BCnature

Knowing nature and keeping it worth knowing

The Magazine of BC Nature

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BCnature

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Together, donations and membership dues keep our office running. The staff are critical to every thing we do: They support the great work of 65+ federated clubs/groups and the staff of the IBA/KBA and the MPAP programs.

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Invasive Weed Pulling /Planting of Native Species
Yorkson Watershed Enhancement Society

“HELP US PROTECT WHAT CAN’T PROTECT ITSELF”

Northern Spotted Owl

Every day, thousands of acres of forest are lost. Rivers run dry and wildlife habitats disappear. Too many species are teetering on the brink of extinction — not decades from now, but today.

BC Nature and its federated groups are on the front lines — planting trees, restoring wetlands, protecting endangered species, and fighting for the wild places we all love.

Lyall’s Mariposa Lily

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- Reforest areas devastated by wildfires and logging
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- Educate and empower communities to act locally and globally

🌎 Nature is in crisis —
but there’s still time.
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BC Naturalists' Foundation 2025 Club Support Grants


Bee School
Native Bee Society of BC


Raptor Banding
Vancouver Avian Research Centre

Bird Checklist
Prince George Naturalists


Purple Martin Nestboxes
Nature Nanaimo


Owl Banding Supplies
Mackenzie Nature Observatory

Your donations and legacy gifts allowed us to assist with funding for:

Club Brochures/Checklists/Signage
Educational Courses (Bee School)
Purple Martin Nest Boxes
BioBlitz for Adults/Children
Staffing/Planning for Nature Centres
Equipment for Owl/Bird Banding
Toad-Painted Turtle-Raptor-and Marsh Monitoring, Fish Foraging
Invasive Removal/Planting of Native Plants
Bird viewing Platforms

Staffing
Delkatla Wildlife Sanctuary

Signage
North Okanagan Naturalists

BC NATURALISTS' FOUNDATION


BioBlitz
Whistler Naturalists

To view all club support grants for 2025: VISIT: *https://bcnature.org/club-support-grants/*

BCnature

Volume 63 No. 3

In This Issue:

Regular Columns

Features

Articles and advertising in BCnature magazine do not necessarily reflect the views of all BC Nature members.

All article references that were submitted with the articles can be found in the e-version.

Objectives of BC Nature (Federation of BC Naturalists)

- To provide naturalists and nature clubs of BC with a collective voice on conservation and environmental issues.
- To foster an awareness, appreciation, and understanding of our natural environment, that it may be wisely used and maintained for future generations.
- To encourage the formation and cooperation of nature clubs throughout BC.
- To provide a means of communication among naturalists in BC.

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Editorial
Wisdom, Prediction, and Survival

Submitted by Peter Ballin

I've had the pleasure of addressing quite a few of you with the talk "The Wisdom of Turtles", based on my research on Western Painted Turtles (*Chrysemys picta bellii*). My premise was that the 15 million years of natural selection on this species resulted in DNA that equipped this animal with not only the anatomy and physiology for survival, but also with the knowledge to express appropriate behaviours. I call that wisdom.

You may well ask, how can we talk of wisdom in creatures other than us? Here's what AI gathered for a definition, and it fits even those missing cerebral cortices or even nervous systems: "Wisdom is the ability to use knowledge, experience, and good judgment to make sound decisions. It involves insight, discernment, and a deep understanding of life's complexities."

Wisdom encompasses predictability. If organisms couldn't predict the future, they wouldn't be adapted for it. The turtle DNA, its major source of knowledge, has undergone selection that mirrors the relevant aspects of their environment. They know what the right food is and where to find it. They know where to dig their nests. They know to jump off their basking logs when I (predator) approach them in my kayak.

Of course, turtles aren't the only wise organisms: all are. Consider the wisdom of Douglas-fir seedlings. The individuals on our coast grow faster to reach the light in their dense wet forest than those in the more sparsely forested Interior, and those in the dry interior tolerate soil drought better than their coastal cousins. And have you noticed how dandelions have outsmarted your lawn mower, either by flowering on short stems or popping up in a hurry after mowing? One of my favourite examples is the counting ability of the bluehead (*Thalassoma bifasciatum*), a small wrasse common in the Caribbean. My undergrad crony Bob Warner is the world expert on these fish, and he invited me to join him in an experiment in St Croix more than 30 years ago. The bluehead male dances above a coral head at 2 pm each day and attracts females to spawn. He rushes towards the surface with a female, one at a time, releasing his sperm as she releases her eggs. Bob's experiment involved trapping all of the bluehead males on the shallow patch reef save one, which meant that all the females converged on the remaining male for the 2 o'clock appointment. Initially, he ran out of sperm after the number of females exceeded his expected number. But that situation didn't last long. Within a few days he allocated sperm so that all the females got a shot. We know that because we collected eggs after each mating event and determined the fertilization rate. The blueheads not only count females, they count their sperm!!

So, a tree has the wisdom to know how to be a good tree, a weed a good weed, a fish a good fish, and of course, a turtle a good turtle. But there's a problem. All these wonderful adaptations pretty much depend upon predicting an environment that doesn't change much. If aspects of the environment change rapidly the organism may not be able to switch gears quickly enough and not know how to handle the new conditions. Turtles know to seek disturbed ground with a warm south-ish exposure for their nests. Humans often provide this when we build roads. And the best nesting areas most often appear on the wrong side of the road. Natural selection hasn't equipped the turtles to withstand the onslaught of tires. One site in Montana lost a third of its turtles one year due to road mortality. And as climate change continues, those nests may get hot enough to influence the gender balance of turtles, because above 28° the eggs develop into females. Hotter and drier summers might exceed the interior Douglas-fir seedlings' drought tolerance or lead to destructive fires, and less cold winters may favour their pests and pathogens. Warming seas may kill the coral heads from which the blueheads display and result in the destruction of a beautiful and complex ecosystem. The ancient wisdom ceases to be an adaptation for survival when the environment changes rapidly.

So we come to the wisdom of the "wise ones", *Homo sapiens*. Is the widespread obsession with consumption a part of our genetic heritage? For most of our existence, we struggled to maximize attainment of resources, and our DNA helped guide our choices to attain them. One example: pigging out on previously relatively scarce nutrients. Sugar? Gobble it! Fat? Gobble it! Meat? Gobble it! This used to be adaptive. Our genetic wisdom didn't anticipate the recent nutrient abundance (at least for some of us). Too much sugar can lead to obesity, diabetes, and heart disease in humans. Too much saturated fat can raise LDL cholesterol in blood, which can increase the risk of heart disease and stroke. Too much meat, especially red and processed meat, can lead to increased risk

Continued page 8

Editorial continued from page 7

of heart disease, stroke, type 2 diabetes, and certain cancers, particularly colorectal cancer, as well as dehydration, digestive issues, and potential nutrient imbalances.

The food environment changed more rapidly than our genes, but our genes also set up a brain that allowed us to develop the capacity to make wise decisions beneficial to our survival: a cultural wisdom. We can choose moderation in our diet. We humans thus sometimes face a paradox: our "animal" wisdom versus our "cultural" wisdom; our base "instincts" versus our better judgment.

The wisdom that natural selection gave us usually can't track rapid environmental changes because our genes are conservative; they predict a future world very much like the present, or should I say the recent past? It follows that most humans possess an inability to embrace the urgency of tackling a not immediate crisis ahead, however predictable. The climate crisis upon us was foreseen at least 35 years ago. Some consequences of this include heat, drought and flood effects on agriculture and forests, changed ranges of insect pests and diseases, and even the distribution of our species. Many people in decision-making roles rely on their and others' consumptive, resource-maximizing scripts to guide their policies. Our collective reticence to employ cultural wisdom to override the DNA script is working against our future.

So here follow some AI suggestions for the kind of wisdom humans can employ to thwart negative consequences to our environment, with my underlines:

- Wise individuals tend to be prudent, acting with caution and foresight. They make sensible decisions that consider potential outcomes and avoid unnecessary risks.
- Wisdom acknowledges that life is often unpredictable and complex. It involves accepting the limitations of knowledge and being comfortable with ambiguity.
- Wisdom is not just about possessing knowledge but also about integrating various perspectives and understanding different viewpoints.
- Many definitions of wisdom include prosocial components like compassion and empathy, suggesting that wise individuals are concerned with the well-being of others.
- Wisdom is often linked to ethical considerations and the ability to make choices that align with moral principles.

Apply the aforementioned list to the management of environmental issues of your choice! Make predictions for survival. And then consider which of your political leaders you might contact to suggest that they apply your wisdom. Please.

And wow! In July the International Court of Justice said that a healthy and sustainable climate is a human right and that countries could be in violation of international law if they fail to take measures to protect the planet from climate change. ☼

President's Report

Submitted by Nancy Flood

It is mid-August as I write, and the zucchini in our vegetable garden are clearly set on taking over the world. As always, the garden is tentative in spring; we worry about whether we planted too early or too late and whether this or that will ever start to grow. And then it does. We froze and "jammed" more raspberries than ever before and until recently, I was begging friends and colleagues to take lettuce and/or snap peas. Now, the vines are straining under the weight of Black Krim Tomatoes and various types of winter squash are growing rapidly: lumpy or smooth skinned, light or dark green, they promise many dinners ahead. Gardening is often like that: uncertainty and dearth can lead to abundance.

And then there are the apricots. After a couple of years of little or no fruit due to unusual winter thaw/freeze cycles coupled with drought, this year everything was—forgive the pun—peachy. There are so many— too many — apricots. We've made jam and pie and frozen more than we will ever use and given them away and been very happy when the deer finally found them, hoovering them up from the lawn, efficiently leaving the pits behind. It is a bit of a nightmare really. Ensuring that they don't attract bears is an uphill battle, fought with a lot of ladder work and considerable time spent bending and straightening to get those the deer miss. Again, from nothing to a surfeit!

In many ways, BC Nature is like that too. Five years ago, it was just beginning to grow: it was a federation of 45 clubs, with one full-time staff member, a small budget and no Executive Director (ED). Since then, the federation has expanded to 65 member organizations, our budget has grown exponentially, and we currently have one part-time and two full-time staff members as well as numerous contractors who all do great work—

Continued page 9

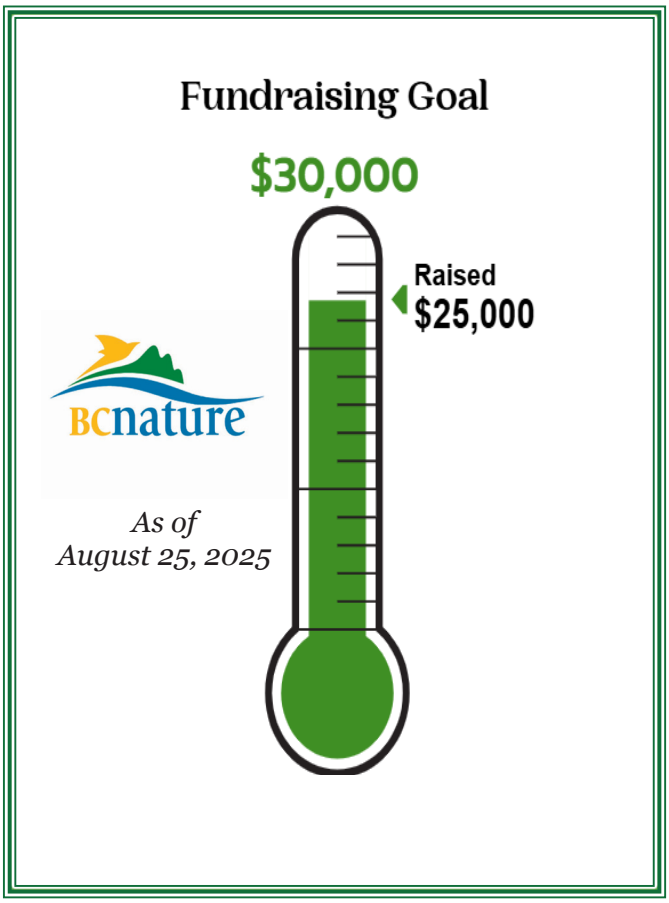
President's report continued from page 8

supporting the activities of clubs, educating the public and promoting conservation in diverse ways. Stewart Guy became our ED in early 2022, and Liam Ragan dramatically expanded his work on Important Bird Areas (IBA), and especially on Key Biodiversity Areas (KBA), to make BC Nature the face of the national and international KBA program for B.C. And we became a partner in the Municipal Protected Areas Program (MPAP) which consists of "Five leading nature organizations working together through the Municipal Protected Areas Program (MPAP) are Nature Canada, Alliance of Canadian Land Trusts, Ontario Nature, and Wildlands League." Along with BC Nature, these organizations have partnered to support municipalities, land trusts, and conservation groups by developing tools and best practices to increase local conservation, which contributes to a broader national effort to halt and reverse nature's decline and reach Canada's conservation targets. (*http://bit.ly/3JqFXKI*). The goal is to ensure that Canada meets its commitment to conserve 30% of its land, water, and oceans by 2030 (i.e., 30 x 30).

