

The Songbird's Secret

by Dana Vasalli

What do birds feed their offspring: seeds, berries, nectar or insects? 96% of small terrestrial birds primarily feed their nestlings insects. What kind of insects? The favored insect for most songbirds is caterpillars. Caterpillars lack the hard and sometimes sharp-edged outer chitinous shell of beetles, they can't fly away nor sting like bees and wasps, and best of all, they have loaded their bodies up with nutrients in preparation for fasting through their period of pupation and metamorphosis (which can last for a few weeks to a few years). With their soft and thin outer skin and nutritious innards, they have been called the bratwurst of the bird world.

With chickadees, both parents take turns feeding the chicks, enabling them to bring a caterpillar to the nest about once every three minutes. And they do this from 6 a.m. until 8 p.m. for each of the 16 to 18 days it takes the chicks to fledge. That's a total of 350 to 570 caterpillars every day, depending on how many chicks they have. Thus 6,000 to 9,000 caterpillars are required to make one clutch of chickadees.

In one study, they brought in 17 species of caterpillars in three hours of observation. A pair of Wilson's warblers brought in 4000 caterpillars in five days of observation. Remember these are small birds; an adult chickadee weighs about a third of an ounce. One observer began to document species of caterpillars near his home and has found 938 species (most would be moths).

Sugary sweet nectar makes up about 30% of the hummingbirds' diet. The remaining 70% is from protein



Four young robins in nest. Photo Izzy Harrington

in the form of bugs - ants, aphids, fruit flies, mites, mosquitos, fungus gnats, and their favorite, spiders. If you don't have those insects and spiders in your yard, it doesn't matter how many hummingbird feeders you have, you are not going to be able to support hummingbirds.

Why are caterpillars so desirable? 1) They are soft & easy to digest, so you can stuff them down the throat of your offspring without injuring them; 2) They are relatively large, each caterpillar equal to approximately 200 aphids; 3) They are nutritious—high in protein and fat, and low in indigestible chitin, unlike beetles which are like little armored tanks; 4) They contain carotenoids, which are only made by plants but are a necessary part of the vertebrate diet. Among other functions, in birds carotenoids supply the color in feathers that create sexual attractiveness. Carotenoids come from plants, but most birds do not eat plants. Thus caterpillars are essential to most bird diets. And they are essential to many ecosystems; caterpillars transfer more energy from plants to the larger food web than any other animal group.

Just how hungry are birds for caterpillars? Some birds will literally migrate halfway around the world just to have an ample supply of insects to eat. Migration is the most dangerous thing a bird will ever do. Migrants lose up to 35% of their body weight while crossing the Gulf of Mexico. Many birds simply fall into the ocean from exhaustion. So why do they migrate? Why don't they stay where they are? Because the overall benefit to the species is greater than the costs. In temperate North



Violet-green Swallow feeding its young insects.
Photo Dennis Forsyth

America there is a massive flush of new leaves in the spring, and following that outburst of photosynthetic life is an outburst of caterpillars, the best of all possible foods for many nestling birds. That flush of food does not happen in the tropics. The abundance of insects in the temperate zone increases reproductive success.

A study came out on 2018 estimating that birds eat 500 million tons of insects (here assumed to be pests) each year. That could be re-written to say 'bird populations require 500 million tons of insects each year.' If you lose the insects you lose the birds. There are 386 species of neotropical migrants; someday there may no longer be enough insects to justify migration. This is largely due to the loss of native plants and the native insects that have co-evolved with them. As it happens 5% of our native plants (the dominants) make 75% of the food that drives our food webs.

It is a point of ecological interest that for the most part native caterpillars will not feed on non-native plants. The point of interest is that organisms and ecosystems evolve as an interconnected whole. Yes ecosystems change over time, sometimes dramatically, but 1) most changes are slow, and 2) if dramatic change is swift, and is a repeating dynamic of a living system—like say forest fires—then the living system will have evolved ways of adapting to such change.

Non-native plants are a very sudden change in a plant community that local organisms are not adapted to. Most of the plants that we plant in our yards and parks are not from this country and a lot of insects have not developed the ability to digest them. According to one estimate, we have introduced 3,300 species of non-

native plants into the United States; most of them are inedible to insects. It takes a long time to acquire new tastes. Phragmites, a grass introduced into U.S. wetlands 500 years ago, only supports 3% of the insects that it does in Europe where it is native. Many of us have planted the wonderfully named butterfly bush in our backyards. However, the butterfly bush, another introduced species, only supports the caterpillar stage of only one of our country's 725 native butterfly species.

