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FOOD SECURITY in BC's north



TEA CREEK (P22-24)

Features



Forest Stewardship?

Ironically, it could be the Forest Stewardship Council that opens the door to global commercialization of GE trees.

Getting Over Ourselves

In this hyper-political age, defeating an opposing faction may start to seem more important than actually doing useful work. Of course, nothing could be further from the truth. The cure? *Actually* listening to and working with the people around us...

Content

- 3,5 **News Shorts**
Quiet climate majority, insuring nuclear, tigers roar back...
- 4 **Letters**
We may be living on a different planet than decision-makers
- 6 **Sockeye**
What's the skinny? Was it a good year or not?
- 7 **LNG to Europe?**
Research reveals schism between dreams and reality

- 10 **Spirit Bears**
Hunting ban protects rare white bears and their relations
- 12 **Nation to Nation**
Land defenders' tour forges strength in solidarity
- 16 **Carbon Capture**
Public subsidies in the billions for a failing techno-fix
- 18 **Ma'amtigila**
Living through extinction to protect their lands and waters

- 32 **Water/Colour**
Artist's tribute to BC's threatened wild water
- 34 **The Land is Us**
Deep connection to the Chilcotin spans generations

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Editorial

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Batten Down

It is time now to batten down the hatches, as sailors do in a storm. There is no doubt now that all of us will suffer climate change – heat, drought, floods – many millions are already displaced. And, being humans, we will react with wars, racism, meanness, forced homelessness, and all the other less cerebral tendencies of fright/flight.

I would like to say, “At the same time we need to continue lowering atmospheric emissions,” but sadly the measurements show that most climate actions to date consist of hot air. We need to catch up to the the aspirations. As the World Meteorological Organization notes in their 2022 report, “A continuation of current policies is projected to limit global warming to 2.8 °C with a 66% probability over the course of the twenty-first century...”

Consider that the current suffering, from Pakistan to California, is at a mere 1.2°C increase in average temperature from pre-industrial levels.

Yes, we still need to do the hard work, from major tech change-outs to renewable energy, local food, conservation of habitat – for species and carbon storage – but at the same time we need to prepare.

We need to focus on extreme neighbourhood resilience, deep community listening to meet all needs, not just our own ideals or theology, and local supplies of everything from food to furniture. We need to focus on decreasing our reliance on global supply chains, before the communication systems go down, as they surely will. Most of us need to lower our material expectations and increase our knowledge of each other, because that is what we will have to sustain us.

—Delores Broten, Comox BC, September 2022

At the 'Shed

In Memoriam: Dave Stevens, *Watershed Sentinel* contributor and chair of the BVLVD Airshed Management Society. We all owe Dave a debt of thanks for his science-based clean air advocacy over the years.

Call for Applications! For our Indigenous Junior Reporter Mentorship Program. Hands-on paid learning opportunities with direct mentorship. See <https://watershedsentinel.ca/articles/call-for-applications-mentorship-program-2022/> for more info.

Putting on an event? Help us spread the word! We are offering bundles of current and back issues of WS for public distribution at in-person events, free of charge as part of our educational mandate. To request a bundle, contact us directly by phone or email.

Fall webinars, brought to you by the Sentinel Educational Foundation. October 3: Food sufficiency in the Comox Valley (case study) and oil barge traffic in the Inner Passage of BC. Watch your email for details coming soon.

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What a little safe habitat can do

Tigers Roar Back

The Union for Conservation of Nature (IUCN) has found there are 40% more wild tigers than indicated in their last population assessment of the species in 2015. Although still considered endangered, IUCN said the numbers attest to the success of focused measures to protect the big cats from poaching and to safeguard their habitat. The new estimate shows tiger populations stable and growing, with up to 5,578 tigers (not including cubs) roaming East, Southeast and South Asia.

—www.ecowatch.com
July 25, 2022

More leukemia in children

Fracking Harms

Children living within 2 km of fracking sites in Pennsylvania are two to three times more likely develop leukemia, according to new research by the Yale School of Public Health. Contaminated drinking water is the suspected vector for the many contaminants from fracking to enter childrens' bodies, including heavy metals, radioactive material, particulate matter, and volatile organic compounds. The study looked at almost 2,500 children, including 405 diagnosed with lymphoblastic leukemia, a type of blood cancer. Pennsylvania has endured decades of fracking, with a particularly frenzied period of drilling in the early 2010s.

—www.desmog.com
August 17, 2022

“Forever chemicals” everywhere

No Way to Avoid

PFAS pollutants are now present in rainwater worldwide at levels often greatly exceeding the US Environmental Protection Agency's (EPA) Lifetime Drinking Water Health Advisory levels, new research from Stockholm University reveals. Per- and polyfluoroalkyl substances (PFAS), so-called “forever chemicals,” are pollutants present in many everyday items such as food packaging and textiles. The study, published in Environmental Science and Technology, found the four PFASs tested for were also often above Danish drinking water limits and the Environmental Quality Standard for Inland EU Surface Water. The authors concluded there is now no real way to avoid PFAS contamination.

—www.ecowatch.com
August 22, 2022

Planet breaking multiple records

Going Up Fast

Greenhouse gas concentrations, sea level rise, and ocean heat all hit record highs in 2021, according to an international science report prepared by the US National Oceanic and Atmospheric Administration and American Meteorological Society, and based on contributions by over 500 scientists in 60 countries. Atmospheric CO₂ concentrations rose 2.3 ppm from 2020 to hit 414.7 ppm, the highest in the last million years, while the growth rate for methane in the atmosphere was the fastest ever observed. Oceans rose 97 mm over the 1993 average when satellite measurements began, and 4.9 mm over 2020, the report said.

—www.theenergymix.com
September 5, 2022

Aussie coal mine nixed

Reef Break



Australia's new government announced it will abandon development of the proposed Central Queensland Coal Project mine due to its impact on the Great Barrier Reef. The country's minority Green party has been pressing the Labor Party government, elected in May, to refuse coal and gas project approvals on emissions grounds. The Greens welcomed news of the project's demise and urged the minister to reject another 26 planned coal mines. The quashed mine would have produced 10 million metric tonnes of coal a year.

—www.nationalobserver.com
August 4, 2022

Americans care about climate

Quiet Majority

A supermajority of Americans is concerned about the climate and want action, in contrast to perceptions that climate is only of tepid public interest, a study released in *Nature Communications* reveals. Across demographics, the study found people grossly underestimate support for climate policies, when between 66% to 80% of Americans want a carbon tax or Green New Deal.

—www.cleantechnica.com
September 7, 2022

Letters

Smoke in the air

Lots of smoke here now. So much less wildlife this year. They are logging the crap out of the Boundary. They are 50 metres from Granby provincial Park. Seventeen 2-storey and bigger slash piles in a kilometre distance and that is not even a square kilometre – a very narrow strip.

—*Angelica Herlihy*
Grand Forks, BC

If Norway can do it...

The herring situation is critical. How can DFO be so stupid? The capelin collapse on the Atlantic coast meant the cod collapsed and have not been able to rebound, in spite of the moratorium on cod. At least bottom trawls are now banned, as they should be everywhere.

I hope the *Sentinel* will try to save our herring, to end the roe fishery and residential herring fishery with a moratorium, a complete closure. Norway protected their herring when it was near collapse with a moratorium about 50 years ago. Now they have billions of herring and, in abundance, all the fish, whales, orcas, seabirds etc. that need herring for food ... and even people with a now well-managed harvest of herring.

—*Nancy Wigen*
Salt Spring Island, BC

The Watershed Sentinel welcomes letters

but reserves the right to edit for brevity, clarity, legality, and taste.

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4 | watershedsentinel.ca

Save the simple CO₂ capture units!

On a recent trip home from Chilliwack, I was astonished by the number of B-train trucks heading south loaded with lumber. There must be well over a hundred a day, not counting loads coming by railway.

Now I ask, how can this degree of exploitation continue in the face of global warming, when forests are universally acknowledged to be a principal source of carbon storage? Are we not in the midst of a climate emergency?

In 2019, more than three quarters of a million hectares of forests were logged in Canada; in 2020 another 700,000 hectares. Vast amounts of carbon were released into the atmosphere, leaving us with a proportionally diminished capacity for absorption and storage.

Would you not think it time to eliminate the wasteful practice of clearcutting, and to recalculate the Annual Allowable Cut (the AAC), so as to address actual conditions? But no, in BC clearcutting remains the method of choice for logging operations, and the AAC has hardly been touched, with not a word from government about reassessing the numbers. Yet – crucially – only with legislative changes can logging practices change.

It gives me to wonder about government decision-makers: Do we happen to live on the same planet? Is it not obvious that we are already paying the heavy consequences of climate disruption? Think of the legion of RPFs (Registered Professional Foresters) we have in BC. Why do we not hear their cries of alarm? Their silence is deafening!

Canfor, Tolko, Interfor, West Fraser, Teal Jones – all have used their lavish profits to invest in sawmills or build new ones in the southern US, where trees grow faster. These dismal observations simply need to be made public.

To redefine forestry, there is one indispensable first step. The control of (un-ceded) Crown lands must be taken out of the hands of big tree-farm-tenured corporations. From this starting point, positive visions of a new restorative forestry under the stewardship of local communities are made possible.

But in the face of fierce opposition, how is this to be accomplished? Revolution is out. Write your MLA? Demonstrate? Pray?

—*Van Andruss*
Moha, BC

Free public symposia on tailings in Alberta



Keepers of the Water and the Edmonton Council of Canadians are presenting a series of three sessions in October and November on the imminent threat from tailings water to the Athabasca River.

The symposia will feature speakers with knowledge of tailings technology, history, ecology, and Indigenous culture. These sessions will take place in person at the University of Alberta Telus Centre and will be broadcast on Zoom.

Not great, but down-ish

Arsenic Cap

A copper smelter in Quebec will be permitted to release arsenic at five times the provincial norm, down from 33 times the provincial standard that the smelter currently emits, Quebec's Environment Minister has announced. The factory in Rouyn-Noranda, Quebec, owned by Switzerland-based Glencore, must curtail arsenic from 100 nanograms per cubic metre of air to 15, within 5 years. The smelter has been cause for concern since studies showed rates of lung cancer in the city are higher than the provincial average.

—www.baytoday.ca
August 15, 2022

It seems methane *can* be reduced...

Regs Matter

A new case study shows that when regulators get tough, fossil fuel producers can dramatically cut methane emissions without reductions in oil and gas extraction. The study, by Calgary-based Pembina Institute, showcased rules implemented by the Alberta Energy Regulator to curtail sour gas emissions in Alberta's Peace River region. It found that producers can eliminate routine gas flaring, limit non-routine flaring, achieve high rates of gas conversion and require monthly leak detection and repair.

