ago, to being currently exposed on the island's coastline involves the movement of tectonic plates. Much of British Columbia was created because of colliding tectonic plates, and this is true as well for Le'eyqsun (Valdes) Island. Subduction is a process that is occurring today, where the tectonic plate below the Pacific Ocean is being pulled underneath the North American continent. This process has occurred for many millions of years; and occasionally small island chains are brought closer to the coast of North America as the ocean between is subducted. These islands can't be subducted and are compressed onto the edge of

the continent. For example, much of the landmass of Vancouver Island is made up of islands that originated much further away in the middle of the Pacific Ocean. When these islands collide with the continent there is a huge amount of force that is applied to nearby rocks. This causes the rocks to become compressed which means they often get raised up higher from where they previously lay. This is the case with the rocks that make up the Island. In Starvation Bay you will notice that the layers of rocks, originally flat when sediment was first deposited on the ocean floor, now have a tilt. This is an indication that large tectonic forces have been active on the rocks.

The next part of the geological story of the island is glaciation. Glaciers were a dominant force in the area between 3 million years ago to about 18,000 years ago. Once the rocks of the island and the Georgia Strait have been pushed up into their current place by tectonic forces, these massive sheets of ice (in some cases up to 2 km thick) carved out the bedrock and created many features that can be observed in the area including the Strait of Georgia and many of the valleys and fjords along the coast of the mainland. The glaciers also deposit boulders and sediment. Much of the pebbles on

the island's beaches are made of an igneous rock type called a granodiorite, which is typical of the rocks that make up the coast mountains on the mainland and much different to the sedimentary rocks found on Le'eyqsun (Valdes).

Along with glaciers, there are other forces that act to break down rocks once they are exposed at the surface of the Earth. The breakdown of rocks is called weathering and it can occur from physical events (a wave crashing into a rock again and again over thousands of years causing it to break), or by chemical reactions causing the rocks to dissolve or even rust. Here, the island's sandstones tend to show a distinct weathering pattern called tafoni or honeycomb weathering, where perfect holes in the rock have formed. The exact mechanism that produces these holes is still debated, but it likely has to do with salt from the ocean drying out the rocks. On Le'eyqsun (Valdes), you will notice that typically the tafoni occurs along single layers of the rock, which likely indicates that the chemistry of the rock may be an important factor.

*Geoff Reith is an Earth Science and Geography instructor at Douglas College and Capilano University. He attended his first Bioblitz on Le'eyqsun (Valdes) Island in June 2022.*



Figure 2- Layers of sandstone and shale at Blackberry Point, These layers were deposited from a turbidity current.

Tafoni rock formation

Photo: Jason Camp



You have probably encountered an abandoned seal pup on our island shores at some point in your summer visits - an adorable spotted baby hauling out on the rocks alone, or crying out pitifully in the night. Sadly, after a few days, these abandoned pups often end up as a good meal for our resident turkey vultures and eagles. But, did you know that Canada's only dedicated marine mammal rescue facility is located just across the Salish Sea at the Vancouver Aquarium?



Harbour seal pup

Photo: Mika Livingston

This summer, after watching a poor seal pup nuzzling our mooring buoys for a couple of days, and hearing its sorrowful cooing each night, our children and their friends noticed it had hauled up on a hot day, way higher than the quickly dropping tide. The seal was not very responsive, and as we later learned, was less than five days old,

and likely would have died that day. With the encouragement of our children, we called the aquarium's Marine Mammal Rescue Centre. We sent photos of our seal friend, and reported our location, and our observations. The staff felt an urgent rescue was required, and asked if we would be willing to support the process. Following their instructions, we carefully captured the seal in an old modified Rubbermaid bin, and met a volunteer staff member near Wallace Island to transfer the seal into their care. The seal was then transported to Saltspring Island for some immediate support, before being flown to the rehabilitation centre at the Vancouver Aquarium.



Photo: Mika Livingston

So far, "Feather Boa", as he has been renamed, is surviving, and even thriving. You can follow his rescue story at, <https://mmrpatients.org/patient/pv2242-feather-boa/>



### What to do when you spot an abandoned seal pup?

Call the Marine Mammal Rescue Centre at 604-258-SEAL (7325). Please note that you should NOT try to help the animal on your own. We only participated in the rescue of Feather Boa after being instructed to by Marine Mammal Rescue staff.