Today, the BC Nature garden is incredibly productive. Liam has made B.C. a model for KBA work in this country—increasing the number of KBAs identified and monitored and collaborating with numerous First Nations and naturalist club caretakers throughout the province. Andrew Banks and his team have made the MPAP a force of (and for!) nature in BC. Last month alone, the municipalities of Lions Bay (*http://bit.ly/47291Sn*) and Bowen Island (*http://bit.ly/4mKPA4W*) joined Metro Vancouver (*http://bit.ly/4oHvKt8*) in announcing that they have signed on, adding more than 8,000 ha of land to the Canadian Protected and Conserved Areas Database (CPCAD; *http://bit.ly/3HDkwoT*). Since these lands include Burns Bog and the Delta Nature Reserve, as well land in the Howe Sound area, we know that several of BC Nature's member clubs played a role—and that they are celebrating! And the MPAP rolls ever onward looking for expressions of interest in the Interior and the Kootenays.

The trick now is to keep the garden flourishing permanently—unlike my garden, which will eventually become dormant. We've been very fortunate (and of course worked hard) to receive large, in some cases multi-year grants that have allowed us to do this work. We are extremely grateful to the Sitka Foundation, Environment and Climate Change Canada, Nature Canada, the Wildlife Conservation Society, the BC Community Gaming Fund, the Chawker Foundation, and TD's Friends of the Environment Fund, among many others. But most grants come to an end and changing government priorities have reduced support for environmental work—leading to increased competition in the sector for other types of funding. So, as we let know you in our most recent appeal, we are facing a possibly difficult time financially; if it persists, one might be concerned about the productivity of the BC Nature garden.

And boy did you respond! We are enormously grateful for your numerous donations, large and small! Since we issued the appeal, we have taken in $25,000 and have acquired 13 new monthly donors. Bravo! Of course, we've been thankful for, and relied on, your donations throughout the years; they have always been an important part of our—and your—success in doing what we do. As clubs, as direct members, as the federation, we all are working on behalf of nature. Go team! And of course, our "home" team is working very hard to find and apply for grants and other types of funding. Some of these are very promising.



Speaking of "the team," Stewart Guy, our first and only Executive Director, so far, will be leaving us at the end of August. It's a good time for us to think about what this position might look like in the future and it's a good time for him, since he's about to embark on a six-week trip in the UK and other parts of Europe. We are extremely grateful for what he has accomplished for BC Nature, we wish him an excellent and relaxing holiday—and we know he will be back to help us in some capacity in the future.

Again, thank you so much for responding to our appeal. For those who haven't, there will always be time; you'll be hearing from us! Now, does anyone need zucchini or apricots? ☼

Conservation Committee Updates

Submitted by Peter Ballin and the Conservation Committee

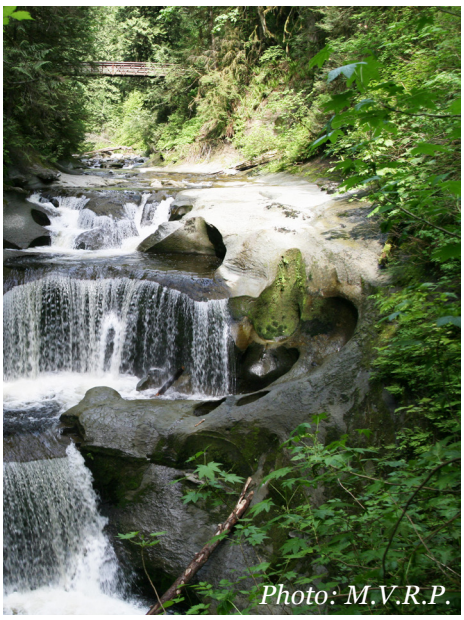
You do conservation! The annual report for this year's AGM revealed that the reporting clubs worked on many kinds of projects with amphibians, bats, bees, and butterflies; BioBlitzes and general inventories/surveys; banding, building boxes, and monitoring of birds; different types of clean-up and restorations; eagle, swan, eelgrass, and glacier monitoring; invasive plant removal and native planting; invertebrate and Motus wildlife tracking; salmon and other types of fish enhancement/habitat clean up; sanctuary/protected area management; signage for trails, viewing platforms/blinds; and water quality monitoring. If your club hasn't yet received a table listing these projects and which clubs are doing what, you soon will. Hopefully you will use it to communicate with other clubs working on similar projects. And speaking of communications, let your community and your MLA know what you are doing! Doing so amplifies our "Voice for Nature".

In this issue we report to you about:

- Bill 15: the Infrastructure Projects Act
- Fish, Wildlife and Habitat
- Fraser River Floodplain Habitat Conservation for Salmonids: Threats and Management of Agriculture and Flood Infrastructure
- Coastal Marine Strategy
- Wind Turbines and Threats to Wildlife
- Mountain Caribou
- Cougars, Wolves, and Bears
- BC Parks Foundation Conservation Education: Learning by Nature

Bill 15: The Infrastructure Projects Act - On May 20, BC Nature wrote Premier Eby to request assurance that streamlining the permitting process for resource extraction projects would not sacrifice safeguarding our environment. We offered our assistance and support with all their efforts that work to preserve healthy ecosystems and our long-term welfare. *http://bit.ly/45xv40J*

Fish, Wildlife and Habitat - Ben van Drimmelen Representing BC Nature on the 30-member Fish, Wildlife and Habitat Coalition, I took part in a virtual meeting with the Minister of Environment & Parks in June. I also met with my new MLA Diana Gibson (Minister of Jobs, Economic Development and Innovation) and gave a five-minute presentation at the Legislature to the Select Standing Committee on Finance and Government Services' Annual Budget Consultation, recommending that at least some funding be directed toward protection and conservation of endangered species. The committee reported: "several individuals and organizations recommended implementing frameworks and legislation that prioritize biodiversity and ecosystem health. BC Nature noted that B.C. is home to a rich diversity of plants and animals, but also the highest number of species at risk. The organization noted that B.C. is one of the few remaining provinces without stand-alone legislation to protect at-risk species and that management and conservation funding is essential. Participants noted that the current patchwork of legislation prioritizes resource extraction with scattered environmental protections. Several individuals and organizations advocated for the province to implement immediate measures to ensure at-risk ecosystems remain intact and implement the Biodiversity and Ecosystem Health Framework. West Coast Environmental Law explained that the Biodiversity Ecosystem Health Framework prioritizes the management of ecosystem health, rather than just resource extraction". However, our position was not included in the Committee's recommendations.



Metro Vancouver Regional Park Kanaka Creek

I reviewed Ontario's Endangered Species Act (ESA). A strong and effective statute was pruned back in June to leave Ontario where B.C. is currently – with virtually no protection of those endangered species that are still hanging on. The purpose of the ESA was amended to consider the need for sustainable economic growth in Ontario. The government claimed that the process to obtain development permits caused unnecessary delays and costs for housing, transit, and critical infrastructure. To help speed up project timelines and provide greater certainty for proponents, the Ministry of the Environment, Conservation and Parks made several changes to its approach to protecting and conserving species. The provincial government now has the discretion to remove species from the Species at Risk in Ontario List. In addition, they removed the requirement to develop recovery plans for species.

B.C. passed similar legislation in May: Infrastructure Projects Act. Touted to fast-track school and hospital construction, it gives ministers sweeping power to completely bypass the environmental assessment processes of any project deemed "provincially

Continued page 11

Conservation report continued from page 10

significant" (see Bill 15 above). A Renewable Energy Projects (Streamlined Permitting) Act was also passed that month. As the title suggests, it streamlines approvals of wind energy projects, a transmission line and some renewable energy projects by exempting them from environmental assessment.

In late May, I attended a briefing on land-use planning in the northwestern corner of B.C. The province is partnering with the Tahltan, Taku River Tlingit, Kaska Dena, Gitanyow, and Nisga'a Nations to engage with industry, community, and other partners to implement existing land-use plans that cover about 16 million hectares. Within just one year, the partners promise to undertake expedited, inclusive land-use planning and essential stakeholder and public engagement. There will be a one-year pause on new mining-tenure registrations in just under one-third of the planning area but permitting and exploration for existing projects and mineral claims will continue.

Fraser River Floodplain Habitat Conservation for Salmonids: Threats and Management of Agriculture and Flood Infrastructure - On July 29, BC Nature wrote to several federal and provincial ministers to address the risk of losing the critical ecosystems of the lower reaches of the Fraser River. In the letter we suggested:

Actions:
- Strengthen and enforce riparian protections on agricultural lands
- Invest in large-scale habitat restoration projects
- Retrofit flood control structures to allow fish passage
- Require cumulative impact assessments for development and flood management projects
- Create collaborative governance mechanisms with Indigenous Nations and local communities

Additional Issues to Consider:
- Agricultural pollutants
- Flood mitigation measures
- Urban sprawl, other sources of pollution, climate change, and over-fishing

Proposed Solutions:
- Engineering fish-passable pump stations, fish-friendly culverts, and installation of fish ladders
- Habitat restoration, organic agriculture, integrated pest management
- Monitoring, enforcement, and protection of habitat and water quality via federal and provincial legislation.

We requested a meeting to discuss how BC Nature and our members can actively contribute to the recovery of Fraser River floodplain habitats through on-the-ground stewardship, citizen science monitoring, education, and policy collaboration.

This letter goes beyond our "usual" and contains quite a bit of detail, thanks to committee member Greg Ferguson, so access it on our website - *http://bit.ly/4fFEvjx*.

Coastal Marine Strategy (CMS) - Peter Ballin

In June, I attended an updating meeting led by Charlie Short, the Executive Director of the Coastal Marine Stewardship Branch of the Ministry of Water, Land, and Resource Stewardship. The plans are well-laid out, but the results are not yet obvious. Here's a look at the framework of goals:

BC Nature has signed onto a joint letter by Canadian Parks and Wilderness Society (CPAWS). CPAWS has taken the lead in organizing environmental non-governmental organizations to push the government into action, including a July joint letter to Premier Eby and Randene Neill, Minister of Water, Land and Resource Stewardship, noting one year since the launch of the CMS. The ask was to allocate funds towards the Coastal Marine Stewardship and enshrine the CMS into law. It's an optimistic letter (*http://bit.ly/3Hwaq9r*). West Coast Environmental Law has produced a document featuring five case studies of implementation of some Coastal Marine Strategy Policy at *Blueprint for the Coast*. *http://bit.ly/4ml79ZK*

In July, I attended a CPAWS meeting that reviewed the progress with the CMS and how to proceed to more tangible results. It seems that the Ministry of Water, Land and Resource Stewardship is focused on cleaning up derelict vessels. Stay tuned!

Wind Turbines and Threats to Wildlife - BC Nature received a reply (*http://bit.ly/47feyFt*) from Joel Butler, Senior Manager of Corporate Responsibility and Environment for Bell Canada, in response to our letter regarding bird fatalities and telecommunication towers in March (*http://bit.ly/3HbQHvJ*)

In the letter, Mr. Butler detailed the environmental policies and practices to reduce the negative impacts of their business. Since 2009, their ISO 14001-certified environmental management system has guided their efforts to achieve this objective, including:
- Pre-project wildlife assessments
- Protection of nesting habitats
- Mitigation of risks in sensitive areas
- Regulatory compliance

Continued page 12

Conservation report continued from page 11

He provided examples that Bell has in place across Canada

- To use, where possible, flashing lights—not steady-burning lights—on cellular and transmission towers
- Identifying and mitigating risks to migratory bird species before choosing a site for a new communications tower

Mr. Butler pointed out, that except for a few towers in the northeastern part of the province, Bell does not own or operate any cellular towers or tower transmission equipment.

Photo: Arrow Lakes Caribou Society

*A Southern Mountain Caribou (*Rangifer tarandus caribou*) calf at the Arrow Lakes maternity pen near Nakusp*

Mountain Caribou - Southern Mountain Caribou have been recovering well lately. The Klinse-Za herd has grown significantly due to a combination of maternity penning and predator control and is now estimated at 187 animals with a three-year growth rate of 1.18 (*http://bit.ly/3JfQND9*) Seven calves were born in year four in the Arrow Lakes Caribou Society's maternity pen. Vince Salvo, husband of our late caribou expert Joan Snyder, submitted an article that raises concern about the diets of penned caribou in the B.C. Interior. Researchers found strong differences between the gut microbiomes of naturally fed deep-snow caribou and human-fed penned caribou. The gut microbiota needs to be the right one to aid the digestion of the lichens that caribou depend upon in the wild. They advise close monitoring to ensure that the prescribed feeding in pens does not compromise Southern Mountain Caribou health and survival. The full study is available at *http://bit.ly/418Gabo*.

BC Nature submitted a letter in July to Ravi Parmar, Minister of Forests, to draw attention to the threats logging permits bring to caribou recovery, *http://bit.ly/4lra5CI*. Despite the government's recent policy promises - including the Biodiversity and Ecosystem Health Framework and A New Future for Old Forests, on-the-ground actions have not matched these words.

BC Nature strongly urged the government to:

- Immediately halt logging within the nearly 6,000 hectares of old-growth and primary forest identified as critical habitat for Southern Mountain Caribou, including both approved and pending cut blocks.
- Cease road construction that fragments habitat and opens corridors to predators and recreational pressure in these sensitive ranges.
- Invest in transition plans for forestry operations that shift harvesting away from critical habitat zones toward second growth and less ecologically sensitive areas.
- Honour its obligations under the Species at Risk Act and uphold the spirit of United Nations Declaration on the Rights of Indigenous Peoples by working in genuine partnership with First Nations to co-develop and implement caribou recovery strategies.