The Trudeau government is working to mandate the fossil sector to cut methane emissions 75% from 2012 levels by 2030. Controlling methane is a critical short-term step for rapidly reducing emissions, according to the Intergovernmental Panel on Climate Change.

—www.theenergymix.com
August 28, 2022

Dollar store goods contain toxins

Consumer Bads

Tests by the NGO Environmental Defence of dozens of products bought at popular Canadian dollar stores showed one in four testing positive for substances controlled under the Canadian Environmental Protection Act. For instance, a set of stereo headphones had 24 times the legal limit for lead and five times the allowable cadmium. A different type of headphones had solder with 3000 times the allowable lead on an accessible portion. More transparency and better enforcement are needed, Environmental Defence said, to protect Canadians from exposure to hazardous substances.

—www.globalnews.ca
September 1, 2022

Accident insurance gets real

Nuclear Liability

Nuclear utilities must now cover realistic insurance against catastrophic accidents under a new international treaty that has served the industry enormous and increasing annual premiums. Previously, nuclear plants were only liable for €165 million in damages for any individual accident, with national governments paying any excess. But now liability has jumped to €700 million and will increase €100 million a year until it reaches €1.2 billion per accident in five years. The OECD agreement closes a longstanding disparity in premiums, tantamount to a subsidy, enjoyed by nuclear over renewable and fossil power generation.

—www.theenergymix.com
August 28, 2022

Wood recycling 2.0

Burls of Steel

Researchers at UBC have invented a way to recycle wood into a material with five times its original strength, boosting the potential for a true circular economy of timber and timber wastes. The process dissolves lignin, a glue-like substance in plant cell walls, to expose tiny hairs called nanofibrils. The nanofibrils bond to other treated wood pieces to create a "healed" composite with a breaking resistance that exceeds stainless steel and titanium. The healed wood can be used to make new objects, and then at end of life recycled using the process again and again.

—www.newscientist.com
May 19, 2022

Don't buy this pipeline, Justin

Coastal CashSink



The cost of the Coastal GasLink pipeline across northern BC has ballooned 70%, to \$11.2 billion from \$6.6 billion. TC Energy told investors the new cost estimates reflect increases from COVID-19, the weather, project "scope" and "other events outside of Coastal GasLink LP's control." The pipeline has been stalled by opposition from members of the Wet'suwet'en Nation and others. If completed, the conduit will cross about 625 rivers, creeks, lakes, and streams spanning 670 km across the province.

—www.cbc.ca
July 28, 2022

Sockeye

What's the skinny? Was it a good year or not?

by Anna Kemp

2022 was a dominant year for sockeye, who reproduce on a four-year cycle. Early in the season, many areas reported bountiful runs. However, as the season progressed, sockeye returns in the Fraser were far below the 9.8 million predicted by the Pacific Salmon Commission. We asked Watershed Watch Salmon Society's fisheries advisor, Greg Taylor, why the Fraser sockeye return fared so poorly and why the huge returns in other places.

Most observers believe the larger returns for most sockeye populations were caused by two years of cooler waters in the north Pacific. Salmon thrive in those kinds of conditions. And with luck, we will see similar benefits for pink, chum, and coho salmon returning in 2023.

Why didn't Fraser sockeye receive the same benefit? One key factor unique to Fraser populations is their migration routes through the Salish Sea. They face a range of challenges including marine traffic, pollution, and fish farms. It raises a lot of questions and we should focus more research into this issue.

Even though we're seeing lots of fish in 2022, we can't get carried away. With climate change, we could see a flip back to a series of warm water years, in which case we'll go from a year of bounty to terrible returns again. We need those fish on the spawning grounds. We need to build up the resilience of all salmon populations, along with protecting and rebuilding their

freshwater habitats, to allow them to survive the bad years, and rebound again in more favourable ones.

It shows just how resilient salmon really are. Given the right conditions, they have an incredible capacity to bounce back. But it also speaks to the absolutely critical importance of maintaining freshwater and marine habitats. That's where that resilience will be maintained. And that's

where we should focus our investments, our time and our concerns. That will be what saves our fish so we can truly enjoy the miraculous bounty of salmon and what it brings to us.

Anna Kemp is communications director for Watershed Watch Salmon Society, an organization dedicated to defending BC's wild salmon and their habitats.



Salmon spawning season offers an opportunity to witness one of the truly great miracles of the natural world. Between late August and December, salmon are returning to spawn in the streams where they were born. With the changing climate, and the many pressures wild salmon face, the numbers of salmon returning to each stream is changing. While we can make predictions, we don't yet know exactly what will happen on the ground.

You can help build a picture of what is happening with salmon around the province with just your phone and a social media account.

How to take part in #SalmonSpawnWatch

- Go to see the salmon spawn.
- Use your phone to take pictures or make a short video. (If there are no salmon returning, and you expect them to, that is an important observation too!)
- Post on social media with the hashtag #SalmonSpawnWatch, including the date and location in the text of your post.
- If you don't use social media, send to info@watershedwatch.ca and we will post on your behalf.
- Each post you make until October 31 enters you in a draw for some amazing prizes from Reo Rafting Resort, Patagonia, and Kumsheen Rafting.

LNG to Europe?

Ramped-up export sales just a pipe dream, research shows

Compiled by Mitchell Beer

Despite the European Union striving to slash its demand for Russian gas by two-thirds by the end of this year and to end all its dependence on Russian fossil fuels by 2027, there's no path for liquefied natural gas (LNG) from Canada to help the continent meet its short-term energy needs, the International Institute for Sustainable Development concluded in a policy brief in August.

Canadian fossil companies have still been loudly touting the possibility of ramping up Canadian exports in the EU's hour of need. But the research reveals "a fundamental mismatch with Canadian supply opportunities," write researcher Lasse Toft Christensen and IISD senior policy advisor Nichole Dusyk.

"Dependence on Russian gas supplies has the EU looking for supplies to fill immediate needs before winter 2022," they acknowledge. But "Canada cannot ramp up supply before 2025, while Europe's energy needs will largely be resolved by that time."

After that, "high prices and energy security concerns, combined with climate commitments, suggest that new Canadian liquefied natural gas infrastructure would be at risk of becoming stranded," with insufficient customer demand to pay back the cost of getting the projects built.

With Europe "accelerating its plans to reduce gas use by ramping up energy efficiency and the use of renewable ener-

gy sources," they add, Norway will be a "more logical" source of gas for companies with immediate supply needs to fill.

"National-level plans and analyses for member states, including Germany, Italy, and Denmark, show how phasing out Russian imports will be accomplished, in part, by an accelerated transition away from gas," IISD writes. "Noting these dynamics, one of Germany's leading economic institutes, DIW Berlin, has

Canada cannot ramp up supply before 2025, while Europe's energy needs will largely be resolved by that time.

said that "building fixed LNG terminals in Germany... does not make sense because of the long construction times and the sharp decline in natural gas demand in the medium term."

Separate analysis in April reached a similar conclusion, showing no need for new export terminals to move US gas to Europe.

IISD looks at the potential locations for LNG export terminals in New Brunswick, Nova Scotia, and Newfoundland and Labrador, reinforcing past analysis

showing little if any prospect for any of the projects. While Repsol SA's existing LNG import facility in St. John, NB, is the frontrunner among the three, "estimates for completion still range from three to five years," the policy brief states, "and LNG facilities have a poor track record for delays."

Importantly, both the Goldboro [Nova Scotia] and the Repsol projects would need additional pipeline capacity to supply gas for export and would need to source gas from the United States or via additional pipeline volumes through Quebec."

Any attempt to expand fossil infrastructure in Quebec "would likely be met with public opposition, which could add time and expense to the project," Toft Christensen and Dusyk add. "In addition, directing existing supply to export raises questions about whether export contracts will conflict with supplying gas to meet domestic demand."

Mitchell Beer is publisher and editor of The Energy Mix. This article was originally published on www.theenergymix.com/2022/08/18/no-path-for-canadian-lng-exports-to-europe-iisd-analysis-concludes

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And a Thank you

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Stubborn Optimism

The Future We Choose: Surviving the Climate Crisis

review by Ana Simeon

I don't read many climate books these days. Keeping current on the science is much better done in real time on *climatefeedback.org* and *carbonbrief.org*, both written by scientists. On the solutions front, Project Drawdown is an online library unto itself, featuring 100+ ready-to-roll solutions, from alternative refrigerants to walkable cities. Its companion site, *regeneration.org*, offers action resources for families, cities, workplaces and governments, and, right on the home page, the most gorgeous piece of climate art I've seen.

A climate book that's neither a science explainer nor a dour post-mortem on how and why we got here and whose fault it is, is a rare and precious find, and worth reading as books are meant to be read, on paper. *The Future We Choose* is such a one: not just a good read but a potential new friend. It is a bedside book, a companion for living, loving and acting in these times. At \$22 at Munro's in Victoria, and pro-rated over my life expectancy as per the StatCan actuarial tables, it comes to \$0.79 per year. I'm buying it. It's not like we'll be done with the topic any time soon.

The book has its origin in the dark days of bitter division after the collapse of the Copenhagen climate talks in 2009. Negotiators, activists, journalists – everyone believed they had just witnessed the final demise of any hope for a global climate deal. At that point, the UN secretary-general asked Christiana Figueres to step in as facilitator.

As we all know, this particular story has a happy ending. Whatever admixture of stubborn optimism, deep listening, and tough love Figueres dispensed, it helped close the deal. In 2015, 195 nations adopted the Paris agreement as a legally binding international treaty.

The road from Copenhagen to Paris was humanity's trial run for how to work together on climate. Now the real work begins to enact the complex transformation that Paris calls for, in every country, every industry, and every household. In doing so we will continue to encounter the same obstacles that Figueres and

**The Future We Choose:
Surviving the Climate Crisis**
**Christiana Figueres and
Tom Rivett-Carnac**
ISBN: 9780525658351
Alfred A. Knopf, New York, 2020

**THE FUTURE
WE CHOOSE**



**Surviving the
Climate Crisis**

Christiana Figueres and
Tom Rivett-Carnac
Architects of the 2015 Paris Agreement

the negotiators faced: conflicts born of colonialism and economic injustice, obstruction by fossil fuel interests, and our own fears (often disguised as “realism”) that it is too late.