### PV2242 Feather Boa – Marine Mammal Rescue Centre

Species: Harbour Seal Patient ID: PV2242 Admitted on: 2022/07/19 Collection Site: Valdes Island  
Reason for Admission: Maternal separation. Weight at Admission: 8.4 kg Patient Status: in care.  
Time in Care: 36 days (1 month, 6 days) Current Habitat: Harbour Pool. Patients that have already demonstrated that they can eat fish on their own are placed in a pool where they can learn how to compete.  
[mmrpatients.org](http://mmrpatients.org)



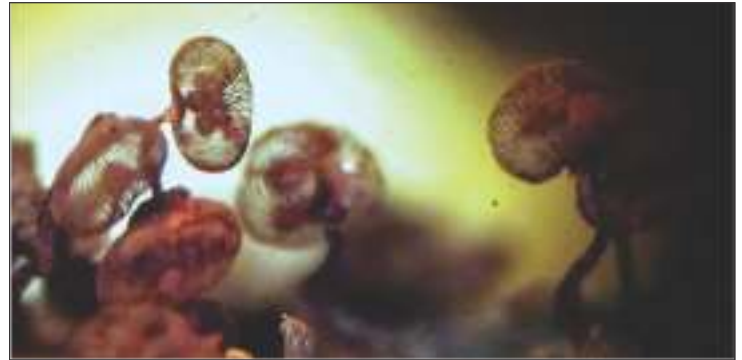
A highlight from the 2022 Le'eyqsun (Valdes) Island Bioblitz was a group of life that is easily overlooked. Indeed, these organisms had hitherto eluded us in our surveys of Le'eyqsun (Valdes) Island and were reported for the first time this year. Walking past some decaying alder logs on the Blue Trail, Marja was the first to spot the unusual organism. After describing it to Andrew, who joined her to investigate this humid little niche of decomposing wood, he immediately confirmed what this organism must be: myxozoa (otherwise known as slime molds)! Altogether, there were three species of slime mold found growing together at this site. Andrew collected some specimens and brought them to Pam Janszen, a regional expert living on Saturna Island. Unfortunately, only two species were identifiable. The following is a brief account of the species she identified:



Japanese-lantern slime *Cribaria cancellata* plasmodium.  
Photo by Pam Janszen

A common, widely distributed, and very distinctive species, the Japanese-lantern slime often forms extensive fruitings on damp, decaying conifer wood. Although the individual sporangia are very small - 1 to 5 millimeters - they are easily recognized by their shape and their colour. This slime begins life as a black plasmodium, which then becomes reddish/black or purplish/black as it moves towards maturity.

Finally, when the sporangia are mature, and the spores have blown mostly away, they usually vary in colour from reddish/brown to purplish/brown. The distinctive shape of a little, nodding, cage-like structure, on the end of a longish stalk, makes them easy to recognize and fun to find. The fact that they generally fruit in large groups helps make them "easy" to find—at least as far as myxozoa are concerned.



Mature sporangia of *Cribaria cancellata*.  
Photo by Pam Janszen



The white plasmodia and maturing sporangia of *Stemonitopsis typhina*. Mature sporangia visible above.  
Photo by Andrew Simon

Between 2 to 5 mm tall, these little myxos often fruit in large masses, but because of their brown colouring the easiest time to spot them is when they are in their white plasmodial stage.



*Stemonitopsis typhina*—More maturing and mature sporangia.  
Photo by Andrew Simon

Unfortunately, this can be quite variable as sometimes they pass through a variety of shades of brown almost immediately, while others seem to reach their full size before they begin their colour



change. They are easily recognized by their persistent silvery-grey peridium and their tendency to have a transparent sheath surrounding their black stem. Getting to know slime molds can be challenging. They are both obscure and ephemeral - and often require microscopy to identify. Pam has spent many years studying slime molds in her backyard on Saturna Island, often returning to visit sites over and over again throughout the year to get to know these mercurial organisms as they develop throughout their life cycle. This patient study has allowed her to document many species in this wonderfully diverse group: organisms that remain invisible to most of us. To share her knowledge with the world, Pam is now working on a guide to the slime molds of British Columbia. If you happen upon any slime molds in your backyard, you can help Pam add to this compendium of BC slime molds by collecting any mature specimens and contacting her at saturnadeathdoul@gmail.com.



Marja de Jong Westman and Andrew Simon discover slime molds. Photo: Marcie Welsh

*Pam Janszen is a regional slime mold expert living on Saturna Island. She is currently working on writing the BC Slime Mold Field Guide for the Royal British Columbia Museum. Andrew Simon is an ecologist with over a decade of experience and is curator of the Biodiversity Galiano project and is a collaborator with the VIC on biodiversity data for the island.*



## Mooring buoys at Le'eyqsun (Valdes) Island

### Hugh Blackman

There is only one way to get to Le'eyqsun (Valdes) and that is by boat! Some of us use water taxis and some boat to the island themselves. And some of us do a combination and have a small boat to gunk-hole while at Le'eyqsun (Valdes). This results in many residents placing mooring buoys to secure their vessels rather than negotiating the tides and pulling boats up on the beach. This necessitates the need for a proper mooring buoy.

Transport Canada clearly outlines the expectations for mooring buoys and details can be found at: [https://tc.canada.ca/sites/default/files/2021-06/2020-2021-MARINE%20PRIVATE%20BUOYS%20GUIDE\\_EN-access.pdf](https://tc.canada.ca/sites/default/files/2021-06/2020-2021-MARINE%20PRIVATE%20BUOYS%20GUIDE_EN-access.pdf)

The main considerations for placing a new mooring buoy or ensuring your current one is compliant are as follows:

- Do not place a private buoy that will/may interfere with the navigation of any vessel, or that will/may mislead any boater.
- Ensure you have enough space for the vessel to

swing and not impede other vessels moored.