Cougars, Wolves, and Bears - Jacqueline Sherk
Cougars - Cougars and wolves are both routinely killed under the B.C. Government's program known as the 'wolf cull' but officially referred to as the 'Predator Reduction Program'. It is part of B.C.'s Caribou Recovery Program, and the goal of the program is to kill predators of caribou. Far fewer cougars are killed than wolves, however, and since the program began a decade ago, 48 cougar deaths have been recorded while the number of wolves is in the thousands. Cougars are solitary, elusive, and have small litters compared to wolves, which live in family groups and have large litters. And, when being chased down by a helicopter bearing snipers with high-powered rifles, a cougar can climb a tree and hide.

The predator killing program is an attempt to conserve declining caribou herds, yet declining caribou populations stem from human activities. For over a century, caribou habitat has been logged, mined, drilled, and blasted, including the roadbuilding that goes along with these industries. These roads provide a way for predators to reach the high elevation old-growth forests where caribou feed upon tree lichens. No longer does deep snow limit predator access to these now greatly diminished forests.

Wolves - 2025 marks the tenth year of the B.C. government's annual wolf cull program. Each winter the province contracts sharpshooters to target wolves (and cougars) from helicopters. The cull is conducted in winter when animals can easily be spotted in the snow, and this year saw the second-highest number of wolves killed (362) since inception. Originally cited as 'temporary, humane, and scientifically supported' our government has continued to exterminate hundreds of wolves every year with no end in sight.

Continued page 13

Conservation report continued from page 12

*American Black Bear (*Ursus americanus*)*

Troubling evidence about methods used to exterminate wolves has been revealed through Freedom of Information requests by conservation groups. Necropsy reports, contractor communications, and internal guidelines reveal that regulations contained in the BC Wildlife Act are being sidestepped. Government contractors are exempted from following regulations for hunters and researchers that are in place to ensure humane treatment. Exemptions allow the use of high-powered, military-style rifles fired from helicopters and the use of nets deployed from the air to capture and entangle wolves. Wolves caught in these nets are then restrained with duct tape around their muzzles. Other exempted practices include hazing by chasing to exhaustion and using so-called "dead piles"—carcasses of livestock placed to lure them to a site where they can be shot or collared. Collared wolves, including pups, are then used to track them back to their dens where the entire pack is exterminated – save for the collared wolf which is left to find another pack to which the contractors are then led. These tactics are inhumane and prohibited for hunters for a reason, but to our government, the end justifies the means.

Bears - In Whistler in April, Conservation Officers destroyed a mother bear after she bit a woman's hand. A video filmed at the scene revealed her three young cubs crying at the base of a nearby tree, but they vanished before they could be rescued, and despite intensive searches over the following week, they were never found.

The injured woman said she had been watching the bear eat from a garbage bin when the incident occurred. That she was near enough to the bear for it to bite her raises the question: why was she so close? Black bears are known to be quite timid and attacks on humans are relatively rare, however, the timing of this incident in early spring when bears are emerging from their winter dens suggests that she would have been very hungry. Our human food wastes are too commonly poorly managed both by individuals and entire communities. It can't be right that bears should be killed when it is our fault that they are lured to us by the scent of our wasted food; shouldn't we do all we can to not attract them, and to respectfully keep our distance from them? Be sure to read about "Tex" the Grizzly Bear and his untimely death page 27.

BC Parks Foundation Conservation Education: Learning by Nature

More than 100 schools across B.C. will benefit from $1.8 million in federal funding from the Climate Action and Awareness Fund, alongside a $1.5 million contribution from the Province of British Columbia and support from private partners, for a program supporting environmental literacy for youth. You may have helped if you purchased a BC Parks License Plate! The program includes installing living lab pollinator gardens on school grounds. Some of this work will involve the resources and facilitators of the Habitat Conservation Trust Foundation Education. For more information, contact *news@bcparksfoundation.ca* ☼

Natural Justice

Good Rancher, Bad Conservationist: Sometimes the do-gooder and the despoiler roles are reversed

Submitted by Ben van Drimmelen

A national conservation organization owned a large ranch in Alberta, which it leased out for cattle grazing. The ranch lay on the eastern slopes of the Rocky Mountains, close to Waterton Lakes National Park, and within the migratory corridors of a wide array of species. The conservation organization believed that the ranch was strategically important for the movement of wildlife in Alberta, occupying the last fringe between cultivated lands on the east and untainted mountainous lands on the west. It described the strip of land as the "North American Serengeti". However, much of the rangeland at the lower elevations of the ranch was unhealthy due to heavy cattle grazing under previous owners.

The conservation organization decided to sell the ranch to free up funds for other purposes but wanted to ensure that wildlife could continue to migrate across the ranch. Before selling the ranch, it registered a conservation easement to ensure that fencing would not impede future wildlife migrations. (A conservation easement, what we call a "conservation covenant" here in BC, is a voluntary, written agreement between a landowner and a covenant holder. The landowner promises to protect the land or features on the land in ways that are specified in the covenant; a conservation organization holds the covenant and can enforce it if the owner does not abide by its terms.) With the easement on title, there was no need for the organization to own the land to achieve the wildlife objectives.

They approached a bison rancher who was known to operate other bison ranches in Alberta, Saskatchewan and Manitoba in an environmentally responsible manner. The rancher was an avid conservationist dedicated to the restoration of wild plains bison as a species in western Canada. He also wanted to restore and conserve the wild native ecosystems, including fescue rangeland, in which, historically, those bison thrived.

He bought the ranch. As he had done at his other locations, he planned to keep a herd of wild bison on the ranch but do so in a way that would maintain and restore the grassland habitat. Immediately after his purchase, the rancher began to replace the old fencing around the ranch. The new fence was a four-strand smooth wire fence (not barbed wire like the old cattle fence), with the middle two strands electrified when bison were within the fenced area (only a small portion of the time). The conservation organization objected, saying that the new fencing was higher than the easement allowed and that it would impede migrating wildlife.

Photo: Anamalia

Plains Bison
*(*Bison bison bison*)*

The rancher reminded the conservation organization that he would be ranching bison, not cattle, and bison required an electrified fence. Also, the new fencing had a higher lower strand to facilitate wildlife passage. He maintained that the new fence did a better job of keeping in his bison off adjacent roads and also a better job of permitting wildlife to migrate through the ranch. The parties continued to disagree, so the conservation organization took the rancher to court to enforce the covenant and to have the fencing replaced.

The court noted that the rangeland had long been in poor condition due to overgrazing, but the conservation organization had done nothing to reduce grazing pressure during the two years that it had owned the property. In contrast, range quality had improved under the defendant's care; he had voluntarily delayed grazing, allowing some recovery. The rancher was experienced in raising bison and in conserving grasslands and had good reasons for doing as he did. A lengthy video showed that the new fence was not a problem for wildlife movement through it, over it or under it. It did not impede the movement of wildlife onto, through or off of the ranch and so would not reduce wildlife diversity or wildlife migration.

The court also found it significant that the fencing had not become an issue for more than a year after the sale, when some neighbouring ranchers started complaining. One of the neighbours had sent a letter of complaint to the provincial government and others had threatened to do so. This was politically significant for the conservation organization because it was trying to partner with the government to conserve and preserve public lands. The court concluded that the public relations impact of the new fence on the conservation organization's future fundraising and support was the real motivation in pressuring the rancher to change his fence. The organization seemed to be more concerned with public relations than range management, whereas it was the rancher who was focused on safe ranching that allowed wildlife to pass.

The court found that the new fence did not contravene the general purpose of the conservation easement, as it did not impede wildlife. ☼

How To Easily Enhance Biodiversity in Your Community

Submitted by Claudia Copley

Author's Note: This article was written with a focus on the Victoria region, but the main points can be applied to any area of the province.

In 1978 David Evans, a research scientist at the Pacific Forestry Centre here in Victoria, published an incredible summary of the insects associated with Garry Oaks in B.C. It is based on more than three decades of surveys done by the Canadian Forest Service and is available online here: *http://bit.ly/3Jyh8MB*. Spoiler alert: if you plant just one Garry Oak tree you are potentially helping up to 800 insect species that, in some way, depend on Garry Oaks to complete their life history, and dozens of birds that depend on eating those oak-dependent insects to complete their life history, and so on. And if you think that none of these insects are beautiful, I invite you to admire the spectacular *Catocala aholibah*, the Aholibah Underwing. Their larvae feed on oak leaves and the adults can be seen flying, bat-like because of their large size, around the trunks of Garry Oaks in the summer and early fall. When the adults rest on Garry Oak bark they disappear as a perfect match, and their larva do an impressive mimic of a stick when they are motionless. When startled, the moth flashes its colourful underwing and zooms off to find a new roost.

Photo: Wikipedia

Aholibah Underwing Moth
*(*Catocala aholibah*)*

But it isn't just insect diversity we can tap into. A similar survey effort of the fungi associated with the Douglas-fir ecosystem on Observatory Hill also shines a spotlight on diversity. Starting in 2004 and continuing for almost fifteen years, the dynamic duo of Oluna and Adolf Ceska found almost 1500 species of fungi! Oluna was the mycologist of the couple, so this work stopped when she passed away, but her legacy lives on in the more than 10,000 of her mushroom specimens that are deposited in the UBC herbarium. Based on her collections, mycological experts described several new species, and named *Cortinarius ceskarum* and *Inocybe ceskae*, in Oluna's honour. Reports for the first decades of this survey can be found here: *http://bit.ly/3Ji8hyE*

Both important efforts demonstrate very clearly how essential it is to choose regionally native and site-appropriate species when you are adding plants to your home landscaping or boulevards in the hopes of boosting biodiversity. Planting 20 different species of horticultural trees does not meet the requirement of enhancing biodiversity in a municipality. As beautiful as Ginkgos and Horse Chestnuts are, they don't actually contribute to improving regional biodiversity because they are not also associated with a suite of native species that belong in the region, such as birds, pollinators, butterflies, and fungi. There is some irony to the fact that horticultural species such as Tulip Trees, Sequoia, Red Oaks, Sycamores, etc. are specifically chosen as species to plant because they do not provide food for naturally occurring species: historically we have not wanted to see evidence of insect feeding in our landscaping. But that means we are working against nature rather than in harmony with it.

If our goal is to make a region more liveable, I hope we will truly extend that effort to include the birds, bees, and butterflies that also call our municipalities home and adopt the principle of right plant, right place. Unlike horticultural species, planting native plants in the appropriate conditions saves energy, water, and time, and they provide shade, cooling, and beauty, just as well as a horticultural choice. Native plants are gorgeous! We love seeing them in our natural parks: spring in a Garry Oak meadow is breathtaking; walking through a fern-filled, cool and shaded forest in the summer is wonderful. And native plants provide exactly what the hummingbirds, chickadees, and robins need to be successful: food in the form of nectar, caterpillars, and berries. When I learned that a family of chickadees needs as many as 9000 caterpillars to rear their clutch *(http://bit.ly/41zhMzK*), my determination to help them with this became a catalyst for action. I hope it will for you as well.

For more on this topic and efforts by Doug Tallamy, the scientist who has been the champion of the Homegrown National Park movement (primarily focused in the United States), check out these books and website:

- *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants* (2007) – his seminal work arguing for native plant–insect–bird ecological networks
- *Nature's Best Hope: A New Approach to Conservation that Starts in Your Yard* (2020) – includes the Homegrown National Park movement concept

Continued page 16

Continued from page 15

- *How Can I Help? Saving Nature with Your Yard* (2025) - explicitly developed as a practical guide following Homegrown National Park lectures and FAQs
- *HomegrownNationalPark.org* – official site with Homegrown National Park tools: maps, ecoregion guides, keystone-plant lists, blog, partner resources, and Doug's reading list. *http://bit.ly/4lCTige* ☼

Advancing Canada's 30 x 30 Commitment: An Update on the Municipal Protected Areas Project

Submitted by Andrew Banks, Project Manager, BC Nature Municipal Protected Areas Project

Minnekhada Regional Park

The past few months have been a period of great activity and progress for the Municipal Protected Areas Project (MPAP). This initiative is a collaborative partnership of Nature Canada, Ontario Nature, Wildlands League, Alliance of Canadian Land Trusts, and BC Nature. Its purpose is to support Canada's commitment under the United Nations Convention on Biological Diversity to protect at least 30% of the country's lands and waters by 2030 (30 x 30 Commitment).

The federal government has recognized that, while municipal protected areas are vital to achieving biodiversity goals, they are currently underreported in the Canadian Protected and Conserved Areas Database (CPCAD). To address this challenge, the BC Nature MPAP team focuses on local governments in BC and assists them in assessment and registration of their protected areas in CPCAD.

To qualify for registration, lands must meet specific criteria, including having clearly-defined boundaries, achieving in situ conservation of biodiversity, having protective measures that prohibit incompatible actions, and being intended for long-term protection.

Since the beginning of 2025, the BC Nature MPAP team has been working on several key projects and has achieved significant milestones.

A joint webinar on MPAP, hosted by BC Nature and the Land Trust Alliance of BC in February 2025, attracted 38 attendees, including local government leaders and staff. This event generated interest from the City of Rossland and the City of Penticton, with the latter confirming its participation. Assessments of the City of Penticton's natural areas are now in progress.

A grant was secured in March 2025, facilitating in-person outreach by the BC Nature MPAP team in the B.C. Interior primarily focused on the B.C. Kootenay region. Productive meetings were held with local conservation groups, including the West Kootenay Naturalists, Rocky Mountain Naturalists, Kootenay Conservation Society, and Wildsight BC, as well as municipal staff and politicians. These groups offered valuable insights and suggestions for lands to be considered for the CPCAD. Following the trip, BC Nature is actively following up with over a dozen local governments in the region to register their protected natural areas. A recent highlight was a presentation to the Village of Nakusp Council on MPAP at a council meeting.