The Future We Choose invites us into a daily practice of cultivating the three mindsets that made it possible for Figueres and Rivett-Carnac to shift the energy in the negotiating room from apathy to commitment. These mindsets call for both “tough mental discipline and a gentleness of spirit,” and need to be pursued intentionally and consistently. *Stubborn optimism* is courage and openness to possibilities in the face of adversity, the opposite of defeatism. *Endless abundance* is the realization that the world holds enough to meet everyone's needs in ways that become available to us when we co-create and share. *Radical regeneration*: of forests, oceans, degraded land, food systems, human cultures.

True to its buoyant, practical spirit, nearly half the book is devoted to discussing the actions that have the most impact, and helping you develop a plan. Start today: “Take a deep breath and decide that we can do this, and that you will play your part.”

The book is available from the Greater Victoria Public Library, or through interlibrary loan anywhere in BC.

Ana Simeon is a former campaign director with RAVEN (Respecting Aboriginal Values and Environmental Needs), and a law student at the University of Victoria.

Spirit Bears

Hunting ban protects rare white bears and their relations

by Odette Auger

Kitasoo Xai'xais and Gitga'at First Nations have successfully banned black bear hunting in the parts of their territories most critical to the beautiful Moksgm'ol (Spirit Bears). Klemtu and Hartley Bay have the highest concentration of Muq'vas Glaw (white bears). They are not albino, and are not unique species or subspecies – they are black bears with a recessive gene that gives them a white coat. Two black bears carrying the gene will produce white cubs.



©Chief Doug Neasloss

turned to Klemtu. He was asked to go out and look for a spirit bear. He was skeptical – he hadn't heard of them, living away from home territories. He thought they were pulling his leg. He went for a walk in the woods. "I didn't see anything. And I just remember thinking that they were joking. And then, all of a sudden a spirit bear comes out right in front of me, with the salmon in his mouth. And he just lays down in front of me and starts eating his salmon and the sun burst out." That experience led to him spending seven or eight

for food, that was the minority. Eighty-five per cent of the hunters were American trophy hunters who came up to kill black bears in Klemtu territory, along with overseas trophy hunters, says Chief Neasloss. Unlike grizzly trophy hunting, they aren't required to report black bear kills, so it's hard to know how many bears are being hunted per year.

The BC Wildlife Federation says the number of licensed hunters in BC has increased more than 20% in recent years – from 85,633 hunters in 2005 to 107,073 in 2020. According to provincial government data, the number of black bear licenses sold over the past 15 years has increased more than 2.5 times – from 14,362 to 36,744.

Ten years in the making, the ban proposal was the work of Kitasoo Xai'xais Stewardship Authority (KXSA) and the Gitga'at Ocean and Lands Department (GOLD). In 2012, Coastal First Nations issued a ban on trophy hunting in general. The biggest challenge in the process for Chief Neasloss was the sheer amount of time it took. "I thought this would've been an open-and-close case – because we know how unique and special spirit bears are," he shares.

"I think a big part of the lag time was lack of science," Neasloss explains. "We helped drive a lot of the science, by partnering up to collect the data." The collaborative research gave them the evidence required to prove that one in ten bears had

Spirit bears have been protected since the 1950s, but black bears continued to be hunted – putting the spirit bear gene at risk.

Spirit bears are culturally and economically important to the community. Tourism generates diverse streams of revenue in a geographically remote location. "Our people have always had a healthy respect for them here, and understand the rarity of the bears." They're integrated all throughout the community – whether it's song, dance, stories, or teachings.

Chief Neasloss recalls the first time he saw a spirit bear. He was 17, having re-

hours a day with the bears... for 20 years. This passion for the bears led to Elders giving him his brother's name Muq'vas Glaw (white bear), to carry on after his brother passed.

Spirit bears have been protected from hunting since the 1950s, but black bears continued to be hunted, putting the spirit bear gene at risk.

While some of the hunters were hunting

the white gene. “I would say this is the perfect example of science catching up.”

Dr. Christina Service has been a key helping hand in the proposal, and is continuing to train community youth in monitoring and field work. One example is setting up hair traps along bear paths – analyzing hair samples was key in knowing how many black bears carry the recessive gene. The hair samples are unique to individual bears, like a fingerprint, says Service. Information can help understand and support their bears, by

giving insight into diet the previous year, and distinguishing populations.

Service hopes the policy will play a part in the continued stewardship of these culturally important animals. More broadly, she says, “I hope that the closure can act as a great example of Indigenous-led, evidence-based wildlife management policy that can be drawn on in other wildlife management contexts.”

“Our well-being depends on the well-being of bears. Now, all three species of

bears are protected– spirits, grizzlies, and black bears.”

Odetta Auger, Sagamok Anishnawbek, is a guest on Klahoose, Homalco, Tla’amin territories. Her journalism can be found at *Watershed Sentinel*, IndigiNews, APTN, and the *Toronto Star*, among other places.



©Photo by Rosie Child, provided by Chief Neasloss.

Nation to Nation

Land defenders' tour forges strength in solidarity



by Sidney Coles

I carried two braids of sweet grass, tobacco, and sage with me to offer my hosts on the Nation to Nation tour. The tour was organized by Wet'suwet'en leaders with an aim to build unity and solidarity with other Indigenous land defenders across Canada.

In the box titled "Skills offered," in the application to participate in its BC leg, I marked "cook." And so it came to pass that I found myself traveling in a van to Wet'suwet'en territory behind tour organizers hereditary Chief Na'Moks, Jennifer Wickham, and Gaylene Morris.

The first of our stops was in Hope, where allies Kate Tairyan and Tim Henry led us to the banks of the Coquihalla to witness the impact of Trans Mountain (TMX) pipeline excavators on the course of the river and this year's salmon run.

It was a devastating and poignant moment. Jennifer and Gaylene stepped into the water and, facing the heavy machinery on the opposite bank, sang the Wet'suwet'en women's water song as tears slid down their faces. It was only the soft sound of the jingles on Na'Moks's regalia that soothed us as we trudged back up

the forest pathway from the water to our vehicles.

At the stop at Tiny House Warriors village in Blue River, Huehuecoyotl activist Tupac Enrique Acosta's video linked the gathering with host Kanahus Manuel (Secwepemc and Ktunaxa) to Puebla land defenders, to share action-based strategies to challenge TC Energy pipeline projects that threaten animals, plant life, and water in their respective territories.

I cooked three meals a day and served up countless cups of coffee for people living

at camp. It gave me pride to nourish bodies who, for years, have stood in harm's way in defense of their territories, in defense of the land and life as they have lived it for centuries.

For two significant feasts, the water and baby welcoming ceremonies, Mary Bau-bien and I took pains to put on a feast Chief Woos, his daughters, Molly Wick-ham (Sleydo) and Chief Na'Moks could be proud of. As part of its assimilation

policies, the federal government banned the potlatch in BC from 1884 to 1951 and while these were not traditional pot-latch ceremonies per se, they served as a gesture to the tradition and provided an opportunity for others to come and see the nearly finished Bathlat (feast hall) on banks of Lamprey Creek.

On a separate day's outing to Telkwa, Witset (Moricetown), and Hazelton, Chief Na'Moks brought non-Indigenous

allies to the fishing weir and smokehouse at Witset Canyon and to the headwaters where the mighty Skeena and Wedzin Kwa (Morice) rivers meet. Watching as the fish leapt upstream, he explained, "The salmon need the water, the people, bears, and the trees need the salmon. Nothing lives without the river."

Na'Moks speaks across time so that it is unclear, to an outsider, whether he is speaking with the voice of an ancestor or his own. The stories seem timeless but they have developed a new urgency, and need to be shared.

The tour was a reminder that the Indigenous movement to protect land and water needs conscientious allies. Feed the movement in your own way.

Sidney Coles PhD, DPE candidate OISE, is an equity and human rights advocate and a recent transplant to BC.



1. Chief Na'Moks - where the Skeena and Morice meet
2. The smokehouse at Witsët canyon
3. Feast Hall
4. Chief Na'Moks, Gaylene Morris and Jennifer Wickham on the banks of the Coquihala river
5. Weaving baby carriers for the welcoming ceremony at Lamprey Creek.
6. The fishing weir at Witsët canyon.
7. Nation to Nation meeting at Tiny House on Secwépmc territory.

Photos ©Sidney Coles

Forest Stewardship?

FSC could soon remove blocks to global release of GE trees



by Lucy Sharratt

The global threat of genetically engineered (GE) trees is closer than ever. Ironically, it could be the Forest Stewardship Council (FSC) – the organization that describes itself as “the original pioneers of forest certification” and claims to “promote the responsible management of the world’s forests” – that may open the door to the commercialization of GE trees.

The Forest Stewardship Council has prohibited the use of genetically engineered trees in FSC-certified operations

and products since 1995. The current prohibition has served as a block on GE tree commercial pursuit globally and has therefore been the target of a pressure campaign from biotechnology tree researchers. Now FSC is taking concrete steps towards removing its GE tree prohibition – they will be reviewing it at the upcoming FSC General Assembly in Bali, October 9-14, and have also launched a “genetic engineering learning process” that proposes to directly oversee selected field tests of GE trees.

What’s at stake

Commercial planting of genetically engineered trees would be a large-scale experiment in our environment, with unpredictable and potentially irreversible consequences. Forest ecosystems have a high degree of complexity, which is recognized but still not fully understood. This makes it unlikely that we will be able to understand or predict the potential impacts in the wild of intentionally or unintentionally (through invasiveness and contamination) introducing GE trees.

Unforeseen impacts can arise from the release of trees with new intended genetically engineered traits, as well as with the many possible *unintended* modifications that can result from the processes of genetic engineering. Unintended effects from genetic engineering could, for example, change the safety or nutritional quality of seeds and nuts; or alter wood rotting qualities which may impact fungal communities and the larval development of some insects. Even intended changes at the DNA level may impact the behaviour of trees in unexpected ways, such as changing stress responses and interactions with other species. Experience with GE crop plants already warns that plantations of GE insect- or disease-resistant trees could shift pest pressures, with impacts on surrounding trees and forests.

The use of GE trees in plantations would put wild forests and forest ecosystems at risk from GE contamination, including invasiveness over time. The contamination risks from GE trees are particularly high because trees are long-lived organisms that produce abundant pollen and seed designed to travel long distances, through wind dispersal and with help from animals. Once GE contamination begins, it cannot be stopped. GE trees will contaminate native forests, which themselves will become contaminants in a never-ending cycle.

FSC's "learning process"

FSC has begun a "genetic engineering learning process" to develop a set of rules so that FSC can directly oversee selected outdoor research field tests of GE trees on non-certified areas. FSC says that "The learning project would also set the base for discussing whether or not we should allow companies to be associated with FSC while using GE outside of any FSC certified operations."