90% of the insects that eat plants can develop and reproduce only on the plant species with which they share a close evolutionary history. For example the caterpillars of monarch butterflies feed only on the genus *Asclepias*, the milkweeds. Milkweeds have cardiac glycosides and will stop hearts from functioning; and yes monarchs do have hearts. But these butterflies have the necessary biologically programmed behaviors to avoid the toxins, and the enzymes to detoxify them. The monarch butterfly is in a tight evolutionary relationship with milkweeds, just as animals are dependent on the oxygen released by plants. If a monarch encounters the milky latex when feeding on a milkweed leaf, the caterpillar will sever the leaf's midrib, stopping the flow.

There is a downside for the monarch with this tight association with milkweed. It is now co-evolved with milkweed and will not eat other plants. As prairies have been converted to farm fields, milkweed has declined, and with that genus the monarchs have declined as well, by about 95% in the west since 1976.

Areas with a higher diversity of native plants tend to have a greater abundance of caterpillars. As a result, these regions attract and support a more diverse range of bird species, creating thriving ecosystems. Native plants not only provide a crucial food source for caterpillars but also offer birds nesting sites, shelter, and other resources necessary for their survival.



White-crowned Sparrow which amused the photographer as it built a bug taco with a leaf from an herb bed, which she then fed to a baby. *Photo Dennis Forsyth*

For example Eucalyptus, which is an introduced genus of trees from Australia now abundant in California, supports only five species of caterpillars, compared to wild cherries (Prunus), which support 246 species of caterpillars, and Ceanothus, which supports 93 species of caterpillars. Giant lawns support zero caterpillars. Nature's intricate web of interconnected species is a delicate balance that is essential for the health and resilience of our planet. Caterpillars represent a fundamental link in the ecological chain ~

Dana Vasilli is the editor of the Methow Naturalist. Much of this article is summarized from Doug Tallamy's work.

Native Plants

Oceanspray

At this time of year, the abundance of oceanspray *Holodiscus discolor* on Lasqueti is readily apparent as the blooming flowers really stand out when peering through the forest or along rocky shorelines. These lilac-like flower clusters will fade to brown but remain on the plants over winter. Also known as 'ironwood' because of the hardness and strength of the wood, virtually all coastal Indigenous Peoples traditionally used oceanspray for tools and implements such as digging sticks, spear, harpoon and arrow shafts, inner bark scrapers, halibut hooks, cattail mat needles and knitting needles. The wood can be made even harder by heating over a fire and it was then traditionally polished with horsetail stems. The wood won't burn so it is a great material for roasting tongs, skewers and salmon barbecuing sticks. Before the use of nails, oceanspray pegs were used in construction.



Oceanspray is drought-tolerant, and its flowering shrub's cascading showy white flowers first bloom in June and flower through July. Satinflower Nurseries says, "Many wildlife species depend on this plant including Bushtits that nest in its branches, other birds that forage in its seed heads, and the many local butterflies that lay their eggs on the buds and leaves."

Ponds and Plants habitat for birds, insects, and amphibians



Photo Norm Stacey

If insect decline concerns you at all, creating a small plant-filled wetland or garden pond is a great way to help create more habitat. It will attract many insects and amphibians, birds and even herons and ducks in winter. And if you have mosquitoes, dragonflies, which gather over water, can eat hundreds of these a day! Dragonflies have a hunt-and-catch success rate of 95%. Their ability to fly fast, hover and sense movement with their eyes, along with their specialized catching style, contributes to their agility in the air. If you do develop a pond, be sure to plan for plenty of plants around the edges. This foliage will aid the vulnerable dragonflies and protect them from predators when they first emerge from the caterpillar stage—it takes a few days for their bodies to harden up.

The best way to attract more dragonflies and other insects to your garden is to surround it with native trees, plants and flowers. Here's a list of plants and trees, primarily native, important to the health and survival of insects and birds:

- meadow sage
- nettle
- native grasses
- saskatoon
- salal
- yarrow
- mock orange
- oceanspray (Ironwood)
- fir trees (with their blossoms and cones)
- oregon grape (with their fabulous berries)
- arbutus
- willow

A few great pond plants that attract insects that are non-native include: aster, borage, irises (but not the yellow flag invasive kind), purple coneflower, wax myrtle.