July was a month for celebration! Several local governments celebrated their contributions to the CPCAD. The City of Delta, Metro Vancouver Regional Parks, the Village of Lions Bay, and Bowen Island, all officially announced their contributions to the CPCAD with each of them recognizing the role of BC Nature and MPAP. Metro Vancouver added more than 8,000 hectares of parkland including Burns Bogs (co-owned by the City of Delta). Bowen Island Municipality registered 145 hectares of parks and protected land, whilst the Village of Lions Bay registered 15 hectares of protected natural areas. These announcements garnered media attention from local newspapers and national media.

Campbell Valley Regional Park

Continued page 17

Continued from page 16

A key assessment currently underway is nearing completion for the City of Surrey's protected parklands, with almost 200 parkland sites being identified as candidates for CPCAD. This is a wonderful achievement for a large urban park system. The BC Nature MPAP team is also actively assessing and registering additional lands in Lions Bay Village, City of Penticton, and the Comox Valley Regional District.

A noteworthy highlight of this project is the building of connections and collaborative working relationships with conservation organizations throughout the province. The MPAP team is working closely with groups like BC Nature clubs, provincial conservation organizations, and the three BC biosphere regions. Thanks to everyone's dedication, we are making tangible strides in Canada's 30 x 30 Commitment throughout British Columbia. ☼

Back to Basics: The Anaerobic World

Submitted by Terry Taylor

Have you ever walked across a muddy tidal flat or lake edge and seen that the surface of the mud was gray but below this thin surface coating it was black? Most people tend not to notice this, but that black mud is a descendent of the Earth's first biosphere. This first biosphere was anaerobic, which means it was a world without oxygen, and it lasted for two billion years. For the next two billion years, our biosphere, has been aerobic, characterized by an oxygen atmosphere. We could not live in the first biosphere, and some organisms from that biosphere could not live in ours. However, the first biosphere is still here, in safe places sealed off against oxygen. This black mud is something unique - possibly our only opportunity to see something related to the origins of life. The black is iron sulphide, a metabolic waste product.

Anaerobic layer near Parksville seashore

These first organisms were bacteria and archaea. Archaea are simple cells like bacteria, but their metabolism and biochemistry are different from those of bacteria. The anaerobes are still with us, but only in microenvironments where oxygen is excluded. The mud flats have a thin layer of impervious clay, below which there are rich deposits of organic material with little or no oxygen.

There are other areas without oxygen which contain little in the way of nutrients but contain very large areas of rock and sediment. The rocks beneath us for several kilometres are one such habitat. They are crisscrossed by small fractures, with moisture, but not oxygen, which is ideal for anaerobes, although their biomass is very small. The deep sediments on the ocean floor are another such habitat. Most of the volume of the biosphere is still anaerobic, but the biomass is very small. Our type of life just occupies the surface.

Another anaerobic biosphere is within other organisms. There are also anaerobes that cause fatal diseases. The tetanus bacterium (*Clostridium tetani*) is one of them. It can be introduced from the soil into puncture wounds. These wounds can be sealed off from the atmosphere, and oxygen. That is why it is important to be vaccinated against it. Botulism is another disease caused by an anaerobe (*Clostridium botulinum*). It can occur in canned meat or fish. That is why these products need to be heated to a high temperature. The neurotoxin these bacteria produce is deadly in extremely small quantities.

How did the first biosphere become replaced by the second one?

This happened more than two billion years ago, so there is not much evidence left. Most of the ancient sediments have been recycled by continental drift. But there are some rocks left, in sites such as the Canadian Shield, where rocks with such evidence is still found.

Shortly after the first bacteria developed, the blue-green bacteria appeared. In geological time, shortly means several million years. The blue-green bacteria were the first organisms to use photosynthesis, combining carbon dioxide and water. This eventually became a problem because their waste product was oxygen, which was toxic to all living things at the time. But this took a long time. The oxygen was neutralized by iron compounds dissolved in the oceans. The by-product of this process precipitated out on the sea floor. Most of our iron and steel is made from these deposits. When the iron was removed from the water, oxygen accumulated and was released into the atmosphere. The blue-green bacteria then developed the biochemistry to protect themselves against their oxygen pollution, but most of the other bacteria did not. This transition period is called the Great Oxygenation Event. This was the greatest of all mass extinctions. However, the ability to use oxygen respiration produces more energy than anaerobic respiration and led to the evolution of higher organisms. ☼

Why do I donate to the BC Naturalists' Foundation?

Submitted by Stephen Partington, BC Naturalists' Foundation

Simply put, donating to the BC Naturalists' Foundation (BCNF) is the best long-term strategy for investment in the BC Naturalist Community that I know of.

The arithmetic is easy. Since its inception in 1991, BCNF has increased its annual granting capacity 8.34 times, an average increase of 24.48% per year. That's a pretty darn good rate of return! Over those 34 years, the Foundation has disbursed $377,482 for 220 grants and scholarships.

How many beneficiaries have there been? At least a thousand naturalists!

How has this largesse been possible? Again, simply put, the magic of compounding. Hundreds of small donations and a couple of dozen bequests compounded over more than 34 years and hey presto!

If you've never had a savings account, you ought to try it sometime. You may find yourself amazed. I'm certainly amazed by the returns I've experienced from some small long-term investments in my life. My first job in Grade five as a paperboy allowed me to buy some Beatles 45s – I've had more than sixty years of excellent entertainment from that tiny starter investment.

Likewise, when I immigrated to Canada at age five, my father enrolled me in the Federation of Ontario Naturalists. Some 66 years later I'm in a current run of about 40 straight years of conservation service, and I'd have to say that my geneticist dad-*cum*-conservationist got a good return on this particular genetic investment, as he referred to his kids. I only wish he'd picked me up a pile of Loblaws shares and put them on the Dividend Reinvestment Plan in 1959. My life could have been quite different if he had.

But seriously, investment long-term on behalf of kids and the future can have huge impacts. Thus, when Heather Kellerhals-Stewart, a longtime Foundation donor, asked me whether the BC Naturalists' Foundation could help with her desire to fund a writing contest for kids I immediately connected her with Rebecca Clapperton Law, Executive Director of NatureKids BC (NKBC). Here is what Rebecca reported to me: "NKBC is a community-driven creation, seeing and acting upon opportunities that make sense for and with our communities. Heather is a great example of this." Heather, a long-time nature advocate, was keen to support budding writers, having enjoyed seeing her own writing on paper as a young person. When she reached out to NKBC, it prompted the staff and volunteer team to consider - what's the opportunity?

What developed was a writing contest (now annual) about birds, with winners being published in the seasonal children's magazine, *NatureWILD* and NKBC was keen to include voices beyond our typical ages of 5-12... so they partnered with a young environmental leaders group, Starfish, to invite teens to join the contest! *http://bit.ly/4fC030p*

We also asked ourselves how we could embed youth voices more deeply into our work - for youth to provide direction in our storytelling, in our educational resources, and in the way we organize ourselves. In November 2024, NKBC launched our Youth Advisory Circle with six B.C. youth from ages 11 - 17. They have met three times already, coming prepared and opinionated and excited to share and learn and contribute together.

Heather Kellerhals-Stewart

We're so very grateful for this new community development.

This year's writing contest will be launched in the autumn with a challenge to write about trees, and we aim to publish articles in our winter issue.

Because of champions and supporters like Heather, NKBC stays connected to community and celebrates the bounty of talents and achievements of our B.C. youth. Thank you so very much, Heather.

This is an example of how simple, strategic, small investments can yield huge results in the BC Naturalists Community.

You can join us in thinking long-term and in strategic investment by donating to the BC Naturalists' Foundation. Donate money or stocks now, or you could deploy Will Power and direct a bequest to the Foundation. The simplest way to direct bequests is by way of percentages. For example, *The BC Naturalists' Foundation is in line to receive from my estate 12.5% of its disbursable residue.* ☼

“Nature in the Rain Shadow” – Highlights From the 2025 Merritt Conference

Submitted by Alan Burger, President Nicola Naturalists

A birding group on the Hamilton Commonage

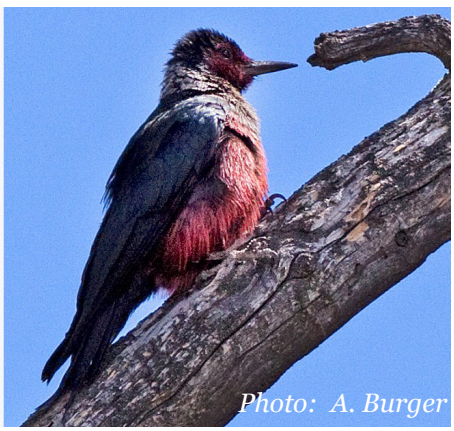
Investigating a fossil bed near Merritt on the geology outing

The Nicola Naturalist Society hosted this years' BC Nature Conference/AGM in Merritt, May 22-25, with 185 BC Nature members attending. In addition to the usual business meetings, there were presentations on turtles (Peter Ballin), rattlesnakes (Karl Larsen), local salmonids (Tom Willms), and an introductory keynote address on fire ecology in the B.C. Interior by Jillian Harvey of Thompson Rivers University. The Merritt Civic Centre provided a spacious and convenient venue. There were numerous displays, a silent auction with more than 80 items to choose from and an art exhibition dedicated to Key Biodiversity Areas by Okanagan artist Lyse Deselliers.

The field outings were a big feature of the conference with plenty of variety including hiking, lichens, geology, mushrooms, macrophotography, local ranching, learning to sketch, and much more. There were 17 options for daytime outings (most repeated on Friday and Saturday), five evening outings (three owling, one moth, one spadefoot) and six Sunday farewell outings. And, of course, lots of birding opportunities. Even the weather cooperated, with sunny skies throughout.

Most of the conference attendees were from the Lower Mainland and Vancouver Island and many of them had their first experience with the diverse wildlife, wildflowers, and scenery of the Nicola Valley. Williamson’s Sapsuckers, Lewis’s Woodpeckers, Wilson’s Phalaropes, and numerous Western Meadowlarks, and Vesper Sparrows were among the local specialties that were seen. One group had two rare species in an encounter right over their heads – a Swainson’s Hawk dive-bombing a Golden Eagle.

The formal proceedings wrapped up at the Saturday night banquet, with an inspirational presentation by Lennard Joe (Suxwsxwwels, meaning Grizzly Man): “First Nations Stewardship – A Journey From the Past to the Present to Look After Our Future Generations.” Lennard is a Registered Professional Forester, member of the Nlaka'pamux First Nation and the head of the B.C. First Nations Forestry Council. The banquet opened with the world premier live performance of the conference theme song “Rain Shadow” performed by songwriter/lead vocals Peter Ballin and guitarist Chris Lepsoe, with gusto contributions from the audience. You can sing along too, and see lots more photos, if you go to the conference website: *nicolanaturalists.ca/bc_nature_agm_2025/* ☼



*Two of the local specialty species seen on the conference outings: Williamson’s Sapsucker (*Sphyrapicus thyroideus*)(L) and Lewis’s Woodpecker (*Melanerpes lewis*) (R).*

"Nature in the Rainshadow"
BC Nature Annual Conference
Merritt, May 22 - 25, 2025

Thank you!

Eastern Kingbird (Tyrannus tyrannus) *Photo: D. Brodie*

Yellow-headed Blackbird (Xanthocephalus xanthocephalus) *Photo: A. Burger*

The Nicola Naturalists Society ran a highly successful conference, hosting 185 naturalists from clubs across B.C. Participants were very impressed with the hospitality of Merrittonians and the incredible wildlife and natural diversity the Nicola Valley.

Thanks to our major sponsors: Thompson-Nicola Regional District; Fortis BC; Merritt City; Beem Credit Union; RSI Rock Solid Inc., Voigter's Meat Shop; and BC Fish & Wildlife Compensation Program. And thanks to the numerous local businesses and Nicola Naturalist Society members who contributed to our silent auction, the Nicola Valley Community Arts Council, and Merritt Curling Club for their assistance and the staff at the Merritt Civic Centre for excellent service.

Sunscreen from a Tree

Submitted by Harold Sellers

Story adapted from *http://bit.ly/3VhvC6g*.

The Aspen tree (*Populas tremuloides*) also commonly called Quaking Aspen, Trembling Aspen, American Aspen, White Poplar, plus many more names, is found in colder regions. The side of the tree that faces the sun "perspires" and gives off a white powder coating (called bloom) that can be used to wipe on the body as a natural sunscreen. In the past, Native Americans used this powder for sun protection. ☼

Aspen trees are famous for their ability to form large, interconnected clonal colonies from a single root system, which can be thousands of years old, making them some of the largest and oldest organisms on Earth. These trees are a successful pioneer species, rapidly colonizing burned areas with their ability to regrow from their roots after disturbances like fire. Their leaves "quake" or tremble in the wind due to flattened leaf stalks.

Note the bloom at the end of my finger

Okanagan Crayfish: A New Crayfish Species Identified

Submitted by Harold Sellers

In early June 2025, CBC Radio Kelowna aired an interview with Eric Larson, co-author of a study that had found a new species of crayfish in Okanagan Lake. CBC reported that two new species of crayfish have been identified in the northwest region of North America, and researchers say both species are vulnerable to extinction.