- Do not place a private buoy in any water unless all size, shape and identification requirements are met and all required information is accurate and up to date.
- Make sure that all private buoys meet the Canadian Aids to Navigation System7 standards.
- Consider things such as size or adding retroreflective material, when there is a need for improved visibility or better identification.
- Use, build and install anchors that will keep the buoy in position.



Shah Point, Le'eyqsun (Valdes) Island Photo: Hugh Blackman

While you do not need to apply for permission or register your mooring buoy it is a good neighbourly practice to let the owners of the foreshore properties know you are putting in a mooring. The property owners do not have any rights to the water directly in front of their property for reserving a personal mooring. The basic rule of first come first served seems to apply. But once you do place a mooring you are responsible for it and may wish to consider liability insurance.

As an owner of a private buoy, you are responsible to make sure that:

1. It meets all legal requirements, standards and guidelines of the PBR (Private Buoy Regulations),



Transport Canada Approved Mooring Buoys

the Canadian Aids to Navigation System and Transport Canada directives.

2. It is built and maintained so that it remains in position.
3. Anchors are used, built and installed in a way that will keep the buoy in position.
4. You have a monitoring and repair schedule for checking that the buoy continues to meet all legal requirements, stays in position and remains in good working order.
5. You use recommended retroreflective material (as a minimum).

Happy and safe boating and remember to have the required safety gear and PFDs for each boater when you are out on the Salish Sea!



And there is a conservation connection to this story! The use of mooring buoys instead of anchor-outs is encouraged as the practice is less damaging to the ecologically rich and now-in decline eelgrass communities (see note below). Many of the sandy bays around Valdes support such communities.

## Eelgrass Conservation

### Abstract from [researchgate.net](https://www.researchgate.net), Environmental Management

Seagrasses are highly productive, but human nearshore activities have reduced their global distribution by >29% since the twentieth century. In the United States and Canada, the native seagrass *Zostera marina* (eelgrass) provides habitat for many species and multiple ecosystem services. By supplying spawning surface for fish and substrate for invertebrates, eelgrass creates foraging areas for high densities of migratory birds. Eelgrass beds stabilize sediment, protect adjacent shorelines, improve water quality, and sequester carbons in their underlying substrate. San Francisco Bay (California, USA) is a significant estuary for eelgrass, and recent surveys show that eelgrass beds are in decline. Protecting eelgrass is a conservation priority for federal, state, and local agencies, yet few studies have documented the extent of eelgrass loss due to human impacts such as boat anchoring. The purpose of our study was to provide factual evidence for policy makers by quantifying damage to eelgrass caused by illegal anchor-outs in San Francisco Bay, an issue that has been disputed for decades. Using aerial imagery and GIS analyses, we determined the amount of direct damage to eelgrass caused by

anchor-outs. We found that boats damage up to 41% of the eelgrass bed, and each boat may cause up to 0.3 ha of damage. These results can be used to inform decisions about anchor-outs by stakeholders and government agencies.

Furthermore, our efficient analytical approach could be implemented in other coastal regions.



Eelgrass conservation in San Francisco Bay, July 2019



# Black Bear on Le'eyqsun (Valdes) Island

## Warren Warttig

17

**How did it get here?** Black Bears are very good swimmers. I've been watching Gabriola Island with interest since the early 1990s. There has not been a year that I can remember that there were no reports of bears or cougars on Gabriola. My understanding from the biologists I know on Gabriola is that they coexist quite well. Most "rules" about Black Bears apply equally to Grizzly Bears. They compete for the same habitat (where there are Grizzly Bears they lose), the same berries, the same fish, and the same territory (again, anything in direct competition, the Black Bears lose). Both male species' territories are highly defended. Coastal Black Bear and Grizzly Bear populations are currently healthy and (lucky for us) Grizzly Bears are only found on the north half of Vancouver Island. The female of each species does not have much to worry about, but for the young males, especially those recently weaned by their mother (once they are on their own, they receive no protection from mom) it is an entirely different story. Bottom line is that the (usually younger) males are pushed out by the dominant male. Given that there is a healthy population of bears on Gabriola, it's a surprise it doesn't happen more often.

was to avoid territorial confrontation, and it will likely stay on Le'eyqsun (Valdes) until it is large enough and confident enough to challenge an established territory that has females. Mating occurs in June so the months leading up to June are critical for males to establish dominance or flee possible death by the dominant bear. It was no coincidence that a bear showed up on Le'eyqsun (Valdes) when it did. It was also not a coincidence the bear appears to be about two years old, about the time it was weaned. Le'eyqsun (Valdes) offers fresh water, produces good berry crops, and there is a massive amount of protein under shoreline rocks and in shoreline sand and mud beaches. Bears are not good hunters when it comes to adult deer but are efficient hunters of fawns.