The learning process is divided into two phases. In the ongoing first phase, FSC established a "panel of experts" (June/July 2022) to develop "safeguards" that future FSC-governed field tests of GE trees would need to comply with. (The panel includes, for example, GE tree advocate and developer Professor Steven Strauss of Oregon State University in the US, who has campaigned for over twenty years for an end to FSC's ban on GE trees, along with weaker international and national risk assessment regulations.)

In November 2022, the FSC Board will decide if the FSC "learning process" moves ahead to the next phase where companies would be invited to apply for FSC governance of their field tests, or if the entire process will be cancelled. If FSC moves ahead to devise guidance and oversee some field tests, FSC itself will be directly responsible for any resulting GE contamination or other environmental impacts from these outdoor experiments.

Downplaying role, responsibility

FSC rationalizes its project by saying, "Genetic engineering in forestry is likely to continue to happen with or without FSC, and the learning process explores if and how the [FSC] can contribute to minimize the potential negative impacts and optimize the potential benefits of the technology in this sector." This is a fatalistic declaration about the role of the FSC – whose certification policies are based on the ethical principles and ecological standards of its membership and are the foundation for consumer trust – which has been critical in stopping the advance of GE trees and their contamination of forests. Most importantly, the process downplays or ignores the serious risks posed to forest ecosystems around the world.

It is clear that FSC's policies and decisions have a direct impact on the global development and release of GE trees. For example, FSC's 2011 decision to allow field tests of GE trees for research in non-certified areas resulted in companies expanding their development of GE trees.

In fact, FSC's prohibition on GE trees currently stands in the way of commercialization of a GE glyphosate-tolerant eucalyptus tree in Brazil. FSC-certified pulp and paper company Suzano received approval from the Brazilian government in November 2021 to commercially plant its tree (a move denounced by civil society organizations in Brazil and across the world). However, Suzano can only commercially plant the GE tree if FSC overturns its current policy that prohibits its certified companies from growing GE trees commercially in non-certified areas, or if Suzano leaves the FSC.

The commercial release of GE forest trees would be imminent if FSC continues taking steps toward allowing GE tree planting in certified or non-certified areas.

A coalition of NGOs is collecting signatures calling for the FSC to maintain its current policy: www.stopgetrees.org/FSCactioncall. For further information see www.cban.ca/trees.

Lucy Sharratt is co-ordinator of the Canadian Biotechnology Action Network (CBAN), which brings together 15 groups across Canada to research, monitor and raise awareness about issues relating to genetic engineering in food and farming. CBAN is a project on the shared platform of MakeWay Charitable Society. www.cban.ca. This article is an edited excerpt from stopGETrees.org/FSCbriefing.

Carbon Capture + Spin

Big hype and billions in public subsidies for failing tech

by Mitchell Beer

After a half-century of research and development, carbon capture and storage (CCS) projects are far more likely to fail than to succeed, and nearly three-quarters of the carbon dioxide they manage to capture each year is sold off to fossil companies and used to extract more oil, according to a sweeping industry assessment released in September by the Institute for Energy Economics and Financial Analysis (IEEFA).

The report lands just as analysts in the United States warn of major verification problems with a CCS tax credit that received a boost in the Biden administration's new climate action plan, and as Canadian fossils lobby for more tax relief to match what's becoming available in the US.

One of the case studies in the 79-page IEEFA report (<https://ieefa.org/resources/carbon-capture-crux-lessons-learned>) concludes that the troubled Boundary Dam CCS project in Saskatchewan has missed its carbon capture target by about 50%. The 13 "flagship, large-scale" projects in the analysis account for about 55% of the world's current carbon capture capacity, the institute says.

Those 13 projects captured a grand total of 39 million tonnes of CO₂ per year, the report found, about one one-thousandth of the 36.3 billion tonnes that emitters spewed into the atmosphere in 2021.

"CCS technology has been going for 50 years and many projects have failed and continued to fail, with only a handful working," said report co-author Bruce Robertson, a veteran investment analyst and fund manager now serving as IEEFA's energy finance analyst for gas and LNG. The report, co-authored by energy analyst Milad Mousavian, concludes that seven of the 13 projects underperformed, two failed outright, and one was mothballed.

"Many international bodies and national governments are relying on carbon capture in the fossil fuel sector to get to net-zero, and it simply won't work," Robertson said in the release.

Though there is "some indication it might have a role to play in hard-to-abate sectors such as cement, fertilizers, and steel, overall results indicate a financial, technical, and emissions reduction framework that continues to overstate and underperform."

Natural gas production

When CCS or carbon capture, utilization and storage (CCUS) projects did succeed, it was usually in the natural gas processing sector, where CO₂ has to be removed to deliver a marketable product, IEEFA explains. But that's often the CO₂ that is handed off for Enhanced Oil Recovery (EOR), a process that involves injecting the gas into declining oil wells to boost their production. Canada's new CCS tax credit excludes EOR projects, but IEEFA says 73% of the CO₂ captured across the 13 projects in the study was used for that purpose.

"Producing the primary usable product (i.e. natural (methane) gas) is impossible without separating CO₂," the report states. "This explains why the sector has been using carbon capture technology for decades, not necessarily as a climate-friendly solution, but as an inevitability to produce the fossil fuel natural gas. On top of that, selling the captured CO₂ primarily to oil producers for enhanced oil recovery improves the economic viability of gas development projects."

But last year's *Net Zero by 2050* report by the International Energy Agency "explicitly expressed alarm about the danger of developing any new oil and gas projects globally," the two authors add. "It emphasized not developing any new oil and gas projects if the world wants to reach net zero by 2050."

Tail-end emissions omitted

The other "elephant in the room", IEEFA says, is that CCS attached to a fossil gas project only applies to the carbon pollution released while a field is in production. It does nothing to reduce the 80% or more of total emissions that occur when the product reaches its final customer and is burned. That means it makes no

sense to declare a carbon capture project attached to a new gas project climate-friendly.

The IEEFA analysis coincides with a furor over the tax credit for CCS operations in the United States that served as a reference point, if not a model, for the C\$2.6-billion subsidy introduced in the Trudeau government's 2022 budget. The US tax measure dates back to 2008, and "by 2021, 12 large projects were using 45Q federal tax credits to capture carbon dioxide from the smokestacks of industry and inject the gas into the ground," *Oil & Gas Watch* reports, citing a report by the non-partisan US Congressional Research Service. The *Inflation Reduction Act* that US President Biden recently signed into law contains billions in new tax incentives for CCS.

Seven of the thirteen projects underperformed, two failed outright, and one was mothballed.

But "about half of the carbon sequestration credits claimed by industry over the last decade were later revoked by the [US Internal Revenue Service] because the companies failed to monitor or verify their capture of the greenhouse gas" as required by the Environmental Protection Agency, *Oil & Gas Watch* says. Of the 10 companies that claimed the largest share of the more than \$1 billion in CCS tax credits, seven had no monitoring, reporting, and verification plans.

But neither the shaky nature of the technology nor the growing controversy south of the border is stopping Canadian fossils from demanding more generous taxpayer backing for their own CCS ventures. Previously, Cenovus Energy CEO Alex Pourbaix told analysts that the new federal tax credit wasn't rich enough to convince major tar sands/oil sands operators to invest their own money in CCS.

Environment and Climate Minister Steven Guilbeault countered that Canada's big oil companies are making record profits this year and should invest some of that extra cash to curb their greenhouse gas emissions.

Mitchell Beer is publisher and editor of *The Energy Mix*. This article was originally published on www.theenergymix.com



Mining Justice for Indigenous Peoples

Gitxaala Nation is pushing back against B.C.'s outdated and unjust *Mineral Tenure Act*, which allows mining companies to stake claims on Indigenous land without so much as notifying the Nations. Working to defend salmon-rich Banks Island, Gitxaala's groundbreaking case stands to protect us all from reckless mining practices.

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“We Are Alive”

Living through extinction, to protect their lands and waters



by Desiree Mannila

With the help of the University of Victoria, Grandson of Ma’amtagila Hereditary Chief Basil Ambers, Xa’nalas Dakota Smith, has been working alongside a team of Ma’amtagila descendants to rebuild a homestead in their unceded territory. Occupying their traditional territory in the face of logging and other threats is part of the community’s work to reclaim their traditional lands and reconnect to the natural world.

Smith describes the beauty of the homestead, Hiladi village – a place to make things right. Located in Johnstone Strait, Hiladi is the home base of a Matriarch-led housing facility, holding the “Little Big House.” In September 2022, an extension will be completed at the village to provide space for more members to return.

The Ma’amtagila are engaged in formal process to gain recognition of their rights and title to their traditional territories, after discovering in February 2021 that 100% of their traditional

territory was included in a treaty being negotiated between the Tlowitsis First Nation and the governments of Canada and British Columbia. (Learn about the history that has led to this at www.maamtagila.ca/news.) The Ma’amtagila, who have never ceded their land to anyone, explain on their website: “Should this treaty be signed, our entire traditional territory would be up for grabs for BC Timber Sales auction, including large areas of old growth cedars and culturally modified trees.”

Smith’s mother, Tsastilqualus Ambers Umbas, lives in Hiladi village full-time. Smith says reviving the village has been generations in the making: “We’re not doing this alone. We’re doing this with the support of our elders and ancestors who’ve already put in the groundwork.”

“It’s our lands and we want to live there,” says Smith. “We want to have access to our resources. We want to bring our youth and elders out there and have access to our territories so we can pick berries, forage for medicines, hunt and bring stuff to our people who need them.”

Stealing vs. Healing

Smith contrasts a self-sustaining homestead, “living on the land, practicing culture, and maintaining territories,” to the destruction taking place within the territory. He points out that the village revived to honour the land is situated across from an active log sort and plots of land sold to people outside their nation. He describes it as “jarring” to gaze at the eagles nestled on the beach, with the haunting sounds of industry in the background. Smith details disrupted streams and berry bushes, forests consumed without consultation across Ma’amtagila territory.

“You can really see the impacts of logging today – it’s devastating,” says Smith, acknowledging that the Ma’amtagila territory continues to be “pillaged.” He tells the story of revisiting a watershed that once held lush bear habitat to discover nothing was left – “It’s all gone, you know?”

In an interview with *Watershed Sentinel*, independent environmental researcher Mark Worthing states: “Industrial logging is

the single largest destructive force on Ma'amtagila ecosystems, cultural sites, water, and food security systems." He lists the devastation he's seen during his time working in Ma'amtagila territory in the Great Bear Rainforest and Vancouver Island watersheds: "We've seen Grizzly bears increasingly go hungry on the Great Bear side – and [they] have begun traveling further and further to find secure food sources, including even swimming across Johnstone Strait to Vancouver Island in search of fish." Worthing says that sacred caves, karst ecology, and the integrity of the remaining salmon-bearing watersheds have been compromised by "reckless road building practices, short rotation second growth logging, and extensive old-growth logging of red and yellow cedar groves in places like the Adams Watershed, Eve Watershed, Naka Creek and adjacent areas." He attests that several corporations are "targeting the last tracks of old growth all over the territory and are exploiting some of the overlapping territorial regions with neighbouring nations."