One of those crayfish is called the Misfortunate Crayfish, found primarily in central Oregon, according to biologist Eric Larson. The other, the Okanagan Crayfish, is found in, well, B.C.'s Okanagan Lake.

Both were previously mistaken for the Signal Crayfish, the most common species of crayfish on the West Coast, Larson said.

"They are brand new species. It's the first time anyone has called this animal the Okanagan Crayfish," Larson told CBC's Daybreak South host Chris Walker. Dr. Larson is an associate professor in the Department of Natural Resources and Environmental Sciences at the University of Illinois.

Upon hearing the story I was reminded of an article I did for the newsletter of the North Okanagan Naturalists' Club a few years ago (Newspacket, November-December 2022 issue). I had caught a crayfish in Duteau Creek near Lumby. At the time, everyone would have thought it was the Signal Crayfish, the species expected to be here and found in many areas of Canada and beyond, but it lacked markings that were indicative of the Signal species.

I found an e-mail address and wrote to Prof. Larson, sending him my photographs. He immediately wrote back, saying: Thank you for sending these images. Yes, I think this is likely the newly described Okanagan Crayfish, *Pacifastacus okanaganensis*. The claw morphology and lack of white spot at joint of the movable finger supports *P. okanaganensis*, and I think the rostrum morphology looks right. Great find - thanks for sharing it."

The CBC story went on to say that Eric Taylor, a professor of zoology at the University of British Columbia, said it's important to identify different species, even if they appear very similar, for several reasons. "There's sort of an inherent value in knowing," he said. "Humans like to know about the world around us,

*Okanagan Crayfish (*Pacifastacus okanaganensis*)*

which includes the natural world, so it's important for an accurate understanding of the level of biodiversity we have." Additionally, it helps researchers better understand the ecosystem in which these species live.

Finally, identifying individual species gives conservationists an idea of how widespread the species is. For example, Taylor said, there could be a stronger effort to protect a species if it's only found in one small area, as opposed to across a region. The Okanagan Crayfish is of particular concern, Taylor said, because it's located in Okanagan Lake — an area of "high human impact." Larson hopes the situation will inspire conservation action.

In my original photo, you will note that there are no white spots on the claws. Now we know that this new species is found in other local waterways, not just Okanagan Lake. Duteau Creek does not connect with Okanagan Lake. It finds its way to the Shuswap River, which is part of the Fraser River watershed.

Perhaps more research and citizen reports will determine the true geographical distribution of this new species. New discoveries are always awaiting us in nature. ☼

2025 Bert Brink Scholarship Congratulations to Sunny Tseng

Submitted by the Scholarship Committee

Sunny is currently a PhD student with University of Northern British Columbia focusing on monitoring bird biodiversity in the John Prince Research Forest in central British Columbia, utilizing innovative technology and advanced analysis methods. She deploys Autonomous Recording Units (ARUs) to capture bird

Continued page 24

Continued from page 23

sounds and employ the BirdNET machine learning tool for species identification based on these recordings. By combining ARU recordings with BirdNET, Sunny is investigating ecological questions in the research forest across various scales: for example, using the unique vocal patterns of Barred Owls to identify individuals, enhancing monitoring efficiency for the study of populations, territories, and behavioural interactions.

Sunny has volunteered with Nature Vancouver since 2018, first participating at Colony Farm Regional Park bird counts and contributing articles to *Discovery*, *Applying Statistics to Bird Listening*, and *Listening to the Whispers of the Wings*, where she wrote about advanced recording systems for bird sound recording. Sunny has also participated in bird banding with WildResearch, specimen preparation at the Beaty Biodiversity Museum, and volunteering with the Cascade Bird Box team..

Sunny instructed a graduate level statistics course, "Advanced Statistics for Natural Resources Science" at UNBC, where she could share her passion about data in nature science. As requested by wildlife researchers, Sunny has also created infographics, combining art and science; she developed an extension (package) for the R statistical programing language called "bbsTaiwan" that makes open source data more accessible to conservation researchers in Taiwan and regions outside North America.

Looking ahead, through infographic design, Sunny has found a powerful medium to communicate scientific concepts with clarity and accessibility, enhancing understanding among diverse audiences. As a data analyst, she transforms complex datasets into meaningful scientific insights. Sunny plans to channel her expertise and unwavering passion toward addressing critical environmental challenges and effecting positive change. ☼

Sunny in her element with "bird in hand"

2025 Rene Savenye Scholarship Congratulations to Rachel Foster

Submitted by the Scholarship Committee

Rachel is currently enrolled in the full-time Ecological Restoration (ER) BSc program at the British Columbia Institute of Technology and is working to fulfil her aspiration to be a biologist. Her volunteer commitments with the Stanley Park Ecology Society as a Heron Colony Monitor, with the Teslin Lake Bird Observatory during banding season with Nature Vancouver, and with Iona Bird Observatory as Bander-in-charge demonstrate her passion for avian ecology.

Through WildResearch, Rachel had the opportunity to volunteer with Environment and Climate Change Canada's (ECCC) Western Sandpiper radio tagging program, which led to her current role as a landbird technician with ECCC.

Rachel, in her final year, will undertake an Applied Research Project where she will take a lead role in analyzing and managing urban songbird detection data. She will explore habitat composition and migration timing of Golden-crowned Sparrows while developing an urban park restoration plan aimed at supporting migratory bird conservation. The project is of federal interest due to the ongoing decline of songbird populations and aligns with Canada's 30 x 30 biodiversity protection goals.

The ER program has provided Rachel many invaluable practical experiences and opportunities to develop skills; last term, she synthesized research and produced a technical report for Metro Vancouver Regional Parks outlining restoration methods for the heavily-used Capilano River Regional Park, this report included identifying stressors and impacts in addition to formulating a plant prescription for drought-tolerant, soil-stabilizing native vegetation.

Rachel out in the field

Rachel also researched avian habitat suitability in Kanaka Creek Provincial Park, analysing correlations between bird use and vegetation communities in urban green spaces and ensuring that the insights gained were translated into meaningful conservation initiatives in land planning.

Rachel's passion for wildlife conservation and collaboration ensures that the scholarship will be used as an investment for the protection of B.C.birds. ☼

Continued page 25

Trial Islands Ecological Reserve Restoration Project

Submitted by Matt Fairbarns and Stewart Guy

In the fall of 2021, *BCnature* magazine highlighted the importance of Ecological Reserve (ER) restoration work across B.C. Diane and David Reesor read about BC Nature's concerns and interest. Following up on that article, the Reesors provided BC Nature with a generous $5,000 donation toward assisting a restoration project at an ER in B.C.

Four years later, after consultation, engagement, and advice from BC Parks staff and Friends of Ecological Reserves (FoER), Trial Islands Ecological Reserve was chosen as the restoration site to receive this support.

The BC Parks License Plate Program that supports habitat stewardship in B.C. matched the Reesor donation with an additional $5,000 grant for further restoration work for the Trial Islands Restoration Project 2025.

The Reesors were invited to visit Trial Island Ecological Reserve with Matt Fairbarns, the ER's warden, to experience the native plants in full bloom. Linda and Stewart Guy with BC Nature and Rick Page with FoER accompanied the Reesors. The group saw the positive results of years of restoration work and spoke with restoration technicians currently working on the islands.

Matt Fairbarns showing native and invasive plants to Diane and David Reesor

The Trial Islands, located offshore from Oak Bay on Vancouver Island, are home to fourteen rare species, one of the greatest concentrations of rarity in Canada. Some of these species, such as the Dense-flowered Lupine and the Island Ringlet Butterfly are known from very few locations in Canada, and the Trial Islands support their largest populations. Other species are even more rare. Macoun's Meadowfoam and Golden Paintbrush are

Continued page 26

Continued from page 25

*Golden Paintbrush (*Castilleja levisecta*) and Common Camas (*Camas sp.*)*

not just rare in Canada, they are globally rare, and the Trial Islands populations are globally significant. Rarest of all is the hemiparasitic Victoria's Owl-Clover, which only survives in four locations in the world, with over 95% of the global population found on the Trial Islands. Most of these rarities were once more common in the Victoria area as 95% of Garry Oak and associated ecosystems have been lost since European settlement.

The Trial Islands also support some very rare ecosystems, including extensive Garry Oak meadows and several small vernal seeps and pools filled with uncommon plants. These ecosystem types may also be found in small parks and protected areas in and around Victoria, but the Trial Islands examples are in particularly good condition and are protected from visitors who might 'love them to death'. In places like Beacon Hill Park and Uplands Park, many rare species have disappeared within the past 30 years and even some common plants have declined, mostly from trampling damage. In contrast, on the Trial Islands, there are still meadows with large pillows of Coastal Reindeer Lichen, a species that quickly disappears with even light foot traffic.

In 2003, the group that eventually became the Castilleja Conservation Society, began to remove invasive species from the Trial Islands, with the assistance of many key partners including the Habitat Stewardship Program (Environment and Climate Change Canada), the District of Oak Bay, University of Victoria student volunteers, an incredible cast of other community volunteers, generous donors, and BC Parks. For several years, the partners nibbled away at dense infestations of Scotch Broom until mature broom plants had been removed from the entire ER. Once the large Scotch Broom had been removed, the partners moved on to clearing out blankets of English Ivy that had flourished in shrublands and spread across the meadows as a suffocating ground cover. By 2022, most of the Trial Island ER had been cleared of English Ivy and the partners began to remove non-native bunchgrasses such as Velvet-grass and Orchard-grass. The Castilleja Conservation Society hopes to rid the Trial islands ER of mature invasive bunchgrasses by the end of 2027.

Unfortunately, removing mature invasive plants isn't enough to restore ecosystem health. Scotch Broom continues to sprout from seeds buried in the soil long after the flowering plants have been removed. When English Ivy vines are removed, tiny fragments that remain must be searched out and destroyed before they can give rise to new infestations. And juvenile clumps of invasive bunchgrasses must be found and removed as they grow to flowering size. This means going back through previously treated areas each year to remove invasive species before they resurface. In areas which had been particularly badly infested with invasive plants, there are so few native plants left that reseeding and replanting is needed before the seeds of invasive plants can grab hold again.

The generous donation from Diane and David Reesor, and the matching grant from the BC Parks License Plate Program, has allowed the Castilleja Conservation Society to return to one of the most severely compromised areas of the Trial Islands ER to finish the task by removing thousands of germinating Scotch Broom as well as clearing out remnants of English Ivy and invasive bunchgrasses. In the autumn of 2025 this area, nicknamed Holodiscus Heights (after the native shrub Oceanspray), will be seeded with the native plant species that previously occurred there. In 2026, the group will supplement the native seedings with native plants purpose-grown in sterile potting mix on Greater Trial Island (to avoid bringing in any new pests).

Visits to the Trial Islands ER are strongly discouraged because it is impossible for any but the most skilled botanists to avoid unintentionally damaging the rare species that are so ubiquitous there. The Castilleja Conservation Society runs one open-volunteer day a year where people can help remove invasive species and get a brief tour of the island. The Society also raises funds to support highly trained conservation technicians who work to restore the Trial Islands ER and some other valuable conservation sites on south-eastern Vancouver Island. An anonymous donor has agreed to donate twice as much funding as can be raised from other private donors to a maximum of $50,000/year. If you wish to donate, please contact the Society at *Castilleja.Conserve@gmail.com*.

BC Nature also hopes to facilitate more donations from our members and clubs for Ecological Reserve restoration projects in different parts of the province where ERs need restoration. We may potentially be able to also match donated funds from the BC Parks License Plate Program. ☼

Tex's Story – No Land for Bears

Submitted by Jacqueline Sherk

*Tex the Grizzly Bear (*Ursus arctos horribilis*)*

He'd been described as 'controversial' and having a 'checkered past', but he was really just a young Grizzly Bear coming into his prime and looking for a home of his own. For that, he was willing to swim four kilometres off the tip of the Sunshine Coast through the currents of Malaspina Strait, to B.C.'s most northern Gulf Island, Texada, where he was first seen on May 25, 2025.

Texada Island has no resident bears, so his arrival caused quite a stir—first locally, then across the region. Grizzlies can be dangerous, but they are also generally non-aggressive toward humans, and they are a protected species in B.C. under a hunting ban established in 2017.

Tex's history began on the Sunshine Coast, where in 2024 he became well-known near Gibsons, even wandering close to stores and schools. That fall, the BC Conservation Officer Service (BCCOS) relocated him to Jervis Inlet, 30 km north. Weeks later, he reappeared—this time in Sechelt—and was moved again, 75 km farther up the inlet. Within weeks, he returned to familiar ground. As winter approached, he likely denned up to sleep away the cold months.

BCCOS may already have decided there would be no third relocation. In spring 2025, reports out of Powell River described a Grizzly Bear following people on trails and raiding bait hatches on moored fishing boats. Officials suspected Tex. Then, unexpectedly, he left the mainland and swam the four kilometres to Texada Island.

Though he had never harmed a person or killed livestock, his presence worried residents and raised public safety concerns. Fear is a powerful driver, and the arrival of a large male grizzly in a place with no history of grizzlies quickly divided the community.

BCCOS publicly stated there would be no further relocation. They cited RAPP line (Report All Poachers and Polluters) calls claiming the bear had chased livestock, though community members disputed these claims and said some reports were fabricated by those who wanted the bear destroyed. On social media, opinions and misinformation swirled. People who had encountered Tex in person said he showed no aggression to them or their pets. Other people came forward offering to help fund a relocation to a more remote area.