Bear behind cabin in South Bay

Photo: Giselle Prince

**What does this mean?** It is likely that the bear will remain healthy on the island for years. It also means we will need to change our habits as islanders. Bears have an amazing sense of smell that is up to one hundred times better than a bloodhound. About two thirds of a bear's brain is devoted to its sense of smell. The term "six feet under" came into being as that is the depth a dead animal needs to be buried before a bear can no longer smell it (and potentially dig it up). With this sense of smell, a bear can easily find an outdoor cooler, pie safe, unclean barbeque, unsecured stored garbage and even compost sites. It can also detect the scent of people on a cooler, garbage bag, pie safe etc.

**What should we do about it?** All of us as a collective group will need to manage our food storage and food waste better.



The bear at Shah Point

Photo: Dan White/Brenda Lepine

**Why did it come here?** The bear did not come to Le'eyqsun (Valdes) looking for food. Likely the only reason the bear came to Le'eyqsun (Valdes)



On 13 April 2022, I brought seven of my graduate students and support staff from my SFU research group to Le'eyqsun (Valdes) for The Great Satinflower Hunt. We weren't successful, unfortunately, but we had a great time trying! Satinflower is restricted to the warm climates of southern Vancouver Island and adjacent southern Gulf Islands. Or so we thought, until on April 22nd, 2021, Ruth McDonald photographed one on Le'eyqsun (Valdes) and uploaded it to the community science platform iNaturalist.

This was a considerable northern extension of its known range. Since I was hosting a visit by my research group at our cabin on Ruxton in April, I thought this would make a great target during a hike on Le'eyqsun (Valdes). We're pretty sure we found the right spot, on the south end of the beaver pond, in an open area that looked like suitable habitat. You can see the spot by zooming in on the map in Ruth's location: <https://inaturalist.ca/observations/85294157>

We had docked at Blackberry Point and walked down the road before heading east and down to the beaver pond. There were dozens of Yellow-rumped Warblers fly-catching at the pond, and a couple of Mountain Bluebirds. Lots of Canada Goose drama. Why can't they all just be friends? In total we saw or heard 42 bird species that day.

After having lunch on the big logs at the site, we headed south through the beautiful bigleaf maple moss forest. We got lost, as I always do on this island, which resulted in an invitation by some wonderful people to come back for a beer sometime! I definitely will! We eventually wound

up on the east coast trail past Bateman's and Marja's place, encountering a patch of Calypso Orchids along the way. One of my PhD students, Allison Dennert, had commented the day before that this was one species she really wanted to see, and it was wonderful to see her communing with the orchid as she took lots of photos.  
<https://inaturalist.ca/observations/111604591>

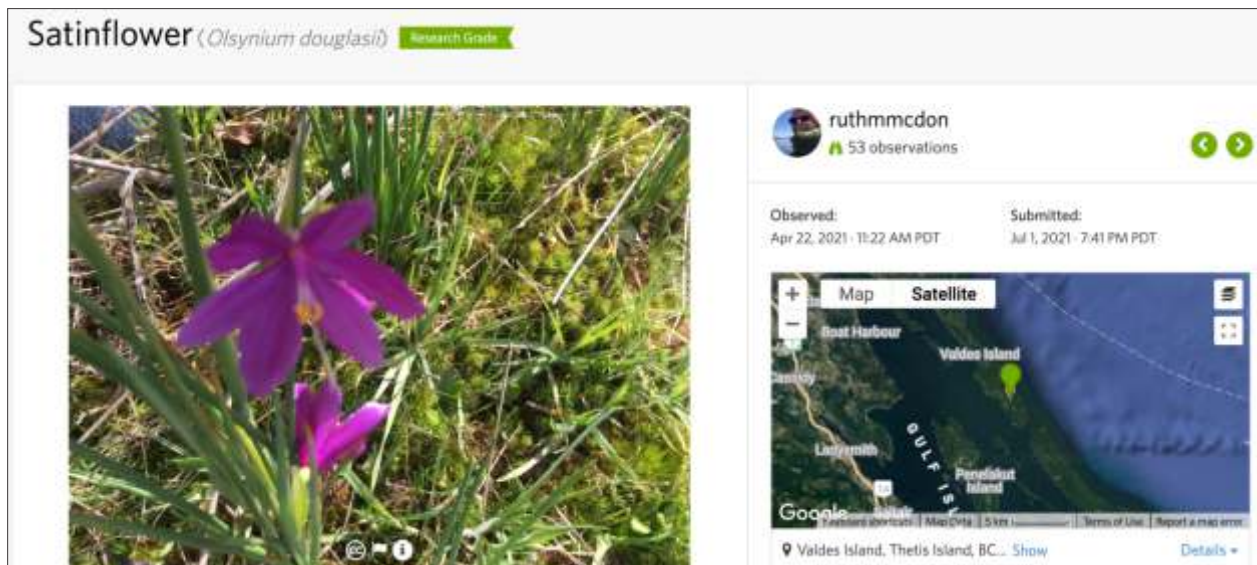
Then we headed back up and around to Blackberry Point after making several bad decisions about which way to turn at intersections. I blame my students. Somehow we turned our excursion into 16 km in total.