The Ecological Reserve June hike to find flowering Prickly Pear Cactus

by Duane West

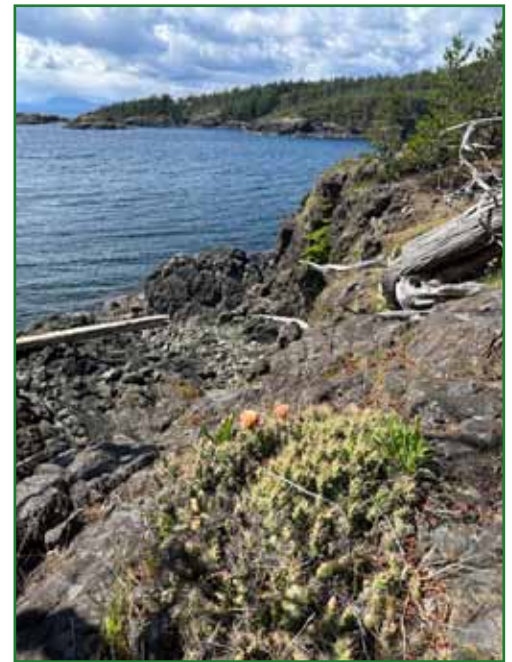
After a few postponed days, the hike into the Lasqueti Island Ecological Reserve to see the blooming prickly-pear cactus *Opuntia fragilis* happened on June 16. Our group accessed the Ecological Reserve from the end of Lake Road. At the point where the road allowance ends, one is also at the NE corner of the Ecological Reserve—convenient.

A little bit about the Lasqueti Island Ecological Reserve. Established in 1971 in a group of BC's first such reserves, it is Lasqueti's first and oldest protected natural area. The Reserve's original purpose was to protect the vegetation and fauna of the Coastal Douglas-Fir Zone. This was later updated to protect a shoreline forest of one of the largest populations of seaside junipers *Juniperus maritima* in British Columbia, two rare plant communities and two blue-listed rare plants.

The Ecological Reserve is a very rugged section of Lasqueti. Mount Jenkins is the second highest point on the island and in a very short distance plunges to sea-level. Our hike followed the eastern boundary of the Reserve and then we went up and over a shoulder of Mount Jenkins. Soon after we crossed Trematon Creek, we passed by a wetlands area with nice specimens of Pacific crabapple. We speculated that this might have been a tended forest garden of Indigenous people. No speculation was needed when we encountered the remains of more recent guerrilla gardens. Hard work and ingenuity by those who capitalized on the rare spots with a water source, sunlight and little chance of detection. Degrading plastic tubs and garbage cans await the next user group who have a vision for the best use of this space.

Our quest, prickly-pear in bloom, was on the shore. The first specimen and all others we found were

within a few metres of and often straight up from the water. If not in bloom the cactus are very hard to detect. There were occasional patches about a metre across that were fairly obvious. As we



Flowering Prickly Pear Cactus on Lasqueti's EcoReserve. Photo above Duane West - below Izzy harrington

stood and admired the “big guys” our eyes began to notice more small specimens blending into the grass and moss around and under our feet. Right at the site the cactus, the seaside juniper were also in abundance, with beautiful weathered old specimens owning the inhospitable bluffs.

Along Lasqueti Island's southern coast we have our own unique expression of floral communities found only around the Salish Sea. Endemic to our region, Seaside juniper was only determined to be a unique species in 2007. Prior to then it was lumped in with Rocky Mountain juniper widespread to the east of the Cascade Mountains. When the Ecological Reserve was established it was known our junipers were special, but time has revealed just how special. The prickly-pear also occupies very specific locations through the Salish Sea region. Mittlenatch Island off Campbell River is as far north as they go on the coast and to the south they are found in the rain shadows down to the Olympic Peninsula.

The forecast for June 16 was for showers, however our location in the Mountain Arrowsmith rain shadow ensured that we enjoyed cactus blooms in sunshine.



Housing and Conservation

by Gordon Scott

At a recent LINC meeting a director asked what effect acquisition and conservation of lands on Lasqueti has on housing supply and affordability on the island.

Great data isn't currently available, and an accurate count of fully developed lots that actually exist on Lasqueti is complicated by the number

of land companies and land groups with undivided large lots along with many non-conforming second dwellings on existing parcels. However, a 2008 Islands Trust map calculated that under Lasqueti's current zoning by-law there is a theoretical maximum of 1236 potential 10-acre lots on the island. It's difficult to know how many of those potential lots are fully developed with houses and how much is left for future development. Stats Canada's 2021 Census provides a clue in their count of 506 "dwellings" on Lasqueti, but Stats Canada dwelling counts aren't necessarily all on separate parcels, so we are left to guess.