Worthing describes the Ma'amtagila territory as "an excellent space for restoration of both natural systems and human relations. It should be a place of healing where we learn to listen to the land." But, as he sees it, "The BC Government and industry seem to be racing to exploit as much as they can before Ma'amtagila are able to reassert their rights in a way that the crown will recognize."

Once the Ma'amtagila are reinstated as the rightful protectors of their territories, a primary focus will be assessing the state of their rivers, plants, and trees, says Smith. "We need to help protect the animal kingdom [and] their resources. They need berries; they need fish. They are our brothers and sisters – our ancestors – and we need to take care of them, too."

Let me sing, let me dance

Smith explains that the Ma'amtagila are part of the Kwakwaka'wakw Nation, run by a community-based legal system. Within this system, families throw potlaches and feasts in the Big House with neighbouring communities to make announcements, conduct business, and later share their sacred songs and dances. In Kwakwaka'wakw culture, community and familial matters are resolved in the Big House – nothing is official until a gathering is held for the community that includes the hosting family opening their "treasure box" of songs and dances.

For millennia, this practice has been the communal governing style of the Kwakwaka'wakw People. Several hereditary chiefs of the Ma'amtagila Nation have held feasts and potlaches in

"We need to help protect the animal kingdom and their resources. They need berries; they need fish. They are our brothers and sisters – our ancestors – and we need to take care of them, too."

the Big House to assert their existence. "We're recognized in the Big House. Our Chiefs recognize that we have sovereignty over this [land]," says Smith. In an interview with *Watershed Sentinel*, Mantlidas Maxine Matilpi remembers the demonstrations her father, Ma'amtagila Hereditary Chief Maxwagalis (Chabane) Matilpi, put in to protect their title and rights. She believes that no progress can be made until the Ma'amtagila are recognized by the Government of Canada – in the same capacity and to the same degree as they are recognized by Kwakwaka'wakw customs.

"It's nice to see the hope trickle into the older people that maybe thought they'd die before anything changed," says Smith. He expressed that it's "emotional getting on the land," and many members shed happy tears witnessing progress made. He shares that this is an exciting time for his people and confirms that they will continue to reestablish their presence across their territories. "We are alive."

Paxala, Desiree Mannila is a proud member of the Da'naxda'xw Nation, and staff reporter for the *Watershed Sentinel*.



It would be difficult not to notice, these days, how social cohesion seems to be slipping away. “Discourse” too often boils down to an “I’m right, you’re wrong/bad” shouting match. We no longer have political opponents, we have enemies. We’re living in a hyper-political age, in which everything feels noisy and divisive but nothing substantial really changes.

In this climate, defeating an opposing faction may start to seem more important than actually doing useful work – but of course, and especially now, nothing could be further from the truth. How do we get past this – get over ourselves and our precious viewpoints – to the action that desperately needs to happen?

There is a cure: to work with the people around us by *actually* listening, focussing on our common needs and interests, and organizing with each other – often locally – to make real, concrete change. This section takes a refreshing look at people who have been doing just that.

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Getting over Ourselves

Antagonists to Allies

Deep canvassing cuts through identity politics

by Montana Burgess

When I held my two-year-old in my arms waiting for the ambulance to get to our house as she struggled to breathe, it was the longest and scariest 15 minutes of my life. It turns out my child has asthma. Each summer of her life, the wildfire smoke has stolen her sunny and fun summer days, as the smoke has replaced the clean air she needs to breathe. For me, climate change is here and now, even with all my privilege in British Columbia.

For me climate change is personal, it's about the safety of my child. And for most other people, it's them and their loved ones that are at the heart of the climate crisis. Climate change, conservation, and energy problems are not environmental problems, they are people problems. They are caused by people and require solutions from people.

For too long, we've been divided on how to move forward on solutions to big problems that affect people every day. To get enough people wanting the same solutions, we need to listen to people who disagree with us. We need to connect as humans and find our common ground to move forward together.

I believe that deep engagement canvassing, or deep canvassing, is the missing ingredient to building a populist climate movement. Populism should not be a dirty word to progressives, it's about appealing to people and the majority of the voters. For our political decision-makers to have the political will, they need the majority of support from their constituents. To get the majority of people to support climate and environmental policy solutions, we need to connect with people outside of the typical environmental "choir," and with those whose livelihood and families are more connected to resource extraction industries.

It feels like everything is politicized and polarizing right now – partisanship is driving identity. If you want to talk about climate policy, you are put in an identity box. It's not that people shouldn't talk about climate policies – we need to – but we need to do it in a different way that doesn't lead to people discarding what is being said because of an associated partisan identity. Deep canvassing gives us a method and framework to give the

time and space to people who are not already on board with collective climate solutions to resolve their internal conflict and become more supportive. Deep canvassing on government action on climate change is about shifting the responsibility away from ad hoc individual actions. To make the changes at the scale required to avoid the worst climate impacts, we need to find a better way than expecting people to make "the right" consumer or lifestyle choices. I believe we need legislation to address the biggest carbon polluters to transform the way we live without harming low income families and vulnerable populations.

We need more government action on climate change because people like you and me can't do it alone. And not just in my community, but in communities around the world. We're in this together.

Montana Burgess is the Executive Director of Neighbours United (formerly West Kootenay EcoSociety) in BC. Excerpted from *Deep Canvassing for Climate and Energy Solutions Playbook and Toolkit*, Neighbours United, May 2022. For more info, visit www.neighboursunited.org/campaign/deep-engagement

What is Deep Canvassing?

Deep canvassing is an engagement model that is rooted in listening with honest curiosity and non-judgment to the concerns of people who have conflicted feelings on an issue.

A typical deep canvassing conversation takes place between a trained canvasser and a resident, lasting between 10-30 minutes, during which canvassers share personal stories and model vulnerability for residents they speak with. Deep canvassers are trained to be curious, compassionate, and ask questions.

In the smelter community of Trail, BC, population 8,300, volunteer canvassers had 1181 conversations, with 40% overall movement/persuasion rate. City council voted unanimously in April 2022 to transition to 100% renewable energy by 2050.

Tea Creek Farm

Culturally safe training and food security in BC's north

by Jenessa Joy Klukas

Jacob Beaton's (Dzapl Gyiyaawn Sgyiik) bright farm kitchen is a flurry of activity in Kitwanga, BC.

Beaton is the owner and founder of Tea Creek Farm – an Indigenous-led, culturally safe, and land-based facility that focuses on food sovereignty and trades training, and acknowledges that food is central to the community.

Beaton is from Haida, Heiltsuk, Gitxaala (Tsimshian) descent and is from the Eagle Clan – his ancestral name is Dzapl Gyiyaawn Sgyiik, meaning “busy eagle” or “eagle who gets things done.”

Beaton grew up in Burnaby, BC and says that his childhood was filled with a “good amount of housing and food insecurity.” His father was a red seal carpenter, but he “also did fishing,” and his mom was a teacher.

“My dad was a carpenter when nobody wanted carpenters,” says Jacob. “He re-trained as a teacher, it took him many years, just in time to be a teacher when nobody wanted teachers.” He recounts that in his father's first year as a teacher, “they went on strike for the whole year ... that led me to living in twenty different houses by the time I was fifteen or sixteen years old.”

Beaton cites his personal history as a large driving factor in what he does today at Tea Creek Farms.

What is food insecurity?

Beaton provided two definitions of food insecurity.

The first is not having food regularly or having doubt that there will be enough food at any given time. His personal experience was not having enough food for the family “pretty much daily.”

The second is simply “how long can you last without going [grocery] shopping,” which he mentions is fairly relevant in a world of uncertainty and supply chain issues, specifically in northern communities. He mentions that root cellars are a fix that could help this aspect of food security – bringing back root cellars (both household and community-based) could be especially helpful for small northern communities, where a highway could wash out and cause supply chain issues fairly quickly.

Indigenous-led

Tea Creek Farms specializes in training Indigenous people in trades such as carpentry, landscape horticulture, professional cook, plumbing, and heavy equipment operator, among other ticketed trades. They also specialize in Indigenous agriculture.

“We are Indigenous-led, meaning the majority of decisions made at every level of our organization, every day, are made by Indigenous people.... We always hire

Indigenous instructors, whenever possible.” He mentions this includes bringing Indigenous instructors from far away if that is needed.

Their preferred method though? To hire past Tea Creek graduates to be instructors. “A lot of our staff this year are graduates from last year.”

“So, most of our instruction that is happening is local Indigenous people who have been trained here at Tea Creek ... some of the trades that are more specialized, we do need to bring people in from outside. But it's usually the minority of our trainers [who] are from the outside.”

Meeting people where they're at, and cultural safety

One of the integral parts that make up Tea Creek Farm, that Beaton labels their “secret sauce,” is that it is a culturally safe place. “One of our rules: we take people as they are ... you don't have to be somebody else to be here as an Indigenous person. You don't have to pretend, or meet somebody else's standard.... That's a critical thing for us.”

Some examples of how Tea Creek practices cultural safety are: they do not implement grades, don't put people on spectrums, and don't classify people.

“The closest thing we have to [classifying them] is the four quadrants,” Beaton says. These are four broad areas of skills that

are needed for food sovereignty, which Tea Creek has organized into four groups – Administration, Nutrition and Hosting, Builders, and Growers. Each of those four areas is necessary, and Tea Creek encourages people to experience all four and identify which area they are drawn most to.

Tea Creek’s practice is a holistic model, and always utilizes the Indigenous models of learning.

There is no cost for trainees, and another important part of this initiative is providing support to ensure that trainees and workers can show up.

Beaton cites the median income in his

One of the integral parts that make up Tea Creek Farm, that Beaton labels their “secret sauce,” is that it is a culturally safe place.

area as between ten and twenty thousand dollars – and if Indigenous, sometimes this income is supporting nine or ten people per household. This can lead to no transportation, lack of proper clothing, lack of childcare, health challenges, and food insecurity among other things.

“If you expect workers to show up to a job site in a very very poor community, they’re not going to be able to come be-

cause they don’t have a ride.” When Tea Creek was in development, Beaton says, that was when they started to make sure everyone had a ride and arranged for people to be picked up.