We added 330 observations of 178 species of plants, animals, and fungi to iNaturalist. The iNat total number of observations on Valdes now stands at a respectable 2600, including 607 species, uploaded by 36 people.  
<https://inaturalist.ca/projects/valdes-island-biodiversity>

I haven't given up on the satinflower. It was seen on 22 April the year before, and this year was a late spring. So it's a good species for Valdesians and their Ruxtonian friends to keep an eye out for next year.

John Reynolds,  
Nayler Bay and Sandollar Bay, Ruxton

*John Reynolds is a Canadian ecologist and holder of the Tom Buell BC Leadership Chair in Salmon Conservation and Management at Simon Fraser University. He is also past Chair of Endangered Wildlife in Canada (COSEWIC) and a veteran of the VIC's annual bioblitz weekend.*




Screenshot from <https://inaturalist.ca/observations/85294157>

Original photo: Ruth McDonald




Western Fairy-Slipper (*Calypso bulbosa* var. *occidentalis*) Research Grade Follow



[Western Fairy-slipper from Cowichan Valley, British Columbia, Canada on April 13, 2022 at 02:57 PM by John D Reynolds, Valdes Island, Gulf Islands, BC, Canada · iNaturalist Canada](#)

**johndreynolds**  
136,982 observations


Observed: Apr 13, 2022 - 14:57 PDT  
Submitted: Apr 15, 2022 - 20:15 PDT



Cowichan Valley, British Columbi... Show Details

Screenshot from <https://inaturalist.ca/observations/111604591>

Photo: John Reynolds



**Valdes Island Biodiversity**

**About** Members 13





A project dedicated to documenting the flora and fauna of Valdes Island, British Columbia, Canada. Photos: @JohnDReynolds

[Read More](#)

[Project Journal](#)

**Overview** 3,991 OBSERVATIONS 831 SPECIES 554 IDENTIFIERS 46 OBSERVERS Stats

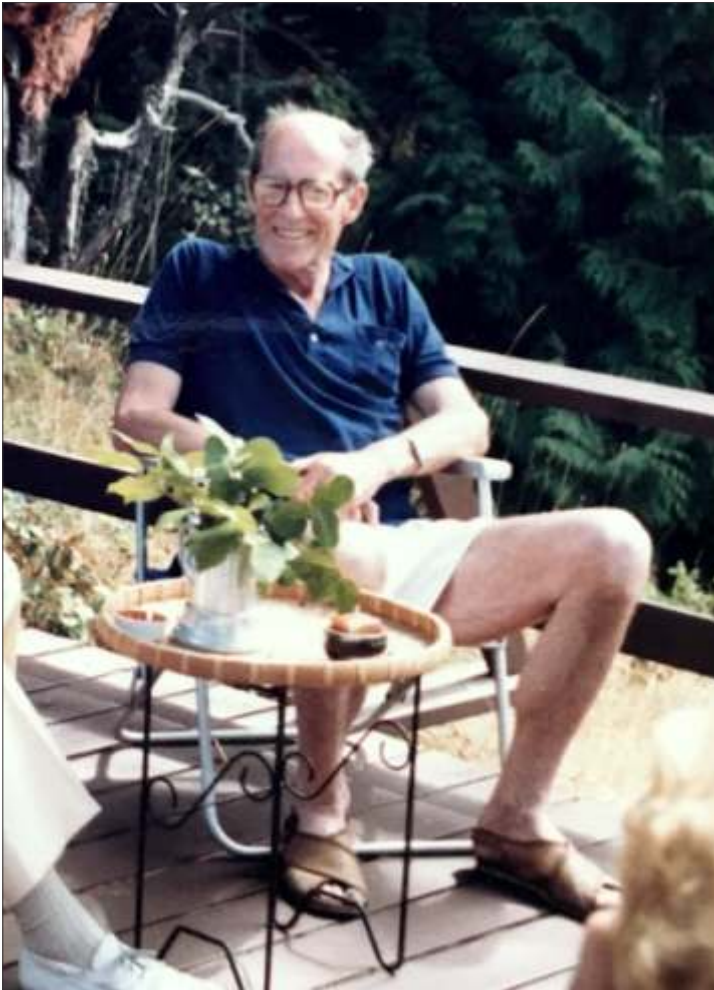
**Recent Observations** View All

-  *Caulacanthus ustulatus* 4 days ago
-  Genus *Prasiola* 4 days ago
-  Broadleaf Sea Lettuce *Ulva lactuca* 4 days ago
-  Pacific Oyster *Magallana gigas* 4 days ago

Screenshot from <https://inaturalist.ca/projects/valdes-island-biodiversity>



When Gordon (Noel) was a boy, his family built a cottage at Boundary Bay, on the American side. You had to cross on the Ladner ferry to get there. His father, a Coast Pilot (the "Captain"), excavated this site for a summer camp when home on holiday. This cottage had verandas around three sides, with enough extra beds to sleep sixteen. Friends and cousins, aunts and uncles all visited over the summer months, cooking and laughing together.