In terms of conservation lands, the maximum potential of 10-acre lots, if fully subdivided, on the four Islands Trust Conservancy's Nature Reserves (Mt. Trematon, Johnny Osland, Kwel and Salish View) plus the two recent BC Parks Foundation acquisitions (Pt. Young and Marine Island) come to just 88 potential 10-acre parcels.

If we assume that at least 400-500 of the potential 1236 lots on Lasqueti are already developed with residential type housing and 88 lots are currently in conservation status, that leaves about 550-650 potential 10-acre lots that are currently available for residential development. A quick review of a 2024 map of structures on Lasqueti indicated that there are about 30 existing ten-acre lots that are currently sitting empty with no structures.

The majority of land that has been acquired for conservation purposes are steep, rocky bluffs, wetlands



The house at Point Young was moved to a local Lasquetian couple's property to be renovated for their home. Photo: Gordon Scott

and shorelines. These types of properties are not well suited to homesteading, and would be difficult and expensive to develop: Mt. Trematon could accommodate up to 4-5 10-acre parcels that would be suitable for homesteading; Johnny Osland Reserve could accommodate 4-5 10 acre lots as well. Salish View might be

able to fit in one developable unit. Pt. Young would be more easily subdivided into as many as 17 lots; and Marine Island, because it is only 10 acres in size, would allow for one residence. Practically speaking, less than 30 potential 10 acre lots have been "retired" through conservation acquisitions.

Reviewing the data it's pretty clear that there is plenty of "vacant" land available on Lasqueti in large lots and under-occupied existing parcels that could be developed for residential housing. Why this land isn't being developed for residential use is a whole other question but individual landowner preferences probably play a major role in land sitting "idle" and not for sale.

If there is a lack of supply of land for residential development it's because of a lack of land for sale. And as we all know, those few properties that are for sale are very expensive and out of reach for many Lasquetians to afford. How did this happen? How did prices for raw land and housing get so unaffordable? Did acquiring lands for conservation purposes raise the price of land for everyone else? The answer is no.

All the conservation projects listed above were either donated or purchased below fair market value. Furthermore, the purchase price was established by an independent appraiser based on the sales price of comparable properties. Conservationists use independent appraisers to help ensure we pay no more than the fair market value for the properties we acquire. This way conservation purchases help slow the pace of rising land prices by not paying more than the going rate. (Con't next page)



Marine Island, now owned by BC Parks Foundation *photo Gordon Scott*

If the purchase of conservation lands doesn't increase the cost of land then how did the prices of real estate get so inflated?

The answer is likely the historically low interest rates that for the last 13 years created a climate ripe for rampant speculation. Real estate quickly become one of the most fungible commodities across the world. What was once considered a home is now considered an asset. Low interest rates allowed investors to borrow money for little cost, acquire what they considered under-valued real estate and turn around and sell the property for a profit. Think Safe Island. Well-meaning buyers of these price-inflated rural properties often use money from the increased value of other real estate, and the market spirals upward with each transaction.

Fueling this trend is the growing presence of private equity investors whose mission is to find the greatest return, with the lowest investment cost, over the shortest time. Private equity firms currently account for 30% of all residential purchases in Canada, while the percentage of individual home purchase declined for the first time in years. What was once a home is now an asset.

The affordable housing issue for Lasqueti is a complex mix of a quickly changing demography and economic opportunism, with no clear or easy solution. Lasqueti is not immune from the swings of the global economy, aging baby boomers, and a growing population. Acquisition of sensitive ecosystems and important habitats from willing landowners at below market prices not only protects natural systems for wildlife, but it also protects those natural systems that benefit the humans that live here as well. Affordable housing on Lasqueti is a concern, but it's not caused by protecting land for conservation.



New Directors: elected at the Annual General Meeting in May 2024

Peter Sorensen accepted LINC's offer to join its board of directors this past spring. He and his wife have been visiting Lasqueti for the past 40 years and purchased a house on Maple Bay in 2017. With over 35 years of experience studying fish biology, freshwater ecology, and invasive species control as well as management, Peter believes he can contribute to developing plans to sustainably preserve Lasqueti's ecosystems.

Norm Stacey has also newly joined the board. He was born in Vancouver and studied fish reproduction at UBC and herring spawning at the Pacific Biological Station before joining the Biological Sciences Department at the University of Alberta (Edmonton). He has been a property owner on the Shumack lands on Lasqueti since 1983.