In June, First Nation leaders announced they would re-home Tex to their Mamalilikulla territory in Knight Inlet, 100 miles north of Texada. Chief John Powell urged action, warning that if the bear wasn't moved, "he dies there". The Grizzly Bear Foundation called the offer "unique and exciting—a game-changer" for BC wildlife policy. Bear biologist Wayne McCrory supported the move, noting Knight Inlet's prime habitat and explaining that the farther a bear is moved, the greater the relocation's success. He too warned that leaving Tex on Texada Island was likely to lead to his death, one way or another.

Conservationists recognized that time was becoming critical. Letters poured into government urging them to seize this opportunity, supported by experts and at no cost to the province. Still, officials delayed. Meanwhile, public tensions simmered.

Then came the news: Tex was dead, reportedly shot by a local. Wounded and suffering, he wandered around before being discovered and killed to end his misery.

Tex's short life followed a familiar arc for wildlife in conflict with humans—one that too often ends badly for the animal. As conservationists, we must ask: What could have been done differently? Could we have acted sooner, bridged the gap between fear and coexistence, and secured him safe passage to Knight Inlet?

A friend and fellow conservationist shared a quote from Rachel Carson that resonates deeply: "We cannot have peace among men whose hearts delight in killing any living creature."

Tex's story is a reminder that in our shared landscapes, the outcome often hinges on how quickly we choose to act — and whether our decisions are guided by fear or by stewardship. ☼

Owls in the Park

Submitted by Michael Levy

The Douglas Park neighbourhood, in Vancouver, consists mainly of single-family houses sitting on modest-sized lots. There is a fair amount of green space, and some urban wildlife has managed to survive here. In the ten years or so that I have lived here, I have seen raccoons, skunks, squirrels, and rats (of course), mice, and even two coyotes. For a while bird life in my back garden was very active - I had a bird feeder, and it attracted American Goldfinches, House Finches, andBlack-capped Chickadees; even a Northern Flicker had a clumsy go at the feeder. But I could not keep the feeder, mostly because of the rats - they were becoming bolder.

I have seen alot of wildlife since moving here but barely saw or spoke to my neighbours, until this spring. This all changed because of this email I received. “We were greatly enlightened yesterday by a Block Watch family that an owl is in the neighbourhood!” It came from the block captain. The email included a picture of a Barred Owl and a willow tree with a perfect nesting cavity.

From the time of the email until the owls were gone, I went almost every evening to join the neighbours, and to watch the owls. Their behaviour was interesting. Every day, for perhaps six weeks, one of the owls, almost certainly the male, sat in a coniferous tree less than two metres above the ground, across the road from the park. The other owl could be seen (or rather, glimpsed) inside the nest. I caught my first sighting of one of the fledglings on May 11. Around this time, the female started sitting in a tree close to, and within sight of the nest. There was surprisingly little action from crows. Occasionally a few would harass the owls, but they would soon lose interest. As the days stretched on, public interest grew, and more opportunities came to see the fledglings. There were two, although at the time it was clear that there were at least two but there may have been more. One evening during this period, I saw the male fly across the road and then give a typical owl “hoo-hoo” call. The female responded, and a few minutes later the male flew off, followed another couple of minutes by the female. I assume they were off hunting. Some of the photographers managed to get pictures of one of the owls with a rat in its beak.

The owls were very aware of the humans under the tree but seemed completely unconcerned. Even the fledglings would stare down from their perch at the opening of the tree.

On May 17, the babies could be seen inside the nest exercising their wings. We all were waiting for the day that they would fledge.

One of our family of owls peering out from the. nest

I do not recall the exact day they fledged, it was in late May. For a couple of weeks after that, the two young could be seen sitting high in the trees, with the adults nearby. On one occasion, a Cooper’s Hawk made some swooping dives towards one of the young owls, but it was soon driven away by one of the adults. For the next while, the babies stayed near the nest, but gradually moved farther and farther away, sometimes in the park, but often in the trees and lanes of properties near the park.

Sadly, my last sighting was of one of the young perched in a tree in the park; it appeared to have a foot injury. When I came back later that evening, there was no sign of it.

Although Barred Owls are not particularly uncommon in Vancouver, the amount of interest in this owl family was enormous. Douglas Park Recreation Centre is inviting people to submit one or two of their photographs for an exhibition which will be held in October. For submissions to the exhibition, please contact Dominic Ponce, dominic.Ponce@vancouver.ca ☼

Editors note: Nature Vancouver have been in touch with the author and have volunteered to lead birding walks/ talks in this area of Vancouver.

Let's Reconnect: An Update on the Wildlife Connectivity Project

Submitted by Katherine Andy, Wildlife Ecologist and member of the Wildlife Connectivity Project Team

While driving through a nearby city this summer, I saw a deer step onto the road in broad daylight. I wondered how she moved through the city, though I was certain she knew the path to the nearest park. Encounters like this are part of a much bigger story.

Across southwestern British Columbia, wildlife is navigating our growing presence. Some species find new opportunities in cities, like the deer who benefit from urban forage and fewer predators. Many species however, especially those that depend on specific habitat types, are declining amid the rapidly changing landscape. Remaining wildlife refugia are increasingly encroached upon by new towns and trail networks drawing people farther into the backcountry.

Let's consider the example of the deer in an urban setting and explore what ways she can move around safely. She can navigate a patchwork of green spaces and parks. She can also move within vegetated pathways alongside streams. Wildlife underpasses and overpasses could help her to cross streets without dodging cars.

Continued page 30

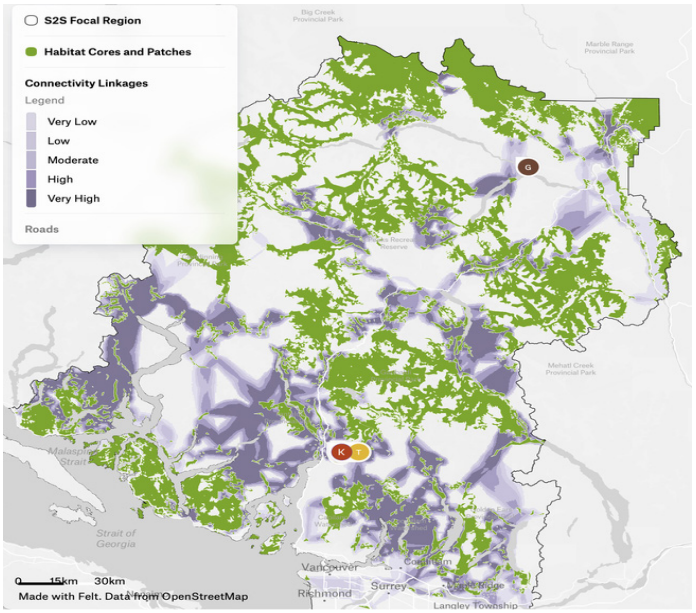


Figure 1. Our draft ecological network for the broader Sea-to-Sky region. Habitat cores, representing high-value habitat for 18 representative species, are shown in green. Ecological corridors, are shown in purple, with darker shades representing higher-priority corridors.

Continued from page 29

These pathways support ecological connectivity, which the International Union for Conservation of Nature (IUCN) defines as "the unimpeded movement of species and the flow of natural processes that sustain life on Earth" (Hilty, 2020).

Ecological connectivity matters for biodiversity because wildlife need connected habitat patches to find food, water, shelter, and mates. It is also important for the health of the ecosystem, as the clean water, nutritious food, and shelter from extreme weather that we take for granted all depend on these connections staying intact.

How do you achieve ecological connectivity? We establish ecological corridors, which link nearby protected areas, other effective area-based conservation measures (OECMs), and other intact natural areas (Parks Canada, 2024; modified from Hilty, 2020). Ecological corridors can vary in size, from revegetated streamside habitat for amphibians to large connections across jurisdictions. The web of interconnected habitat cores (i.e., protected areas, OECMs, and other intact natural areas) via ecological corridors is considered an ecological network (Hilty, 2020).

In the Sea-to-Sky region, many organizations have been actively working to enhance ecological connectivity, including protecting streamside habitat, identifying new OECMs, and assisting amphibian migrations. Complementing these efforts, the Wildlife Connectivity Project created a local-scale ecological network to help practitioners integrate ecological connectivity into land management decisions and coordinate efforts across jurisdictions.

Co-led by Nature Squamish and the Howe Sound Biosphere Region Initiative Society, and guided by a coalition of partners, the project team has developed a draft ecological network for the broader Sea-to-Sky region (Figure 1) that identifies high-value habitat cores and links them via ecological corridors. The network reflects the needs of 18 representative species of mammals, amphibians, and reptiles. This work builds on ecosystem-based connectivity models developed by Pither *et al.* (2023) and Grizzly Bear connectivity models by McLellan et al. (2021).

The network was built in three stages. In the first stage, we mapped suitable habitat for each representative species. Habitat suitability maps indicate how well habitat across the region can provide a given species with the right resources for survival. In the second stage, we refined the habitat suitability maps to just the highest-value habitat cores. This serves as an actionable set of habitat parcels that land managers can protect while still considering the needs of each representative species. In the third stage, we connected high-value habitat cores via least-cost ecological corridors.

Protection of vital wildlife corridors for rare and at-risk species - Bummer's Flats Eastside Benchlands, Nature Trust BC

This past spring and summer, we worked with project partners and stakeholders to gather feedback on our draft ecological network. This peer review process included a technical presentation on the modelling methodology, field visits with project partners to explore the map out on the land, and distribution of an interactive web application to gather input on the modelling process from project partners and subject-matter experts. All feedback will inform model revisions, which are underway this fall.

In our last article (*It Takes a Community: Using iNaturalist Observations to Model Habitat Suitability for Wildlife*, *BCnature* Fall 2024) we called upon readers to upload their wildlife observations to *iNaturalist*. These observations serve as the foundation to our modelling process. Thanks to your effort, we have a better understanding of habitat suitability for our representative species, which strengthens the accuracy of our ecological network.

With our refined ecological network, expected by mid-fall, we aim to assist partners with establishing ecological corridors, following Canadian national guidelines (Parks Canada, 2024) and community-level recommendations (Kahal et al., 2025).

Project outcomes are intended to be shared via a website, which will serve as a learning resource hub for the broader Sea-to-Sky community. Website development is ongoing. Resources will include the maps, summary documents, guides, and toolkits to support local conservation and stewardship initiatives.

More details can be found on our updated project overview document. For more information about the ecological network or modelling process, please contact *wildlife@squamishenvironment.ca*. ☼

Taking Care of Key Biodiversity Areas (KBA): Highlighting KBA Caretakers

Submitted by Liam Ragan, KBA Program Manager

Key Biodiversity Areas (KBAs) are a remarkable tool. They point us towards the most critical wildlife habitat on Earth, highlight areas where special attention is required, and highlight the narrowing in species' migrations that cannot be allowed to fail. They are also only an idea. If tomorrow, every boundary, website, and scrap of paper that explains where they are, why they're there, and what's important about them went up in smoke, what would be left? At BC Nature we have the immense privilege of being able to answer that question; we would still have our caretakers. While by no means the only link we have to these places, caretakers are our lightning rods through which we mobilize community in the form of naturalist clubs, Indigenous partners, environmental non-governmental organizations, and everyone in between, towards the common cause of stewardship. They answer the who, what, where, and when, and push the conversation towards the how and why.

We are honoured to have more than 50 caretakers in B.C. who fill this role, taking on everything from monitoring to stewardship to outreach and education. Each brings a unique perspective and set of tools to the task, and each knows their respective KBA site better than just about anyone. In the coming months, we'll be making a full-scale appeal to you, the BC Nature membership, to grow our team of caretakers. This will include IBA sites which never had a caretaker before and are now becoming KBAs, as well as new KBA sites which were never IBAs to begin with. While we secure the funding to do that push, I wanted to highlight some of the caretakers that make this program what it is. To do that, I asked a few simple questions to some of our most prominent Caretakers, and over the next few months, I will be sharing those with you. As you read them, I hope you consider whether you might be interested in becoming a Caretaker yourself; we could certainly use your help.

Dianne Cooper - Skookumchuck Prairie KBA - What made you decide to become a Caretaker?
Volunteering as a caretaker seemed like a way to use my skills and knowledge to support my natural history club, honour those that came before by carrying on their work, and help conservation. The Skookumchuck Prairie KBA was initiated, I believe, by one of the founding members of the Rocky Mountain Naturalists Club (RMNC), Penny Ohanjanian, so our club has always been involved. Our club was looking for a new caretaker because the previous caretaker had passed away. Since I had just finished updating our local printed checklist and eBird uptake was well on its way,


Photo: M. Baird

*Long-billed Curlew (*Numenius americanus*), in late evening light*

I had the time for something new. I knew a little about woodpeckers and shorebirds from previous work experience, so it seemed like just the thing for me since Skookumchuck Prairie was initially recognized as being important to Lewis's Woodpecker and Long-billed Curlew. I did not know at the time I took over that I would have to become a bit of an activist, but it has worked out fine because it is not just one person doing something, it is all those people and groups doing many little things, pitching in. All I did was keep an eye on things and alert those I could when there was a problem.

What's one thing you wish everybody knew about your KBA?
Two things: Skookumchuck Prairie KBA is a little nexus of biodiversity in the southern East Kootenay trench. If you live there, are visiting, or just passing through, know that you are in an area with a great biodiversity of birds (74% of East Kootenay species) and of all nature. Secondly, look closely at what is under your feet. The cryptogamic crust of lichen that blanket the grassland is very delicate. This top layer is the base for all living things in the grassland and takes decades to re-grow after damage. So, vehicle operators please resist the temptation to take off over the open fields or climb that hill; please travel only on already established tracks.