“Everybody gets fed here, you show up, you get farm eggs and bacon, and hash browns. Then we work, then we eat a big

Continued on Page 24 ➔



meal together, and everybody gets fed and then you take home the leftovers. Then rinse and repeat, same thing happens again the next day.”

Indigenous agriculture and land management

Beaton is passionate about teaching the history of Indigenous agriculture and re-connecting traditional Indigenous farming practices to Indigenous peoples.

“First of all, we need to change our understanding as Indigenous people – because we have been stripped clean of our food knowledge.”

“We, including our trainees, go through a lot of anger when we learn how much

Indigenous people have contributed to mainstream agriculture today, and received zero credit. It was stolen just like our land, our children – it’s upsetting.” For example, Beaton says, “It’s upsetting to learn all potatoes are Indigenous and that they were growing potatoes here before settlers and explorers arrived, in our part of the world, on the west coast here.”

Beaton uses tomatoes as an another example – tomatoes are one of the world’s most valuable cash crops today, but were domesticated by Indigenous peoples over 7,000 years of intentional agriculture. “Not accidental farming, not hunting and gathering! But like, actually agriculture.” Beaton says that a big part of land management in Indigenous culture is the cooperative nature of Indigenous agri-

culture. “We were not trying to do it all by ourselves, on one farm. We were a community of people that each have our own gifts and specialties, and we work together cooperatively, collectively, really effectively on our territory.”

How does this work today though? Tea Creek’s website says: “We have the philosophy that everyone has a gift, and that we aren’t all designed to be good at the same things.” Teaching each person to use their gifts is a way to reach the outcomes of Indigenous Food Sovereignty, and is ultimately what Tea Creek is educating others to do.

Jenessa Joy Klukas is a journalist of Xaxli’p and Métis descent. She grew up on the land of the Haisla Nation in Kitimat.



Struggle for Strathcona

BC parks need community science

by Loys Maingon

Thirty-four years ago, the “Friends of Strathcona” staged their 1988-1989 protest against the expansion of the Cream Silver Mine in Strathcona Park. The mine would have obliterated Cream Lake and most of the Thelwood Creek and Price Creek watersheds. Now, few visitors to Strathcona Park, and even fewer British Columbians, are aware that were it not for that historically important protest, BC’s oldest and largest park would now be a maze of clearcuts and mining claims.

Both BC Parks and the Ministry of the Environment and Climate Change were duly indicted in Dr. Peter Larkin’s landmark report, *Restoring the Balance*, from the Strathcona Park Advisory Committee in 1988. (www.for.gov.bc.ca › documents › bib19708). The report paints BC Parks as a compliant arm of the Ministries of Forests and Mines, all-too-willing to trade parts of the park for forestry and mining permits, for money and window-dressing.

→ While BC Parks has been erecting expensive signs reassuring the public that it is “inclusive,” its policies and actions are decidedly “exclusive.”

Under both provincial Liberals and NDP, BC Parks has had a dubious history of protecting the interests of commerce over wilderness. Larkin’s report showed that BC Parks merely implemented recreational policies of the government of the day to distract the public from the depredations of the mining and forestry industries.

The 1988 protest was the formative ground for Clayoquot Sound. As such, the environmentalists, not BC Parks, saved Strathcona Park. They were ultimately responsible for the restoration of some of the park’s integrity and all the additions in the 1990s to the park, including the Clayoquot Biosphere reserve.

To date, only about 40% of Larkin’s recommendations are implemented. The buffers around the park which he recommended, including Jessie Lake, Pearl Lake, Forbush and Willemar Lakes, were excluded and now stand in continuous clearcuts that border the park. Control of access to the edges of the park and proposed public campsites that were promised in 1993 remains with the forest companies.

Commercial tourism

The park is back under threats that started when the government gave exclusive rights to park usage to the Clayoquot Wilderness Lodge, an expensive dude ranch with glamping. In 2014, *Bill 4* allowed transmission lines and pipelines through the park, and it was never repealed by the NDP. The commercialization that Larkin excoriated has now been subtly re-introduced by BC Parks, with little response from the environmental community.

Concerns about commercial tourism that began in 2008 with the Clayoquot Wilderness Lodge now find private property at Moat lake which was supposed to be only for grandfathered family use, helicoptering in clients to the Moat Lake Retreat. The private park operator which replaced park staff for trail and campsite maintenance, has been given a permit to run a business in the park, renting canoes and kayaks on Buttle lake – conservation impacts on sensitive declining shore-



Continued on Page 26 ⇨

bird populations be damned. In 2021, unknown to the public, the mine's new owner, Myra Falls Mines, was given an expansion permit. It is the thin edge of a very disturbing wedge, excluding public interests in wilderness.

BC Parks has further commercialized the park by requiring that all campsites be reserved in advance. As research on reservation systems in the US National Parks shows, these systems discriminate against lower income demographics, and favour urban white campers with higher than median household incomes.

Exclusion from Living Lab

While BC Parks has been erecting expensive signs reassuring the public that

it is "inclusive," its policies and actions are decidedly "exclusive." Nowhere is this truer than when it comes to scientific research. BC Parks' notorious reputation for obstructing research permits is even more explicit in the overtly discriminatory eligibility criteria for its flagship: "Living Lab for Climate Change and Conservation Program." Eligibility is limited and exclusive: "Lead applicants must be professors who hold a current teaching or research position with a public post-secondary institution in BC. Adjunct professors are not eligible for Living Lab funding."

This raises a number of red flags. First, it is a clear case of "ageism." Retired professors, no matter how well-qualified, are excluded. It also excludes some of the

leading climate researchers in BC such as Dr. Richard Hebda (retired adjunct professor).

Second, BC has a large pool of environmentalists who are adjunct professors and professionals. The eligibility criterion favours age and privilege over merit.

Third, this policy runs completely against the recommendations of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services which stress the urgent need to move away from exclusionary top-down approaches and engage local communities if humanity is ever to stand a chance to address climate change. That is a far cry from BC Parks' belief that parachuting university professors in the summer into local communi-

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ties will somehow solve climate change. That approach simply perpetuates the socially discriminatory notion that science is something that is done only at universities in urban environments. This is socially divisive and only serves to feed climate denialism. To solve the climate and biodiversity crises we need to connect people with science at a local level focused on including local resources and knowledge. That begins by recognizing the work of scientists working away from universities in rural localities.

Species inventory and discovery

The Friends of Strathcona understood early on that there is a need not only to reactively protest politically and advocate legally for the park, but also to proactively provide nature education and inventory Strathcona Provincial Park's species. That became even more urgent when in 2001 Gordon Campbell closed down the remnants of BC Parks' naturalist programs. In 1995, Betty Brooks and Steve Smith led the drive to set up the Strathcona Wilderness Institute (SWI) to liaise with BC Parks and provide park information, education and research.

Since 2018, SWI has launched six non-invasive and unpermitted research projects, without any financial support other than federal Canada Summer Jobs to pay one to two students yearly. These projects listed by starting year are:

- Fungi of Strathcona Park (2018),
- Bryophytes of Strathcona Park (2019)
- SWI Data Collection Site (2020)
- Student Research Transects (2020)
- Lichens of Strathcona Park (2020)
- Strathcona Park Climate Change Lakes Project (2021)

The data for these projects is compiled in the publicly-available *iNaturalist* site "SWI Data Collection." BC Parks incor-

porates this information in the BC Parks project run by Dr. Brian Starzomski (UVic) and Dr. John Reynolds (SFU). As Dr. Starzomski has publicly stated, the work of SWI has made Strathcona Provincial Park "the best inventoried park in BC, heads and shoulders over all other parks."

Indeed, SWI has documented over 2,000 species in the park. It has quadrupled the number of known species of mosses, liverworts, lichens and freshwater algae in the park, and increased the known numbers of floral and faunal species recorded on Vancouver Island. It has increased the number of rare and red-listed species, and even discovered one mushroom, one or two new lichens and one moss new to science, as well as extremely rare species new to the Americas.

Citizen Science

What matters here is that SWI with this local volunteer citizen science vindicates and consolidates the political achievements of the environmental community. While BC Parks gave an expansion permit to Myra Falls Mine, SWI discovered a hitherto unknown population of *Pseudocypbellaria rainierensis* (*Old-growth Specklebelly*) at the minesite. That alone vindicates the 64 arrests of 1988-89. Who in their right mind allows a mine to operate in old growth, and worse, gives an expansion permit at a time when the United Nations calls for the preservation of biodiversity, because as Antonio Guterres eloquently put it: "The future of humanity depends on it"?

Then there was the discovery of an extremely rare algae, *Cosmarium woronichinii*, a new species to America, on the same road that would have been built to destroy Cream lake. It would never have been found had the road been built.

So why might one care? That discovery tells a story that British Columbians are unaware of. The *Forest and Ranges Practices Act* does not require that forestry operations determine what species might be at risk from logging operations. We have no idea what species, or how many species, we daily eradicate, and may have lost in BC since colonization started the pillage we call prosperity.

Every park needs a locally-based institute to raise the bar, collect public data and communicate with local communities. That might disturb the government's cozy relationship with business. If SWI found four species new to science in mid-elevation old growth of moderate productivity, and quadrupled the numbers of known species across various phyla locally, that is not just an acknowledgement of the huge knowledge gaps underlying our ecological and economic assumptions. It raises the spectre of the loss of thousands of species across BC on which, we are told, the future of humanity depends.

When BC Parks promotes discriminatory policies that exclude local community-based research, it cannot claim to be inclusive. Its policies further the same short-sightedness that sustained the colonial interests of forestry, mining and commerce before the Larkin report. A hierarchical shake-up may be needed to save our parks, again, and increase BC's conservation lands to 50% as recommended by conservation scientists.

Loys Maingon PhD is a retired biologist, who dedicates this piece in memoriam to Ron Hatch (1939-2021), fellow arrestee and trusted friend.

Water Guardians

How a local battle has grown into a BC-wide movement

by Jen Groundwater

As 2018 began, becoming an activist was not among Bruce Gibbons' New Year's resolutions. He and his wife, Nicole Poirier, were enjoying early retirement on a small hobby farm on a quiet road near the headwaters of Portuguese Creek in Merville.

But everything changed on a Friday in early March, when they learned from the Merville Residents Association that a neighbour had received a conditional provincial license to bottle and sell water – 10,000 litres a day – from the local aquifer. Because bottling was not a permitted use on Scott MacKenzie and Regula Heynck's rural residential property, the couple had requested a zoning exception. The matter was on the agenda for the next Comox Valley Regional District (CVRD) meeting – only two days away.

Gibbons – whose mild demeanour hides a remarkable persistence – recalls, “When I found out, I thought, ‘We have to stop this.’” He has a powerful belief that nobody should have a license to take water from a shared aquifer for profit.