Martha Konig and her family have had a summer home on Lasqueti for 20 years. After 35 years working as a litigation lawyer, she has retired. She is now happy to spend more time on Lasqueti. She is a long time supporter of West Coast Environmental Law and is joining the LINC board to support efforts to preserve Lasqueti's unique environment for everyone, especially for her four children and their families

Thinking About Wildfire and Risk On Lasqueti

by Ken Lertzman and Doug Hopwood



Forests around the world are experiencing changes in the weather conditions that drive the frequency, severity, and magnitude of fires. In recent decades we have seen increases in extreme fire behaviour in Australia, the Mediterranean, Europe, the global North, and Western North America from the Southwest through BC, Alberta, and the Yukon. Close to home, a series of recent bad fire seasons in BC and Alberta have increased public awareness of wildfires and the risks they create.

One of the greatest concerns is the safety of homes and communities in the “wildland urban interface” – the WUI. These are more at risk and harder to protect than communities farther from the forest. All homes on Lasqueti can be considered part of the WUI – as are most communities across the islands of the Salish Sea. Managing fire risk in the WUI is a complicated problem and has been the subject of a lot of research. The BC FireSmart program, developed beginning in the 1990’s and refined over time, provides guidance for landowners and communities in the WUI to increase resilience to wildland fires and minimize their impacts.

It is important to remember that fire has been an integral part of the ecology of the Islands of the Salish Sea for as long as these ecosystems have been around. Douglas-fir, our most common tree species, is well adapted to periodic fires. For thousands of years, fires have occurred frequently enough to maintain Douglas-fir as a dominant species. In addition to natural fires started by lightning, Indigenous people actively used fire as a management tool to influence forest ecosystems and increase the productivity of desirable food species.

In contrast to the Indigenous approach, the Eurocentric emphasis on absolute fire suppression has not only failed to protect forests and communities from extreme fires, but has contributed to the current fire-prone and degraded condition in the dry forests of western North America. More recent, ecologically-based approaches to forest planning and fire management seek to find ways of living safely with the fires

that will inevitably occur on the landscape, rather than trying to eliminate them. This usually involves management of the forest to reduce fuels and carefully reintroducing prescribed fires, often with the active involvement of Indigenous people and their traditional ecological knowledge about fire.

Basics of wildland fire behaviour

Wildfires vary greatly in a number of key characteristics that together make up “fire behaviour.” These characteristics include intensity (the actual physical heat being released in a fire), severity (the effects of the fire on vegetation), rate of spread, size, and internal heterogeneity. Wildland fires can range from low severity, slow-moving surface fires which burn grasses and other understory vegetation, but have little effect on overstory trees, to high severity crown fires, driven by high winds, moving rapidly, killing most of the trees, and lifting embers high in the air that sometimes drop to the ground kilometers from the flaming front. Fires can also burn quite variably, creating a complex mix of higher and lower severity patches within the burned area. Understanding the factors that cause fires to burn with these different characteristics – and how we might influence them – has been the focus of a lot of research over the past few decades.

Over time, forests tend to experience a characteristic pattern of fires that is referred to as the “fire regime”. For example, ponderosa pine forests generally have a low severity fire regime and boreal forests typically have a high severity regime. Mixed ponderosa pine and Douglas-fir forests in the southern interior of BC often have a mixed-severity fire regime. The Coastal Douglas-fir zone in which we live on Lasqueti has a long and varying history of fire that is probably best categorized as mixed severity, but fires hot enough to kill a mature Douglas-fir tree seem to have been rare. The charred bark on most of the residual old growth Douglas-firs indicates fires of low enough severity that those large, well-established trees were able to

survive. The highly varied topography of the islands also probably helped to interrupt the spread of fires across the landscape. This is very different from the extreme crown fires seen recently in Northern BC and Alberta. These very large, fast moving, high severity fires arise from a distinct combination of fuels and forest type, extreme fire weather, and a landscape with few natural barriers to fire spread.

People generally summarize the drivers of fire behaviour with the “Fire Behaviour Triangle” of weather, topography, and fuels, which interact in complex ways to determine how a fire burns. But fuels are the only component of this process over which we can exert much influence. For this reason, research has focussed on the effectiveness of strategies for reducing the amount and flammability of fuels, in the immediate area around dwellings (e.g., resulting in programs such as FireSmart) and across the broader landscape (forest and range management).