What is your favourite bird?
American Kestrel. In fact, the first one I identified was in the KBA just north of Wasa along the highway on May 5, 1979. I always wondered what that little hovering "hawk" was so after I had learned my birds and got a pair of binoculars, I was thrilled to see one doing

Continued page 33

Continued from page 31

just that over the grasslands. Such beautiful colours and such a skilled flyer and not a hawk but the smallest falcon - fast and fierce with a touch of impudence saying "I am going to survive here beside your houses whether you know it or not. Most of you won't even notice me but here I am, helping keep the grasshoppers in check. Hope you appreciate that."

Do you have any advice for other birders looking to become involved in conservation?
Develop and use your strengths and abilities on something you are personally interested in, be it a specific place, just one animal species, or even a certain ecosystem you are drawn to - as you are able - all else will follow.

If you want to learn more about Skookumchuck Prairie and Dianne's work there I encourage you to listen to the recent Birds Canada podcast episode of The Warblers, titled *The Wake-up Call: Long-billed Curlew* (Search Spotify for podcast). In it, she speaks about the significance of the site, why we need to protect it, and the work Birds Canada is doing with local conservation partners to better understand Long-billed Curlews in our province and how to protect them. ☼

American Kestrel (Falco sparverius)

A Quiet Gesture of Hope: How Nest Boxes Became a Symbol of Stewardship in Saanich, BC

Submitted by Jennifer Dowd

Sometimes, conservation doesn't come with a spotlight. It arrives quietly—on the heels of a necessary infrastructure upgrade, in the form of a handful of nest boxes hung with care.

That's exactly what happened in Saanich, British Columbia, when BC Hydro needed to upgrade an overhead circuit to maintain service for its customers. Faced with limited options, the team chose the route with the least environmental impact, even though it meant clearing some vegetation and removing several trees—two of which may have served as future nesting sites.

What struck me about this project wasn't the unavoidable loss of trees, but the conscious decision that followed, a decision that wasn't required but came from a place of responsibility and respect: to install five nest boxes as a way of giving something back to the landscape.

This wasn't just mitigation—it was a gesture of care.

Nature Vancouver owl box program

The decision to install nest boxes didn't begin with a plan—it grew from a dialogue. During community engagement sessions, a long-time local observer shared a summary of 20 years of informal monitoring, which revealed that two historical Western Screech-Owl territories—thought to have been unoccupied since the mid-1980s—had recently been re-occupied. This unexpected information, not found in formal species-at-risk databases, prompted the team to dig deeper. They consulted with the provincial specialist and then decided to deploy passive monitoring tools—automated recording units (ARUs)—to confirm the presence of screech-owls. The faint, haunting calls were there, validating the community reports and confirming a small but meaningful return.

When it later became clear during the construction phase that two unavoidable trees with potential nesting value would need to be removed, the team took notice. Perhaps these owls—already struggling with habitat

Continued page 33

Continued from page 32

pressure and predation—were nest-site limited. In response, three nest boxes were installed nearby in Saanich parkland, where suitable habitat remained. Two additional boxes were designed with other cavity-nesters and waterbirds in mind, taking a broader community approach to restoring what was lost.

No press release. No fanfare. Just a quiet, mindful act of stewardship.

As a conservation storyteller, what moved me most was this: the installation of these nest boxes wasn't about checking a box. It wasn't a public relations campaign or a project requirement. It was simply about doing the right thing—even if no one was watching.

The team reached out to the Habitat Acquisition Trust to ensure their actions didn't conflict with other local efforts. While formal monitoring of the boxes isn't part of the plan, the hope is that these small sanctuaries may one day become home to owlets finding their voice in the trees once more.

These boxes may seem like a small gesture, but they represent something bigger. They show us that even in the context of utility work—where deadlines, wires, and poles usually take center stage—there's room for compassion. There's room for listening to the forest. Because sometimes, a nest box is more than a box, it's a symbol of hope, a promise to do better, and a reminder that if we each take small steps to restore what we take, the ripple effects can be profound—for wildlife, and for us. ☼

Eagle Watch: 20 Years on 60 Islands

Submitted by Dave Manning

The Wildlife Tree Stewardship (WiTS) is a conservation program that identifies and protects significant wildlife trees, particularly those supporting Bald Eagle nests. In 2005 I became the Pender Island Coordinator for WiTS, calling my Pender project Eagle Watch. I had no idea the effort would expand to more than 60 islands within the Salish Sea, from D'Arcy Island to Hornby Island.

Via boat, car, and foot, I searched intensively for Bald Eagle nests. A ten-hour day was common. Many volunteer monitors have generously participated, and we've been able to provide conservancy groups and governments with data essential to protecting nest trees and their habitats.

The BC Wildlife Act protects Bald Eagle nests year-round. These birds require big trees, primarily Douglas-firs, in which to build their nests, preferably near the water. Not just any large tree will do—its limbs must have just the right configuration to support such huge nests, nests that are added to annually. And these trees are disappearing—dying or being cut down for views, safety reasons, and land development.

Also important are trees near the nest, living or dead—as destinations for young eaglet's first flights, a perch for parents to observe their growing chicks or to watch prey in surrounding waters and as a buffer to protect nests and nest trees from wind destructions.

Eagle Watch has identified more than 225 eagle nests over the past 20 years. Most nests identified have been in Douglas-fir trees, a few in Grand Firs and one in an Arbutus tree. These trees are mainly near the water, with each territory including about one kilometre of shoreline. When suitable territories and trees are unavailable for maturing Bald Eagles, they will nest inland. One Bald Eagle pair built their nest near a golf course, likely due to the large number of Canada Geese goslings available each spring.

During this last breeding season, I was surprised to see the remains of a dead fawn in one nest. Within two days, the remaining uneaten bones and fur had been completely discarded. I often witnessed the older eaglet killing its younger sibling, a heart-wrenching experience. It is called "obligate siblicide" in which one sibling almost always kills another.

*A Bald Eagle (*Haliaeetus leucocephalus*) tending their chick*

Thanks to a handful of generous skippers, I've bounced along the shoreline of many islands in their small inflatable boat or sometimes more smoothly in a larger vessel, photographing and gazing up for hours, sometimes wishing I was back in my comfortable home! I've tramped across numerous islands carrying my equipment and food, eyes raised, sometimes walking right below a Bald Eagle nest without noticing it hidden in a tree top.

Continued page 34

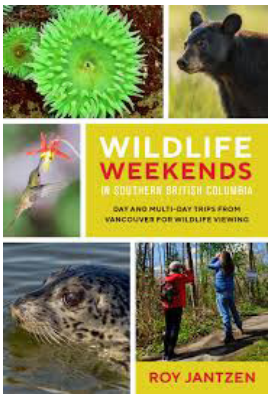
Continued from page 33

Eagle Watch has received grants from various groups, allowing it to acquire research equipment and pay for transportation. In recent years, as I've aged along, my focus has been primarily on my home island of Pender and nests on other islands that can be viewed while travelling BC Ferries. On Pender alone I know of at least 33 eagle nests that have collapsed during the past 20 years, revealing the many challenges that they face.

Contrary to popular belief, the Bald Eagle was never designated as America's national bird—not until President Biden signed a bill into law on December 24, 2024, just before leaving office. Preston Cook, a collector of eagle memorabilia in the U.S., is mainly responsible for this final official act. He describes them as "one of the most beautiful natural blessings." This certainly rings true. They stand out, boldly so, an iconic species.

Some of us take these magnificent birds for granted since they are frequently viewed in our travels. But their future survival here is not guaranteed as development marches on. All wildlife trees and their surrounding habitats are important in maintaining biological diversity. Learn about wildlife trees, especially those with nests. Become a nest monitor. As a landowner, protect wildlife trees and consider placing a covenant on your property. Plant more trees. Encourage your local government to protect wildlife trees. Most of all, enjoy these magnificent birds while you can.

We BC Nature members all have our favorite projects, ones that support Mother Nature. This has been one of mine. Each small step we do helps her, and it helps us personally to feel a part of the whole as we keep up the good work! ☼



Book Review

Wildlife Weekends in Southern British Columbia
Day and Multi-day Trips from Vancouver for Wildlife Viewing
Author: Roy Jantzen, 2024
Rocky Mountain Books Ltd.
464 pages; paperback; $45
Book reviewed by John Saremba

This superb new guidebook invites readers to experience 20 wildlife viewing weekends within a six-hour drive from Vancouver, B.C. Depending on your destination, the viewing sites are intended to be experienced as daytrips or a weekend away.

The book is organized by the four seasons, and each season has an introductory chapter followed by a series of species-focused chapters. Each wildlife experience chapter begins with an "At a Glance" summary, offering what, where, when, traditional territory, and level of access, and concludes with a list of additional resources.

This book covers a wide range of species, including birds, amphibians, fish, invertebrates, mammals, and reptiles. The chapters include information about scientific research regarding respective wildlife species and interesting insights from more than 50 well-known wildlife researchers and naturalists. The author, a nature-educator and award-winning instructor at Capilano University, also offers his own personal reflections. To further add to the reader's enjoyment and learning about nature, this guidebook greatly benefits from the 200 or so high-quality photographs, illustrations, maps, and charts.

This guidebook is intended to be appreciated by readers of all ages. Special attention is given in assisting children, youth, and families to better understand and appreciate the relationship between wildlife and their habitat. It is a book that can be dipped into, or enjoyed by reading cover-to-cover.

This guidebook also points to our responsibility for the ethical manner in which we should view wildlife, that is, with a "wildlife-friendly lens." Each chapter offers deliberate actions designed to protect and co-exist with wildlife in terms of choices that we make around our homes or when we recreate in nature.

In summary, *Wildlife Weekends* is highly recommended, particularly for those interested in learning about nature and ways to conserve and protect wildlife and their associated ecosystems. It would make an excellent addition to one's nature book collection. More importantly, it will inspire readers to get out of the city and experience nature.

What are you doing this weekend?☼

John has more than 20 years of active volunteer participation with the Burke Mountain Naturalists. John has led several nature education and conservation projects in the Metro Vancouver area. He is passionate about helping people understand the value of wildlife and nature spaces.

BC Bee Atlas: First Year Findings

Submitted by Emily Carmichael

It is probably safe to assume that members of BC Nature have a deep appreciation for the rich biodiversity throughout B.C. Many BC Nature members would also probably not be surprised to learn that this biodiversity also extends to native bees. There are thought to be 500-600 species of bees in B.C., which is the greatest diversity of native bees in all of Canada. This gives us another reason to love B.C. more (if that is even possible!) The Native Bee Society of BC (NBSBC) champions the protection of native bee diversity within the province - most notably, through the development of the BC Bee Atlas. The BC Bee Atlas is fueled by participatory science, grants, and donations. The NBSBC launched a bee atlas pilot-program in 2021 with a small number of passionate volunteers and officially launched the BC Bee Atlas in 2024.

The goal of the BC Bee Atlas is to learn what native bees are present in B.C., when and where they are active, and which flowers the bees are using for themselves and to raise their young. This information can be used to determine critical habitat requirements, species phenology*, and distributions of native bees. Over time, the bee-plant associations documented as part of the BC Bee Atlas can be used to create planting prescriptions that support the diets of both specialist and generalist bees.

Bees and plants go hand in hand. There is a special and dependent relationship between bees and plants. In terms of bee diets (e.g. pollen and nectar), bees can be broadly broken down into generalists and specialists. Generalist bees will collect pollen from many different types of plants, while specialists will only feed on pollen from specific plant species. Two uncommon bee specialists submitted to the BC Bee Atlas in 2024 were a Mallow Bee (*Diadasia diminuta*) which specializes on the pollen of Malvaceae, and the Yellow Loosestrife Bee (*Macropis nuda*), which specializes on an uncommon oil-producing plant, *Lysimachia ciliata*.

Photo: Jakob Dulisse

Yellow Loosestrife Bee (Macropis nuda)

Finding rare specialist bees does not usually occur by happenstance. Some BC Bee Atlas volunteers spend hours researching where to find rare bee host plants in hopes of tracking down special bees. Similarly, many BC Bee Atlas volunteers are avid gardeners, so have been tucking bee-magnet plants into their gardens in hopes of bringing some of the specialist bees in. Either way, an added benefit of participatory science projects like the BC Bee Atlas is that it encourages people to get outside and observe. Observing bees also inevitably leads to an increased curiosity about plants, natural history, and an increased desire for habit protection.

In addition to documenting some uncommon specialist native bees, the BC Bee Atlas is documenting known introduced species and supporting the detection of new non-native bee species. The BC Bee Atlas has already recorded nine introduced species; these include the European Mason Bee (*Osmia cornuta*), the Sleepy Scissor Bee (*Chelostoma florisomne*), and the Oblong Woolcarder Bee (*Anthidium oblongatum*). The Sleepy Scissor Bee was first detected in North America by the BC Bee Atlas, highlighting the power of the Atlas to detect newcomer species.

While rare and newcomer bees will always create a buzz, all contributions to the BC Bee Atlas are meaningful and important, and help us better understand the bees in our landscape and what they need to succeed. Since piloting the BC Bee Atlas project in 2021, 150 different species have been identified with many specimens still awaiting species level determinations. Each year, the BC Bee Atlas grows, in large part, because of BC Bee Atlas volunteers. Geographically, B.C. is a huge landmass to cover. Having BC Bee Atlas volunteers scattered throughout the province means increased sampling opportunities without great travel expense. More area is covered, and more data are contributed, simply by the participation of keen individuals with a sense of curiosity and deep love of place.