Gordon Noel

Gordon, though, didn't just hang out at the cottage. At age twelve, he would ride his bike back to Vancouver to mow the lawn for his 10 cents an hour allowance! Crabs were plentiful at Boundary Bay and he soon got a reputation for catching them with a forked stick, and cooking them in a big washtub over a bonfire on the beach. He sold them for 25 cents each!

Gordon's three older sisters brought their boyfriends, and later, husbands, for the summer get-togethers. Everyone knew each other in this little summer community, from the storekeeper to the neighbours.

All these memories came to halt during the Second World War. The sisters were scattered East with one husband in the Navy, another in Transport, and the youngest sister working in Washington, D.C. for the British Embassy. Gordon, now grown, joined the R.C.A.F. to become a pilot and go overseas.

Sadly, during the War, the Captain was brought back from Alaska on a stretcher after a heart attack. He recovered, but since Coast Pilots had little work, due to less sea traffic, he decided to sell the Boundary Bay cottage, receiving a mere pittance for the property.

After the war, when all the family returned home, they spoke with dismay at no longer having the summer cottage to return to with their children and families.

Some years later, after marriage and six sons, Gordon had a wish to reconstruct his happy childhood memories, for his children. Waterfront spots by this time were not so easily found, or financed.



Gordon and Jocelyn Noel (centre) with friends

Finally, on Le'eyqsun (Valdes) Island, he procured a precipitous 3 ½ acre lot on a small bay. He then set about choosing 22 cedar logs to build a summer cottage. But first, he had to construct a "habitable dwelling" to claim this lease lot. Clearing the rocky, treed hillside, with just a pick, a shovel and an axe, then building the "cabin", was hard. We only had weekends and two weeks' holiday, so it took a lot of planning, "to-ing and fro-ing" by ferry and car, and legwork to transport all the building materials and supplies and to get the cottage built.



With no electricity or water, his wife Jocelyn needed some imagination to produce meals on the little wood stove, to feed all these hungry males! Since there were no stores, bread and cinammon rolls were baked each day, to augment supplies.

The first little 8 x 16 cabin was completed by the end of the summer. Inside was a bed, a wood stove and a pull-out couch. Eating was on the deck at a table under the eaves, and the children slept in tents. We also had friends visit, by boat, and welcomed neighbours walking about.



The next project was the "cottage": 625 sq. ft., vaulted ceiling, open planning, three small bedrooms, and a 30 ft. living/dining/kitchen area. For fifteen years, this would be a work in progress. A fireplace was one project, a chimney for the wood stove, another. Guests joined in the wood chopping, and in making cedar shakes with a froe. Running water came from rain collected off the little cabin roof to a cistern. It was heated from the wood stove, then stored in a boiler. We even had fine wood panelling in each room - maybe a first on the Island!

Now Gordon's children, and new grandchildren, could come and enjoy the outdoors: the fishing, the crabbing, the clamming, and the wildlife: the deer,

the racoons, the otters and the mink. Not only family, but friends as well, all came to experience the wonders of water-skiing, sailing and fishing. The camaraderie of the summer pioneers grew accordingly. Children had their summer friends to greet and to build sand castles with, and to



exchange stories.

Gordon left us unwillingly twenty-seven years ago, on the night of a full moon. His ashes are scattered on the Point across from our cabin. The grandchildren used to go there in salutation each visit. Now, thirty-eight years after his dream, when shadows fill our day, we ask that life be kind.

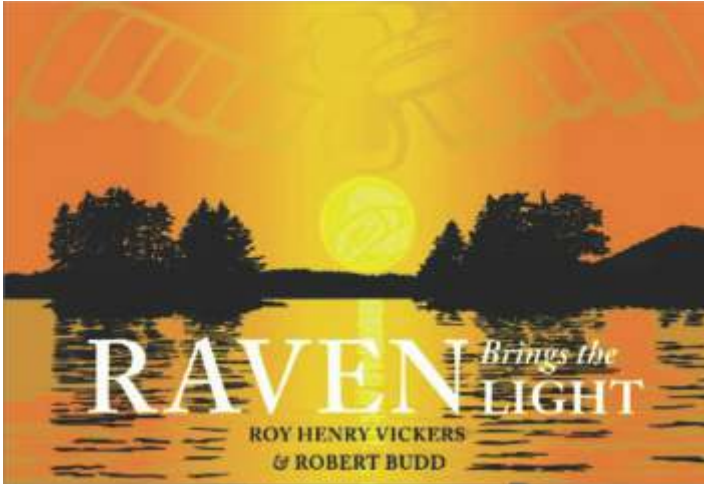
I recently ruminated on a recent visit to the island, as I looked up from my bed through the window, at the cathedral of trees, and listened to the sound of waves lapping on the shore below me. The previous night, by a full moon, three granddaughters, of three different sons, squealed in astonishment as they jumped into the cold water of the bay - now named Noel Bay - followed by another Gordie Noel, age fourteen then.