Most of this research suggests that at the stand level, the most effective approach to reducing fire severity or spread involves a combination of overall fuel reduction, creating patchiness in the canopy, reducing ladder fuels (sub-canopy trees or branches close to the ground, which allow a surface fire to “ladder” into the canopy) retaining less flammable vegetation types (such as older forests and hardwoods) and reintroducing controlled fire. Mechanical fuel reduction treatments, such as thinning, are more effective if combined with a controlled burn. At the landscape scale, there is a lot of focus on maintaining heterogeneity in the forest that can produce fire breaks and reduce fuel connectivity, for instance by having stands of different ages or maintaining patches of hardwoods in a conifer mosaic. Most of this research comes from the western US; less has been done in Canada. These kinds of forest treatments are generally done by government agencies in partnership with the forestry or silviculture industry and Indigenous groups. These approaches tend to be expensive and those using prescribed fire

require a great deal of technical expertise.

While these approaches can be effective at influencing fire behaviour in many circumstances, neither preparatory forest treatments nor real-time tactical suppression can be counted on to change fire behaviour under truly extreme weather conditions. This is one reason why action on climate change is so essential.

We are heading for a hotter future in which even our most sophisticated tools will be increasingly challenged to protect us from devastating fires.

What can you do?

First, educate yourself about the nature of fire and fire risk in our ecosystems. Study the FireSmart recommendations and think carefully about how they might apply to your home and immediate surroundings¹. Everyone should do what they can to make their home a safe space. We also have individuals in the Lasqueti community trained to do FireSmart assessments -- consider getting a free FireSmart assessment. Our Regional District has adapted the FireSmart guidelines for Coastal BC and provide suggestions tailored to our local environment².



Examples of Low-Severity Surface Fires in SW BC. This was a prescribed fire in an ecological reserve near Kamloops. The fire was intended to restore the forest to an ecologically desirable condition. Bottom image: a year after the fire.

Remember that the focus in FireSmart is on your home and its immediate surroundings - and remember that most fire ignitions in the Salish Sea are started by human activities. Keep in mind also that being “FireSmart” doesn’t mean eliminating all vegetation within 30 metres of your home. The FireSmart BC Landscaping Guide³ explains how to minimize fire risk while maintaining the aesthetic and ecological values of a diverse plant community near your home.

Neither FireSmart nor other experts are suggesting that the broader landscape should be treated in a similar manner as the immediate area around your home. The probability of a wildfire may be the same in both places, but the higher consequences for our lives of a fire burning close to our home motivates us to take much more stringent fuel control measures there.

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Connecting the Future

A journey of recovery, discovery and community

By Morgan Maher

Over the past 12 months LINC has seen a major upgrade—made possible by a generous grant from the Government of Canada’s Community Services Recovery Fund in collaboration with the United Way Canada.

This fund was built to support adaptation and resiliency regarding the long-term impacts of the pandemic. The CSRF invested \$400 million across Canada to support charities, non-profits and Indigenous Governing Bodies for pandemic recovery. LINC received nearly \$60,000 to adapt, diversify, innovate and strengthen the organization.

During the pandemic, LINC experienced compounding demands and challenges to its events and communications. This resulted in a frustrating loss of momentum and community connection. Then came a light. Then came the funding. Then came momentum. From this—a rich, dynamic, creative and purposeful project unfurled.

Officially titled “Diversifying Demographics - Adapting LINC for Innovative Futures” led by Julia Woldmo, Morgan Maher and Ian Rusconi, the project provided experience, equipment and opportunities to empower current and future generations to continue the work of protecting and stewarding nature.

What emerged, and continues to grow, has proven much greater than the sum of its parts.

With support from the grant, numerous free community events were organized and recorded: a Native Plant Walk & Talk Field Day with SatinFlower Nurseries, The Lasqueti Fungus Fest with renowned mycologist Andy MacKinnon, an educational mushroom walk



Looking up into the forest at Salish View.
Photo by Morgan Maher

with students of False Bay School, a Merlin Bird Identification App workshop with Lasqueti’s youth led by Emily Barnewall of Nanaimo and Area Land Trust, a presentation on the history of the Coast Salish woolly dog by Audrey Lin of the American Museum of Natural History, and the Foraged Food Feast celebrating local foods, growers, caterers, and the community.

It’s an exciting time of unique, educational in-person events with LINC.

To address the challenges of technology and online communication, three key elements were focused upon; video production, social media, and the LINC website.