To learn more about the BC Bee Atlas, upcoming learning opportunities, or how to get involved with native bee protection, please *visit https://www.bcnativebees.org/* ☼

Emily Carmichael is a volunteer member of the NBSBC, a Master Melittologist Apprentice, and investigator for the BC Bee Atlas initiative.

* The study of the timing of recurring biological events, particularly those related to the seasons, and how these events are influenced by climate and other environmental factors.

Seabird Stewardship with Coastal Rainforest Safaris

Submitted by Indigenous Tourism BC

The islands off the northern tip of Vancouver Island—traditionally known in Kwakwala as Wa̱di and Hiładi—host the highest concentration of breeding seabirds on Canada's west coast. The surrounding waters are incredibly rich, offering ideal feeding grounds for numerous species. Due to their ecological significance, these islands have been designated as an internationally recognized Important Bird Area for alcids, cormorants, shorebirds, larids, and more.

One of many spectacular inlets on the central coast

A recent knowledge-sharing session was hosted by Coastal Rainforest Safaris on the traditional territories of the Kwakwaka'wakw Peoples with experts from BC Nature and local land guardians. All participants had the opportunity to share their scientific and traditional ecological knowledge of the local seabirds and marine life.

Together, they wove two powerful threads: Western science and Indigenous wisdom. Sessions on seabird migration paths, nesting cycles, and habitat patterns were enriched by ancestral teachings of ecological indicators, stewardship traditions, cultural significance, and oral histories that have connected people to these birds for millennia.

As the group set out through the waters of the Great Bear Rainforest, seabirds circled overhead – living guides in a lesson on interconnectedness. The group learned how birds signal shifts in ocean health and how respectful observation supports conservation and preservation, which can now be passed along to visitors in the region. The Puffins and Seabirds Tour of Coastal Rainforest Safaris is a bridge between science, culture, and the land itself.

Indigenous Tourism BC (ITBC) supported these sessions through their Indigenous Tourism Training Initiative. ITBC is a non-profit organization that supports a sustainable, respectful Indigenous tourism sector in British Columbia.

There are hundreds of Indigenous-owned outdoor adventure, accommodation, dining, shopping, and arts and culture experiences in British Columbia. By connecting with Indigenous hosts, visitors become part of a journey rooted in culture, land, and shared learning. Visit *https://www.indigenousbc.com/* and plan your next trip.☼

BC Nature Volunteer Merit Awards

BC Nature Club Service
Janet McIntosh, White Rock & Surrey Naturalists

Carol Monaghan (L) and Margaret Cuthbert (R) presenting to Janet McIntosh (C)

For more than 15 years, Janet has been an active member of the White Rock & Surrey Naturalists (WRSN), taking a lead role in conservation and advocacy. When Janet zeroes in on a specific subject, she studies it thoroughly and then decides on the proper action to be taken.

Three years ago, she researched intrusive outdoor lighting on a nearby newly-constructed building, and her persistent efforts got the owners to agree to turn off the offending lights. Her research led to how excessive artificial light impacts birds, insects, and other wildlife and what bylaws and building codes in municipalities across Canada were being used to mitigate light pollution. Janet wrote articles for newspapers, the club newsletters, and the *BCnature* magazine to raise public awareness. She also worked with the BC Greenhouse Growers' Association, encouraging them to reduce lighting during peak migration.

Janet devotes many hours to research and letter writing with the aim of increasing awareness and changing the bylaws on outdoor lighting, including making a presentation on excessive residential lighting to the City of Surrey's Environment and Climate Change Committee. Janet's efforts can be counted as positive steps in protecting nature and our environment. ☼

BC Nature Club Service
Ray Hornby, Williams Lake Field Naturalists

Ray has contributed countless hours as a director of the Williams Lake Field Naturalists club, and is a star volunteer at the Scout Island Nature Centre. As a club director for 14 years, Ray has also been a member of the infrastructure committee that oversees volunteer labour on three major boardwalk projects. He is a quiet, committed volunteer known for his carpentry skills and talent for eradicating invasive species on Scout Island, including Burdock and Canada Thistle.

In 2022, Ray helped prepare a new management plan for the Nature Centre, providing constructive input to ensure that it was completed in a timely manner. He is retiring as a club director this year, but we believe we will continue to see him at the Nature Centre, ready to volunteer. ☼

Dave Leman (L) presenting to Ray Hornby (R)

Education Award
Gail Loughridge, North Okanagan Naturalists

Gail and Jim Loughridge moved to Vernon in 2002 and soon put up hummingbird feeders. Gails has more than 20 years of involvement with hummingbirds, starting even before Cam Finley through the BC Hummingbird Project, taught her how to identify and band them, and later certifying her for a banding permit. Gail produced reference sheets for each species to help with identification of adults and juveniles. As the only certified bander in the North Okanagan area, in 2007 she started to train interested members to help under her permit, to increase the numbers of hummers banded. In 2010, a site in Lumby was chosen to participate in The Hummingbird Monitoring Network of North America, which studies hummingbird populations to support their conservation. In 2013 a site on Okanagan Lake became a secondary site for trap counts. Both sites continue to provide important information on fluctuations of bird numbers over the banding season.

Continued page 38

Continued from page 37

Gail has organized and hosted several hummingbird banding workshops in Vernon. She has volunteered more than 1,000 hours banding hummingbirds in both Victoria and in the North Okanagan, retiring as banding leader in 2024. Gail and Jim remain active members of North Okanagan Naturalists and are avid birders in the region. ☼

Gail Loughridge

The following award recognition profiles and photographs will be listed in the winter *BCnature* magazine.

Allan Garland (South Okanagan Naturalists)
Anne Scarfe (Rocky Point Bird Observatory)
Dr. Ian Walker (Central Okanagan Naturalists)
Gareth Pugh, Ryan Usenik, Wim Vesseaur, Tom Wildeboer (Friends of Semaiahmoo Bay)
Congratulations to all of the award recipients
A complete list of all winners will be published at:
https://bcnature.org/bc-nature-awards/

Summer Student 2025: Rianna Shannon

Rianna Shannon

This summer, I had the privilege of joining BC Nature as Communications Assistant. My role blended creativity, design, and collaboration to strengthen BC Nature's digital presence and support communications that reflect the passion and dedication of our conservation community. I assisted Betty, Communications Coordinator, in the creation and editing of marketing materials, maintained regular updates to our website, and helped prepare the *BCnature* quarterly magazine and *Nature's Voice* - enews. I managed and created content for our social media platforms, thus ensuring our posts celebrated B.C.s natural wonders while encouraging engagement in conservation.

Throughout the summer, I worked extensively with various digital tools. Each platform brought its own learning curve and creative opportunities, whether learning how to design layouts for publications, building and editing web pages, or creating graphics for social media. The variety of projects meant no two days were the same, and I enjoyed the challenge of applying technical skills in creative ways to support a meaningful goal. Collaboration was at the heart of my experience. While working alongside the team at BC Nature, I also connected with partner organizations like the Elders Council for Parks in BC to help share their initiatives and assist with their digital presence.

One of the most meaningful aspects of my role was contributing to the storytelling that celebrates B.C.s biodiversity and conservation efforts. Every article, social post, and publication was an opportunity to highlight the dedication of our members, clubs, programs, the beauty of our natural environment, and the urgency of protecting it. In the process, I gained a deeper appreciation for the incredible variety of ecosystems and species that call B.C. home, as well as for the vital role that community-based conservation plays in protecting them.

Looking back, this position was both a professional milestone and a personal inspiration. It strengthened my communication, design, and collaboration skills, while deepening my connection to the natural world. I leave the summer proud of what I contributed and grateful for the chance to work with such a passionate and knowledgeable organization. My time at BC Nature has reinforced my belief in the power of clear, creative communication to bring people together in support of a shared cause. I look forward to carrying that forward in all my future work. ☼

Editors note: Thank you to Canada Summer Jobs and to MP Terry Beech for the assistance in funding Rianna's position.

North in the Spring #33
Burgess Shale Formation Part 1

Submitted by Heather Neville, Author - John Neville

*Painting of a Velvet Worm (*Aysheaia pedunculata)

The Burgess Shale is a very special geological formation in Yoho and Kootenay National Parks. It was laid down in a series of layers at the base of a submarine cliff, each layer preserving a range of organisms living 508 million years ago (about two-thirds of the way through the Cambrian Era). The bodies of the Cambrian creatures were quickly covered and preserved, like flowers between pages of a book. Preservation of Cambrian fossils happened in many parts of the world, but the Burgess Shale accumulated quickly, resulting in preservation of the soft tissues as well as the exoskeleton. This allows paleontologists to study the anatomy of these animal fossils in much more detail. In order to understand what happened we need first to consider the slow evolution of the Earth. Scientists estimate that it is now 4.6 billion years old. At around four billion years ago, single cell organisms (bacteria and archaea, cyanobacteria, and single celled eukaryotes) predominated. Stromatolites found in Africa and Australia are early fossils believed to be created by bacteria.

Then, 600 million years ago single cells began to join. For example, sponges are a collection of single cells strung together by protein molecules called collagen. This form of glue or soft tissue construction is found in animals such as ourselves! Then about 550 million years ago, fossils in the Ediacara Hills in Australia suggest motility, an ability to move! A worm-like creature called *Funisia* had also begun to exchange genes by sexual reproduction. This was only eight million years before the Cambrian explosion began.

The Earth itself is a very lucky planet! It happened to form in the habitable zone of our solar system. Temperatures were in the right range to allow water to exist in liquid form. As the Earth cooled, steam partially condensed into liquid water and partially remained as water vapour saturating the hot dense atmosphere of carbon dioxide and nitrogen gases. The Earth was just the right size to hold onto a liveable atmosphere, including oxygen for aerobic respiration, and carbon dioxide for fixation into complex molecules via photosynthesis.

The Cambrian Era lasted from 542 to 488 million years ago. The land we know as North America was called Laurentia. It was part of a super-continent just south of the equator. There was no ice, so sea levels were higher. Life forms exploded in the Cambrian seas. Conditions on Earth were suitable for the Cambrian Explosion of multicelluar life forms.

Arthropods (creatures with exoskeletons and articulated limbs) were dominant in the Cambrian, as they are today. The Cambrian arthropods can be arranged into four groups:

1. More than 20,000 species of trilobites, all now extinct.
2. The ancestors of lobsters, crabs, and shrimps.
3. Early forms of spiders, scorpions, and mites.
4. The insects.

The second, third, and fourth arthropod groups have evolved into their modern evolutionary offspring, comprising 80 percent of modern animal forms. Some examples to be found fossilized in Burgess Shale deposits include:

- *Anomalocaris canadensis*: was a large creature for its time; approximately 60 cm long, a hunter, a predator, perhaps the terror of the Cambrian seas!
- *Aysheaia pedunculata*: was a soft bodied creature whose descendants still live today in the tropics and are called the Velvet Worms
- The *Pikaia gracilens:* is important to us, because it had a rudimentary spinal cord which some believe make it an ancestor the vertebrates.

Starting about 180 million years ago, the Rockies began to lift out of the ocean due to tectonic plate movements. Today the Burgess Shale is protected in beautiful Yoho National Park and Kootenay National Park, within the traditional territories of Ktunaxa and Secwepemc Nations.

To learn more: The Burgess Shale Geoscience Foundation web site *https://www.burgess-shale.bc.ca* or visit *https://parks.canada.ca/pn-np/bc/yoho/visit* See Burgess Shale Part 2 in a future edition by Dr. Steven Earle, (editor of Part 1) ☼

Naturalist Mentor
Deborah Simpson

Submitted by Katelyn Bissat – NatureKids BC

Deborah Simpson

Deborah Simpson has been supporting family nature opportunities in Vancouver for more than seven years. As the main Volunteer Club Leader for the Vancouver Club of NatureKids BC, she has led and organized more than 100 Explorer Days for families in the Lower Mainland. Not only does she inspire families to love and protect nature, but she also mentors other volunteers to do the same!

Throughout her volunteer work, she has created countless community connections, built relationships with other non-profit organizations and stewardship groups, and supported community programs. Through these connections she is deepening the sense of community belonging and has built a stronger sense of place with the families she is interacting with. Many of these families are new to the Vancouver area and have discovered and experienced British Columbian nature at one of the Explorer Days that Deborah has organized.

Deborah also volunteers countless hours with the Marine Biology Section of Nature Vancouver, focusing on educating and fostering interest in nearby marine life and coastal habitats through a speaker series and nature walks. She is also one of the lead organizers of the yearly "Wonders of the Salish Sea" event, which features educational talks and seminars to educate and connect individuals to the biodiverse and fragile habitat of the Salish Sea.

Deborah is also the recent recipient of the Nature Canada Volunteer of the Year Award! NatureKids BC is so grateful to have her as part of their volunteer community. ☼

Vancouver NatureKids BC Explorer Day: Still Moon Arts Society with their regular stewardship activities at the Colour Me Local Dye Garden in east Vancouver. This is a special day in the garden as, in addition to weeding and watering, they will learn how to harvest some of the plants for dye baths. After this Explorer Day, the kids will be able to grow their own dye garden! Deborah Simpson (Third from left back row)

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