Most British Columbians share this belief. In a 2018 public opinion poll, 91% of BC residents agreed that “fresh water is our most precious resource,” while 85% deemed fresh water “a basic human right not to be denied or sold off by governments or corporations.”

Gibbons was alarmed that a bottling operation could be approved in an area where

most of the properties were designated as Agricultural Reserve Land (ALR), and where many farmers irrigate their crops from the aquifer. And, like many other new activists, he initially believed he just needed to talk to the right people to get an illogical situation sorted out.

Four years later, he's still talking. He's launched environmental appeals (denied). He's filed Freedom of Information requests (unanswered). And he's lobbied every municipal government in BC. What he's found is overwhelming support for his common-sense cause – except from the provincial government.

British Columbia's *Water Sustainability Act (WSA)*, enacted in 2016, is meant “to ensure a sustainable supply of fresh, clean water that meets the needs of BC residents today and in the future.” But it nonetheless allows individuals and corporations to extract water for profit, as long as they're licensed by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development.

After months, the CVRD turned down the rezoning request. During those months, Gibbons launched the Merville Water Guardians to share information and activate support when needed. The new group grew quickly, and Gibbons began making presentations to local governments on Vancouver Island and beyond.

His pitch resonated intuitively with most of his audiences. Fresh water is an es-

sential resource that must be shared and safeguarded for the social good. Bottling water is not only unnecessary – British Columbia's drinking water supply is, for the most part, very safe – it also supports the fossil fuel industry and leads to increased waste (a 2019 study showed only 15% of plastic packaging is successfully recycled in Canada).

Gibbons' mission was to make local politicians aware that, although they couldn't stop anyone with a provincial license from taking water from an aquifer, they *could* change bylaws to prevent water bottling in their jurisdiction. And many did: at press time, more than a dozen jurisdictions have already changed their bylaws. “Local government representatives are looking after their community, taking care of their community. They want to make their community better. They listen and they act,” notes Gibbons.

After Gibbons presented his case to the Strathcona Regional District (SRD), directors Brenda Leigh and Jim Abram took it to the Association of Vancouver Island Coastal Communities. AVICC unanimously adopted a resolution calling on the province to stop licensing the extraction of groundwater for commercial bottling purposes, on principle.

Next, the SRD took a similar resolution to the Union of BC Municipalities (UBCM)'s conference in September 2019. Gibbons and the Water Guardians rejoiced when the UBCM passed the resolution

with strong support, but the province replied with platitudes – and no action.

Gibbons gained valuable help from the Canadian Freshwater Alliance and the Comox Valley Council of Canadians. Both citizen groups had developed insights, resources, networks, and tools, garnered over years of waging similar battles; their shared expertise enabled the Merville Water Guardians to access grant funds and reach new audiences.

It's been heartening for Gibbons to find allies in many places: "I've met really good people and was so surprised to find hundreds, if not thousands, of people out there doing this kind of work [for the] forests, water, environment." Like many other activists before him, though, he's discovered more questions than answers. The WSA is supposed "to ensure a sustainable supply of fresh, clean water that meets the needs of BC residents today and in the future." So why are extraction licenses still being issued?

Scott MacKenzie's initial conditional license to extract water expired December 31, 2020. Yet as this issue goes to press, the CVRD are about to address his amended application (details are not public at this time). This application has been emphatically rejected for a variety of reasons by a community, a regional district, and a First Nation, so why is the province still trying to make it happen?

Gibbons notes "how unfair it is for the provincial government to download decisions, responsibility, and the cost of fighting water-bottling to local governments." But those local governments, thanks to the Guardians' efforts, are now calling on the province to take some responsibility and "immediately cease the licensing and extraction of groundwater for commercial water bottling and/or bulk water exports from aquifers."

BC residents need no reminders of the last 15 months of record heat, drought, wildfires, heavy rains, severe flooding,

Everything changed
when a neighbour
received a conditional
provincial license to
bottle and sell water
– 10,000 litres a day –
from the local aquifer.

and back around to extreme heat. In a worsening planet-wide climate crisis, why doesn't provincial water policy prioritize social good over one individual or corporation's profit motive? The Merville Water Guardians are going to keep on asking those questions.

Jen Groundwater is a writer, editor, and non-fiction author, based in the Comox Valley.

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Healthy Advocacy

Saving my sanity in times of crisis



©Dianne Bersea

by ©Dianne Bersea

On a hillside walk among the vineyards and orchards of the Okanagan, a friend looked me in the eye and abruptly asked, “Are you aware that residual DDT is still having an impact on our fruit crops... 30 years after it was banned?” Did I know that? “No, no I didn’t know that,” I stumbled away, panic stricken and stunned. More words, “We need to start a new campaign!” An insecticide haze drifts before my frightened eyes.

When I first considered this essay, climate change and all related issues hung like a

pall of mid-summer wildfire smoke. I had no idea that the climate crisis was about to get a brutal addition with the Russian invasion of Ukraine. I immediately recognized that the two events are part of the same catastrophe with the same mental health imperative, for all of us.

From the top of my head to the soles of my feet, I found my existing anxiety level compounded. Already overwhelmed, it became even harder to navigate or respond effectively. Unsettled and distressed... sometimes even resentful of the

sad-news barrage, I was not an effective advocate for anything.

For a while I tried to respond to every email, personal request, or demand. I wrote letters, signed petitions, made protest signs, joined Fridays for Future gatherings and other events, made donations, wrote a Nature Wise column for a local paper, and posted important issues on social media. I even briefly chaired a climate change education committee.

When a friend exhorted me to join yet

another environmental action group, I responded angrily. I felt angry there was more to consider, and angry for not feeling up to the task. I collapsed in defeat, a failure.

I discovered I'm not alone. When I posed the DDT dilemma to associate Lia, an accomplished friend of the earth, she immediately responded, "First question, what can we do about residual DDT?" Secondly, Lia shared her own story. "I've been approached about the climate crisis in demanding circumstances. I couldn't think straight. I felt like I'd failed somehow."

How can I, or anyone, be an effective champion for all the entities we hold dear if we feel engulfed, without the stamina to do what is begging to be done? The only respite I can think of is self-care – if I'm not functioning at a healthy level, I can't save the earth, or even myself.

What can we do? For Lia, already doing important work, it's a regular and vigorous hike with her boisterous lab. I simply stepped back, finally leaving room to consider what I can realistically do. I looked at how I'm living my life, my everyday life. Am I doing what supports my concerns, yet offers restorative options? What are the issues that are closest to my heart? What is healthfully possible?

Stepping back had an immediate positive impact. I started deleting emails for which I didn't foresee the resources to respond. I let go of overly-demanding social and political connections. I read less of the US press.

I had already been walking back and forth to my studio, which often extended to a nature walk with friends, cameras in hand. Those activities I retained and embraced. My physical and emotional heart thrives on bird song and spring unfolding.

Next I looked at my favourite protest sign, a list of nine "re-" words – i.e. reduce, reuse, rethink, etcetera. "Rethink" really speaks to me. That's where I started to assess what I've done and what I am doing.

I created a list of those concerns closest to my heart. As alarms never stop ringing I just wrote them in the order they came to me... energy sustainability, downsizing, healthy resilient local agriculture, reduced plastic use, wildlife habitat protection, especially habitat enhancement, plus tree advocacy and all that means. Even this list needs to be kept short!

Next step: what can I realistically contribute within personal limitations? At age seventy-five some things are now too demanding – still, there are many things I have done or am actively doing that contribute to my objectives. Fortunately, I got to check off a big one right away – downsizing.

On arriving in the Okanagan, my partner and I lived in a large ranch house with individual studio, production, and music rooms... lots of stuff and lots of space.

A move into Penticton three years ago left all that behind. We downsized our living space from about 3200 to 1000 square feet, by investing in a mobile home. Divestments became imperative. Vehicle use and energy inputs dropped immediately with basic locomotion... walking.

As for agriculture and a measure of self-sufficiency, we started a container garden with emphasis on good pollinators like oregano and wild flowers. We've managed a summer-long feed of bush and pole beans, cherry tomatoes, chard, cucumbers, and herbs. We've even attempted to change our miniscule grass lawn to insect/bird friendly clover.

Meanwhile, what we can't grow ourselves can be found within a few blocks. On Saturdays, May through October, local farm folk put on an impressive organic/permaculture display at the Penticton Farmer's Market. Add in a locally sourced, low-waste retail food outlet and we are making the most of what is right at hand.

This is my sustainability mandate at work, a mandate that supports local producers, decreases food transport time and costs with a big uptick on freshness.

Acknowledging my climate action achievements is important for my mental health, for keeping in touch with reality. It feels good to recount them. In moments of self-questioning I can give myself credit for what I am doing, a restorative moment of reflection.

I'm not trying to be smug. My list of both concerns and climate action achievements are not earthshaking. I'm disconcerted to find areas that need more attention. But this self-examination of what enhances my life and reduces my climate impact has turned me around.

For me, that's the objective. To live the message, and not react with panic to each new threat or challenge. It's practising what I preach. It's accepting my limitations, finding activities that are congruent with who I am, emotionally and physically. Here's to good health and realistic achievements for all climate champions.

Dianne Bersea is Artist in Residence at the Penticton Arts Council.

Water/Colour

Tribute to Bute Inlet and BC's threatened wild water



©Ester Strijbos



©Ester Strijbos

by Judith Willians

No one was in Bute Inlet's Southgate Valley when rock and ice above Elliot Creek launched itself 6,000 feet down from the Homathko Icefield into a glacial lake.

The first report was a photograph taken on December 10, 2020, by pilot Bastien Fleury. He was led up Bute Inlet along a trail of raw, broken, and shredded wood to the Southgate River. There, a vast alluvial plain spread out from the base of Elliot Creek into the river.

Elliot Creek flows from a glacial tongue of the Homathko Icefield. Seismic data indicates that at 6 am on November 28, 2020, a massive slide of rock and glacial ice fell into the lake that fed Elliot Creek to the Southgate.

The collapse and resulting lake tsunami was estimated to have the power of a 4.9 earthquake. A wave up to 100-feet in height washed down the entire watercourse to the Southgate River, carrying fractured boulders and shattered wood. It ripped the creek bed into a canyon and

mowed down stands of timber. The glacial tongue supporting a mass of rock had receded and the rock mass gave way.

The Southgate and its feeder streams historically support chinook, coho, chum, and pink salmon runs, as well as at-risk species like the bull trout in Elliot Creek.