None of them had ever known their grandfather. Was he watching from above, looking down at them, realizing his dream had come true?



Some of Gordon's grandchildren and great grandchildren enjoying the beach in front of the cabin, fulfilling his dream.





**Raven Brings the Light.** Author, Illustrator Vickers, R.H., Author Budd, R. (2013). Harbour Publishing.  
(children and adults of all ages)

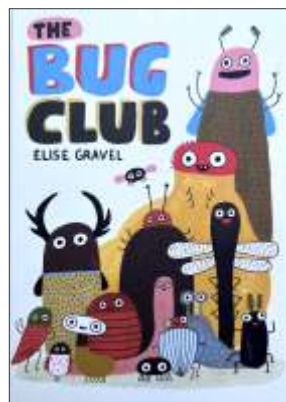
Raven Brings the Light is the first book in the Northwest Coast Legends series. This is an indigenous oral story passed down from generations, which has been traced back 3,000 years by archaeologists who found images of the story in petroglyphs on the Nass and Skeena rivers. This is a remarkable book with Vickers' beautiful images paired with Budd's powerful storytelling.

The story is of Weget, a boy born in darkness in Haida Gwaii. By transforming into a raven with the gift of a raven skin, he flies to the sky Chief in search of light. While there, he finds the sun in a box, and cleverly escapes with the sun and brings light back to earth.

An oral version told by Roy Henry Vickers can be heard at [memoriestomemoirs.com/raven](http://memoriestomemoirs.com/raven).

**The Bug Club.** Gravel, E. (2021). Drawn and Quarterly.  
(older children)

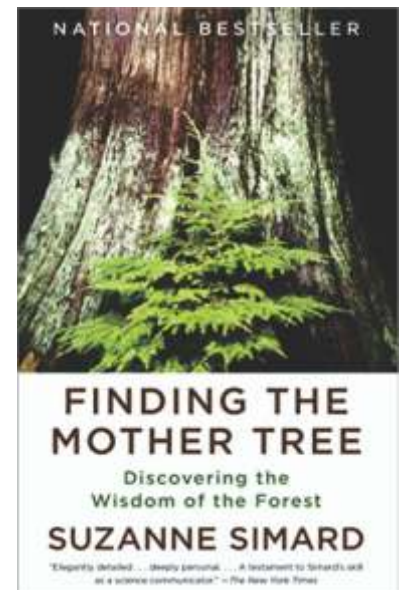
Did you know that mosquitoes are attracted to smelly feet? And that grasshoppers have ears on their bellies? Or have you heard that honey bees have hair on their eyeballs? For



more fun facts and interesting info about bugs, check out Elsie Gravel's newest book: The Bug Club. This nonfiction picture book is filled with fun and interesting information about an assortment of bugs, complete with Gravel's signature cartoon-style drawings and informational yet humorous writing. Kiddos (and adults) of all ages will be delightfully entertained and intrigued by this book - bug enthusiasts or not. As with Gravel's previous book, The Mushroom Fan Club, this new book offers more opportunities for family fun waiting to be explored in nature.

**Finding the mother tree: Discovering the wisdom of the forest.** Simard, S. (2021). Knopf.  
(teens and adults)

I'm in the middle of this exceptional book, and can't put it down. Part memoir, part biology and forest ecology, Suzanne Simard, world renowned scientist and Professor of Forest Ecology at the University of British Columbia, uncovers many truths of the forest and changes the way forests are understood. She shows how trees have connectivity, intelligence, and social cooperation in ways that are not very different from our own as human beings. Through her scientific research, Suzanne has explained how trees interact with each other in many ways including below-ground fungal networks. At the centre of this are the oldest trees in the forest, also known as the hub trees or Mother Trees. She explores how these trees play a crucial role in the exchange of resources and information in a forest. This important research has wide-ranging implications for how to manage and heal forests due to human impact. A must-read!



*Christina Doolittle is a primary teacher in Vancouver and spends as much time as possible at the cabin with her family.*





### ***Wingspan (2019)***

1-5 players  
40-70 min to play a game  
Age: 10+ (but I have played successfully with 9 yr olds)