The funding provided LINC with excellent digital media production capabilities. We purchased a new computer with improved digital capabilities, video equipment, a new printer, and a drone. In our contemporary world, video has become a primary means of communication and LINC now has the ability to create, document, communicate, share and celebrate via video. Examples of this include video footage from the Fall 2023 Lasqueti Fungus Festival and video vignettes about some of our reserves.

Alongside this, an extensive and refreshing update to the website was initiated—helping bring the site into a contemporary form and function, provide agility and fluidity for updates and additions to operate as a central hub and archive for the conservancy’s accomplishments.

Where social media can be fleeting, unpredictable and toxic, the LINC website intends to stand as an Old Growth tree—healthy, sturdy, and storied, with ever

new leaves and branches. We focussed on developing more media content on the LINC website, with the goal of providing a long-term, information and visually rich archive for our members and others.

A major element of the project has involved training—educating and empowering the conservancy’s contractors, board of directors, other volunteers, and youth in the use of equipment, tools, technologies, apps, and software, to create a diverse, creative, resilient knowledge base and skills resource in the community—one that extends across generations.

On Lasqueti, the demographic tends towards Elder, therefore many of the educational opportunities of the project were created with youth in mind, to offer empowering ways of engaging, seeing, working and participating with nature.



From ink to paper to events to gear to training and, significantly—to people, knowledge, wisdom and skills—the funding has paid for it all. This entire multilayered upgrade has thrived with increases to financial equipment and resources for the conservancy. The funding for this project has allowed a significant increase in activity over this past year targeted towards leaving a legacy for LINC that will strengthen our ability to reach out to the membership in the future.

At the same time, the project has encouraged a rise in support, membership, donations, volunteering, participation, inspiration and excitement. It has helped raise awareness of the conservancy on the whole, as well as shed light on the numerous specific projects LINC is actively involved in.

So now—we’ve got great momentum, strong connection, powerful community. While the project was for 12 months, and the funding a one-time grant, the purpose and intention is to continue—to adapt, support and co-create the future.

With LINC, this means a future worth living in. A future full of nature—healthy, protected, and cared for. Visit the website, become a member, check out our youtubes, keep updated on facebook, get in touch by email, chat in person, volunteer, come for a walk. Come along. We’re in the forest, on the shore, online and up the road. <https://linc.lasqueti.ca/> www.youtube.com/@LINC_BC

Fire Risks - cont'd from page 8

Another good resource is a report from a workshop organized by Transition Salt Spring in 2023 and published by Raincoast: “Fire risk reduction in the Coastal Douglas-fir biogeoclimatic zone: A practitioner’s report”⁴. This report is especially helpful because it provides some guidance for how to think about fire risk and forest condition in the forest beyond the zone of intense FireSmart focus (the 30m immediately around a dwelling). It reflects a lot of the discussion in the broader research and practitioner’s literature that emphasizes a healthy and resilient forest condition: reducing fine fuels and ladder fuels while encouraging a healthy, productive, and diverse forest understory. They also emphasize retaining and encouraging large fire-resistant canopy trees, reducing understory herbivory, and retaining less flammable plant species.

We have some special conditions on Lasqueti in relation to these issues. Open areas with grassy vegetation and little canopy cover are among the most flammable vegetation types because they provide fine fuels that dry easily and are exposed to sun and wind. Very sparse and open forest canopies on exposed sites allow the sun and wind to quickly dry fine understory fuels. Our beautiful rocky knolls with sparse tree cover and an understory of mosses, lichen, and grass are highly flammable and little can be done to reduce that flammability, so extreme caution needs to be taken to avoid sources of ignition in these areas. We also have many areas of younger forest with dense, even conifer canopies and lots of ladder fuels—as described in the Transition Salt Spring report for other islands. Finally, we also have extensive areas, especially on the south end, where herbivory has dramatically reduced the understory vegetation, exposing and drying the ground surface and any fine fuels there.

There are no easy solutions to these problems and they demand careful thought. In the next issue, we will continue this discussion with more of a focus on the Lasqueti landscape and ideas that we as landowners can put into practice.

1 <https://firesmartbc.ca/7-tips-to-firesmart-your-property-this-spring>

2 https://www.qathet.ca/wp-content/uploads/2024/05/FireSmart_Coastal_Brochure.pdf.