All fish habitat was now buried by gravel. Elliot Creek was one of eighteen run-of-river hydro dam and power-line projects proposed for Bute Inlet by Plutonic Power Corp (now Alterra) in 2008. Research

for “High Slack,” a UBC Museum of Anthropology art installation, and the book *High Slack: Waddington’s Gold Road and the Bute Inlet Massacre of 1864*, made clear any alteration to this mercurial landscape did and could cause avalanches and landslides.

Painting with threatened wild water

In 2009, I began “Water/Colour” to bring attention to the landscape threats posed by hydro projects. From 2010 to 2020, water was collected from waterways listed in proposed hydroelectric run-of-river dams to make available in visual form the threatened wild water geography in a time of increasing climate change.

Paintings were made with the collected water alone allowing it to make whatever mark, tone or figured area it could. The paintings, together with 20 years of Bute photographs and stories, are keys to a history and pre-history of the Inlet. Bute

Inlet falls within the traditional territory of the Homalco First Nation. This unceded territory extends from Campbell River on Vancouver Island, throughout the Discovery Islands and up Bute Inlet on the mainland to the Homathko Icefield.

After the landslide, Homalco Chief Darren Blaney said, regarding the decimated spawning areas, “It is certainly one of our extra productive river programs ... for chum, coho, and pinks, so it is a massive loss for us.” The Homathko and Southgate Valleys also support grizzly and black bear, goat, deer, lynx and bobcat, martin, mink and wolverine, and endangered Marbled Murrelet.

I was curious how Elliot Creek’s water looked after the slide, and Isabelle Desmarais collected water from the damaged sites for Water/Colour. The coastal inlets are major engines of the BC coast, receiving ocean up-wellings right to their heads and feeding fresh water and nutri-

ents back south. We do not have enough data to start stripping the fjords apart with excessive hydro projects. The Elliot slide was nature’s climate-warmed action – providing usable fact, not opinion.

At the Tidal Art Centre in Powell River, Judith Williams is showing a selection from the Water/Colour paintings and material about water collection at Cumsack Creek, the Southgate River and Elliot Creek. Her response to Bute Wax, collected in Bear Bay by August Schnarr in the 1950s, led to related canvas work.

The exhibit was shown at TOSH on Cortes Island in the summer of 2022 and will travel to the Old School House Art Centre in Qualicum Beach in 2024. Judith Williams lives on Cortes Island.

See also <https://watershedsentinel.ca/articles/massive-bute-project-sparks-conflict> (March 2009)



Southgate River Water
Water from above and below slide area. Collected after Elliot Creek slide. Isabelle Desmarais, April 2022



The Land is Us

Deep connection to the Chilcotin spans generations

by David Williams

Yesterday we drove the old Cariboo Road, through the storied Fraser Canyon, onto the rolling hills of Cariboo, turned west at Williams Lake and then crossed the Fraser River and ascended up onto the Chilcotin plateau.

As we went my mind drifted back through time to my grandfather and father's time, almost a hundred and fifty years ago. They traveled through here on horseback, by wagon and buggy. Much has changed in that time, but the land, scarred now by fences, roads, and small towns, abides still and always. I think, too, of traveling this road with my dad seventy years ago and his stories of that earlier time, and of his later life as an engineer building this very road to meet the demands of growth and what we came to call progress.

This morning I contemplate my return as the sun rises, the land fresh and renewed following a hard winter. As my companion and I drove into Yunesit'in, one of the six Tsilhqot'in communities, last evening just before sunset, it was clear that renewal was underway. This is renewal not just for the land, but for the people of this place, too. We were to stay in the new guest house and to get there we drove by the new architecture rising from the land, stark in its simplicity and beautiful in its intensity. Here was the new way to be on and part of the land – it felt like waking from a dream of dislocation and oppression brought here by the strangers from afar two hundred years ago.

It seems to me that this community, and others, too, are leaping from the nineteenth century into the future, preparing to bypass much of the mess of capitalism and exploitation that damns so many of our endeavours. These stark and beautiful buildings – school, health and government office, guest house – will be powered by the solar array standing outside here, and

this village is redolent of community and shared enterprise. Community forest management that includes cultural burning, a small portable mill that cut the lumber for these buildings, communal greenhouses – this is the achievement of people working together under enlightened leadership.

Perhaps best of all, two young women on horseback greeted us as we drove into the community – this is a land of horses still. My companion laughed at the sight and said, “now you are home.” And there was truth in that – I have loved Chilcotin since I first came here with my father seventy years ago. I have come to know the fierce warrior people, the Tsilhqot'in, whose land this is – as much theirs as any land can belong to our species. For they have protected it, fought for it, and are today regaining it. It was my privilege, for a few years, to fight beside them.

Next month, I plan to be here with my son and his two sons. I will explain to them that they are the fifth generation of our immediate family to come here. I will try to pass on to them the meaning this has for me. I will explain to the young ones that we are connected to the land through blood, through ancestry from the St'at'imc people to the south of here. We shall for a little while be “out on the land,” learning about our four-legged neighbours through their tracks, their scat, their mark tree “post offices,” and I shall attempt to pass on to my grandsons a few of the age-old ways of how to be comfortable in such an environment, as part of it. For we are not mere visitors here. The land is us, and we are the land.

David Williams was born in 1938 and is a multi-generation British Columbian. His roots extend deep into Indigenous and settler history of this land.



Oikos: Autumn

Staying connected to the surrounding, sustaining world

by Michael Maser

Autumn arrives hesitatingly, languishing in summer's idyllic shadow but also teasing us with the anticipation of seasonal change. Nights are cooler and longer, the air redolent of decaying leaves. Juddering clouds skitter above, increasingly restless and threatening. A sunny day calls us to relax and we oblige – but not too comfortably, for autumn is a fickle season with its own agenda. In mere moments a pellucid sky transforms to gray and pummelling rains remind us of the changes we ignore at our own risk.

The natural world around us heeds autumn's onset, as minute changes in the Earth's rotation prime chemical and biological changes throughout the biotic world. Spiders spin glorious, intricate webs; leaves flourish in rainbow-regalia before withering and dropping as trees close up shop for oncoming winter; migrating salmon swim with urgency to help provide life for future generations; woolly bear caterpillars move across our path hoping to preserve themselves.

All of these activities and many more are happening around us 24/7 if we are inclined to perceive them with our eyes and ears and other senses. But therein lies a dilemma, for we have also cast autumn as a time for “back-to-school” and “back-to-work” busyness that distracts us from the natural world. This accompanies our migration to interior existence which practically seals us off from the world beyond our walls, doors, and storm windows.

Such interior existence confers an ignorance that exposes us to much greater threat. The antidote is to stay connected to the surrounding world that sustains us on all levels. Craig Holdrege, an author and educator with the Nature Institute (natureinstitute.org), suggests taking a minimum of five minutes each day to go outside, no matter the conditions, and intentionally “invite the world in” through your perceiving senses. In this experi-

ence – akin to the philosopher's “sense of wonder” – you may notice something you hadn't before: a gentle breeze massaging your cheek, a special light refracting off a puddle, or how the air smells in the park.

Holdrege urges us to “dwell” in such a moment, holding our attention to remain present with the experience. Such dwelling, he says, shifts our focus and attention from the abstract world of facts and severance from the natural world. In these moments, our senses connect us, intimately, to the “eventing” of the world in which we are actually and totally implicated. This kind of contemplation will bring a tingling freshness and vibrating vitality that not only benefits us neurochemically by helping us relax in the moment, but later, when we've returned inside, we can recollect this experience and reap further benefit.

Fostering re-connectivity with the natural world is vitally important right now. More separation, achieved through cling-wrapped interiority and protection, will not foster connectivity. Neither will obsessing that our salvation rests with hi-tech or big-data solutions that ultimately do little to foster much-needed connectivity.

This prescription is a joyful act of re-enchantment with the world we inhabit and that inhabits us. The spider's web, the trickling creek, the capricious butterfly, these are the furnishings of our home, our *Oikos*. And to help preserve its sustainability, and ours, we need to be fully present.

Michael Maser lives in Gibsons, where he may be found “nature-bathing” year-round.

Welcome to Oikos - a quarterly Watershed Sentinel almanac - written with the goal of helping people enjoy more direct engagement with nature, wherever you may call home.

Wild Times

A Joyful Summer

by Joe Foy

A lone Canada goose honked intermittently, adding rhythm to the morning bird chorus lead by a nearby red-winged blackbird. Across the little lake we were camped on, a black bear slowly meandered, grazing the shoreline meadows. A dark green mantle of old growth forest, streaked here and there with light green slide-alder patches, cloaked the mountainsides. It was a joyful start to a morning brimming with the promise of a week-long wilderness backpack expedition.

My backpacking buddy and I had earlier discovered a provincial map online, showing a proposed logging plan that aimed to slice a road up the Teapot Valley and chainsaw its old growth forests down to stumps. On that map we also found one reference that attached a name to the little lake we were camped on – Teapot Lake.

Even though we were only a short drive from the Lower Mainland, we'd been unable to glean much about what lay ahead. We knew that we were in the unceded territory of the Nlaka'pamux Nation and that the creek we intended to follow would eventually drain into the Nahatlatch River system, a major drainage, partially protected within the territory. We knew we would be walking through one of the last unroaded and unprotected watersheds in these parts, and entering high quality spotted owl habitat, but had no idea what it would all look like.

At first we wandered through groves of gnarled ancient yellow cedar and mountain hemlock, with the ever present calls of varied thrush sounding a bit like an off-key referee whistle eerily drifting in and out of earshot.



As we backpacked downstream we entered an emerald-green moss-covered landscape with big old Douglas fir and red cedar trees looming like ancient pillars. The only bummer was the bright red ribbons fluttering in the breeze hung from lower branches or tied to small trees and signifying planned cutblock boundaries and logging road locations.

We then stumbled into a series of smooth granite waterfalls and pools, with crystal clear water cascading down both forks of Teapot Creek to join in a spectacular symphony of water-worn stone and towering trees. It was the end of July and a hot day, so we both hopped in.

Sitting in the pools, taking it all in, I was enveloped by a feeling of pure joy and thankfulness for just simply being in such a powerful place. Feelings of anger and dread and worry over the logging plans washed away along with the muscle

aches accumulated over several days of backpacking.

What will be the future of the Teapot Valley I cannot see. The future looks as indiscernible as the valley did when we first started our backpack. But now that I have experienced the Teapot a little bit more, I remain more convinced than ever that the valley should not be roaded and logged – it should instead be passed on to future generations, preserved within a large Nlaka'pamux Nation Indigenous Protected Area that also encompasses the Stein, Nahatlatch, and surrounding watersheds.

I am thinking that the future could use a little more joy.

Joe Foy is the protected areas campaigner for the Wilderness Committee.

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