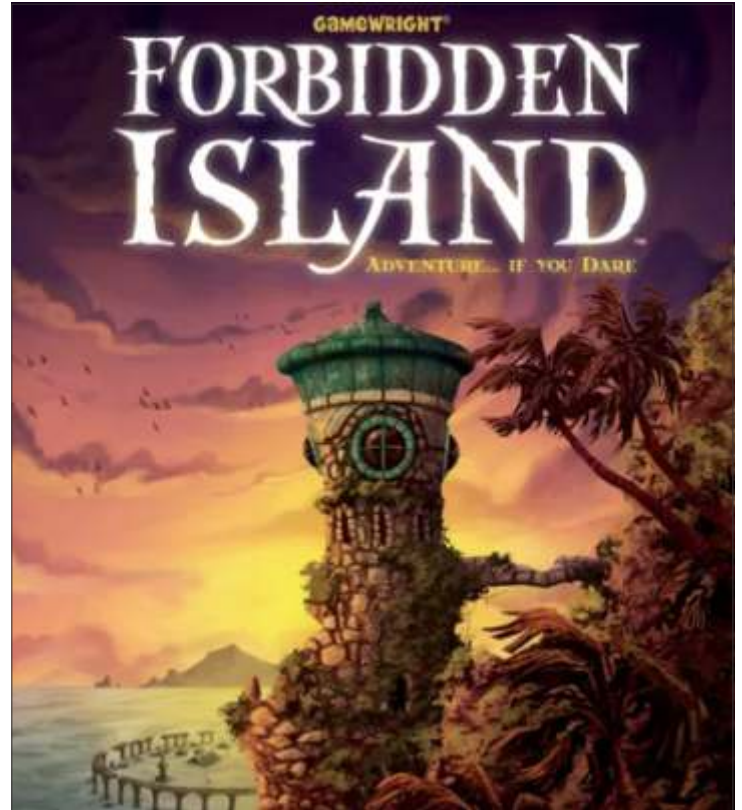
Wingspan is a beautiful, fun, and somewhat educational game designed by Elizabeth Hargreaves and published by Stonemaier Games. The artwork is spectacular and with 170 unique birds in the deck of cards you might find yourself flipping through the deck just to read the fun facts at the bottom of each card.

The game involves the strategy of finding habitats for your birds over the course of four rounds. The birds that you play in their habitats bring certain conditions that can layer to allow players more powerful options to play future cards. At the end of four rounds, the player with the most points wins.

I also appreciate that you can play this game by yourself (when one finds themselves up before anyone else with a coffee in one's hand). The rules are largely the same as in the multi-player game and it is possible to adjust the solo play to make winning a little easier or much more challenging.

### ***Forbidden Island (2010)***

2-4 players  
30 min to play a game  
Age: 10+ (but, as it is a cooperative game younger is fine)



Forbidden Island is a cooperative adventure-style game designed by Matt Leacock and published by Gamewright. Gameplay requires players to move their pawns around the "island" to find artifacts before escaping as the island slowly (and randomly) sinks into the sea. It is great fun to play with younger children as the suspense of the island sinking will keep all players on the edge of their seats!

I have recommended this game to families where siblings are usually very competitive with each other and this game has bridged that gap by requiring teamwork to win.



*Jason Camp is an educator with a passion for the outdoors. When not in Vancouver, encouraging students and staff to take their lessons outside, he can often be seen tinkering around his cabin*





Ruth has a cabin at Shah Point that she shares with her husband Gord and best friend Don. Her first "sketching" was making a map of Le'eyqsun/Valdes so she wouldn't get lost. Since then she never leaves home without her sketchbook and watercolours.





The newts came out to play on a foggy winter  
we counted 51 on the path between the boiler plant and  
can grow up to 22cm in length.  
We counted 51 newts on  
January 13, 2022  
Saw newts on  
following days  
but never  
with the  
same  
concentration



Canoe Point  
Shak pt  
Portier Pass  
Cayetano Pt  
Cardale Pt.

VALDES ISLAND



Rough-Skinned Newt  
Valdes Jan 13, 2022  
"Don't lick  
them!"  
They have a strong  
toxin exuded from  
their skin.

# Oyster Catchers

It ranges from the  
Aleutian Islands to  
the Baja peninsula.



2 to 3 eggs are laid. Nests are small bowls  
close to the shore. The eggs are very hard and  
can even survive being submerged by a high  
tide.



Haematopus  
Bachmani  
17-17 1/2"



Black Oyster Catcher

July 4th Valdes Island  
2021







Group on the beach, listening to Frank Conibear's traditional welcome.  
Photo: Brian Hurst, project manager, Lyackson First Nation



Mackenzie Bromstad, Artist



Martha Dunford and her new favourite friend, a California sea cucumber (*Apostichopus californicus*)!

Photo: C. Dunsmoor



Third generation Valdesian, budding beachcomber Linden Bateman with Biologist Mom, Becky. Photo: C. Dunsmoor



Photo: MDJW



Doug Cochran and the mottled seastar with three generations of Cochrans on the seashore.

Photo: Warren Warttig



Mackenzie & Geoff with a sea urchin.  
Photo: Warren Warttig



Photo: MDJW





Geologists Geoff Reith and MacKenzie Bromstad describe the island's geological history in context with the earth's 4.5 billion year pathway. Photo: Warren Warttig



Avery Elliot and pal Photo: Sarah Elliot



Mark Bateman built 6 purple martin boxes. Pending installation at Wake's cove. Photo: Jane Bateman



Mottled (*Evasterias troschelii*), leather (*Dermasterias imbricata*), blood (*Henricia leviuscula*) and vermilion (*Mediaster aequalis*) seastars. Photo: C. Dunsmoor



Christine Dunsmoor displays Barred owl feathers. Photo: Marja de Jong Westman



Lyackson Councillor Jennifer Jones (right) and Marja de Jong Westman share laughter at one of the geologist's rocky tales. Photo: C. Dunsmoor