3 <https://firesmartbc.ca/resource-types/guides-manuals/>

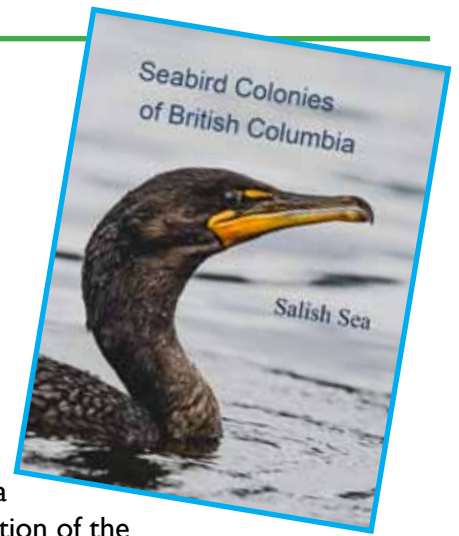
4 Doll, S. with contributions from R. Waldick, K. Tolsma, C. Kelly, and P. Mineau. 2023. Fire risk reduction in the Coastal Douglas-fir biogeoclimatic zone: A practitioner’s report. pp 32. <https://www.raincoast.org/reports/fire-risk/>

New Books

Seabird Colonies of British Columbia: Salish Sea.

by Michael Rodway

Now available online at the Biodiversity Centre for Wildlife Studies website (wildlifebc.org)



The fourth and final volume of the series on Seabird Colonies of British Columbia is now complete. This volume considers all known seabird colonies in the BC portion of the Salish Sea, from the north end of the Strait of Georgia to Victoria at the south end of Vancouver Island. It presents the status and historical changes of seabird breeding populations at all known breeding sites, including in urban areas that have become important habitats and now support large proportions of the seabird breeding community in the Salish Sea. Colony histories, regional summaries, and in-depth analyses of population trends for the 10 colonial-nesting seabird species that have been recorded breeding in the Salish Sea are presented, current through 2023. Introductory sections describe persons and institutions that have contributed to our knowledge of seabird breeding populations in the area. Historical impacts and current threats to nesting populations and established and recommended conservation measures are reviewed. The Salish Sea area is heavily urbanized, with expanding human populations exerting tremendous and increasing pressure on the environment. This volume is intended as an aid to the conservation and management of nesting seabirds and the marine ecosystems they depend on in this intensely developed region.

In addition to presenting data through to 2023 for the Salish Sea colonies, an appendix to this fourth volume also updates population estimates and trends for all colonies on the BC coast. Tables in Appendix I provide updated population estimates for every known current and historical colony site in Haida Gwaii and the BC Outer Coast areas that were addressed in volumes 2 and 3 of this series. Summary statistics for the entire coast are also presented, updating to 2023 the provincial summaries present in volume 1.

As with previous volumes, this final volume is illustrated with location maps and hundreds of photographs. As well, there are many anecdotes that recount experiences of the authors and relate interesting details and musings about seabird natural history and conservation. Lovely paintings by artist Mark Hobson and drawings by Robert Butler are also included. Almost all photographs are presented in colour in this volume. The Biodiversity Centre for Wildlife Studies have decided that this volume (Volume 18, Numbers 1 & 2) would be issued primarily as an online publication.

The author, Michael Rodway, adds, "I have made a full-colour, paperback edition available through Amazon. Amazon prints it on demand and I have set the price just to cover the Amazon cost. Currently, it is cheapest to order it through Amazon.ca.



This issue of the LINC Newsletter was funded by:



Working with communities in BC's Interior, Lower Mainland, Central & Northern Vancouver Island

Funded by the
Government of Canada's
Community Services Recovery Fund



Seen In Passing



Barn Swallows feeding their young, July in a yard across from a hayfield where insects were gleaned. Babies will get their own for a day or so, then follow the adults and get fed mid-air for a day or two.

Photo *Dennis Forsyth, Denman Island*



Mama Wolf Spider (from *Lycosidae* family) with her offspring, on her back (spinneret) sighted under a deck on the Shumack land

Photo *Jane & Chris Byra*



Ken and James at Marine Island in the thick salal bushes, which only grow in areas where herbivores (sheep and deer) rarely browse. *Photo Gordon Scott* right: flowering salal bushes, *Photo Izzy Harrington*



Newt at Osland Reserve
Photo Sophia Rosenberg



Above left: Northern Alligator Lizard - a native species *Photo Todd Carnahan*



Above right: Invasive Wall Lizard, *Photo Gavin Hanke, Royal BC Museum*. Wall Lizards are accidentally transported in hay bales, livestock trailers, firewood, camping supplies, and gardening supplies. Watch for them and don't bring them to Lasqueti!!



Do you want to become a director or volunteer and help conservation and stewardship on Lasqueti?
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