

# THE VILLAGE GREEN

Number thirty-three, June 8, 2021

**Do you want to know what local environmental ecological and climate events (on-line and in person) have been scheduled for Grey, Bruce and environs?**

**They're listed and described at Grey Bruce Climate Action's event listing:  
<https://greybruceclimateaction.ca/events>,  
where you can also add your own organization's upcoming events.**

## OWEN SOUND NATURAL BURIAL: CEMETERY PARIAH?

***Editor's Note:*** Bob Hope of Owen Sound has championed natural burial (ecologically the best option) for decades, and finally got the city to include a natural burial section in its Greenwood Cemetery. But Bob's letter below describes a problem that can occur when a town agrees to something without understanding it (despite repeated opportunities to do so). Note that Grey Highlands Council will be reviewing a natural burial proposal on June 16. Let's hope Grey Highlands pays more attention than Owen Sound did:

"You would never think that the ugliest packed soil to be buried in in Greenwood Cemetery, would be in a designated Natural Burial area. I would be hard pressed to find a more trampled and barren soil in Greenwood, except for the parking lot.

You may reasonably ask, '*Why would an area, selected to honour nature, be barren of nature?*' One reason is that the city staff picked this clay sand barren location themselves. I can't comment on why they would think this space reflects the best of Grey County nature. If anyone asked those active in Natural Burial our own choice, we would have preferred a site near the compost pile, which is just wild grass land. We naturalists like nothing better than compost for healthy soil. I would have said, '*Don't put it there*', except they already buried someone there without presenting their planned location to anyone, including the person who died. *A fait accompli.*

Realizing the barrenness of the site, the city has agreed that they will make it natural, but only after there are '10 bodies in the ground', a rather harsh way of describing their job or their sensitivity to our interests. So how long will we have to wait for nine more people to not just sign up, but also die and be buried in the dead clay? To find an answer we can look at some of Greenwood's more recent new cemetery areas. The recent Jewish area has now been active for 15 years and they are yet to reach 10 burials. Of course, they weren't told, '*Someday this will be a Jewish area but only after you bury at least 10 of your members.*'

I wish I had a simple answer. The site they picked is not only barren but it is surrounded by tombstones on three sides. Their solution is to plant cedars around this area so no one can see it. Of course, a Natural area could be viewed as rather untidy when compared to the headstones and manicured grasses around it. It would be almost like being the only neighbor on the block who doesn't tend their lawn and leaves it unkempt. I can see the tombstone neighbor complaining about the 'untidiness' of their neighbors.

I had spent 12 years explaining the value of Natural Burial and encouraging the city to include an area for Owen Sound at our cemetery. Having succeeded, I can't imagine myself or anyone else agreeing to be buried there without it first becoming natural."

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## BLUE MOUNTAINS TREE TRUST PROTECTS OLD TREES, FINDS NURSERY HOME

Tree Trust TBM (Town of the Blue Mountains) is a charity established in 2021 to engage volunteers and professional arborists in extending the lives of large, significant trees in its community. They have protected two such trees so far, and a celebration to mark the protection of their third tree will be held once pandemic restrictions are lifted.

In early May, Tree Trust TBM planted four sugar maple saplings on a small vacant parcel of land located where the Georgian Trail crosses the 10<sup>th</sup> Line – the site of a magnificent 200-year-old sugar maple, one of the first two trees that received arborist’s care through the organization.

The vision is to plant more saplings on the site to establish a sugar maple grove – a broad canopy and an understory of compatible native shrubs and understory plants. The saplings will eventually take over the critical roles that trees play in maintaining ecosystems and sequestering carbon. Tobias Effinger, owner of Arboreal Tree Care in Thornbury, volunteered his time and expertise to make sure the saplings get off to a good start.

Work is also proceeding on the Tree Trust TBM’s native tree seedling nursery. The Town of the Blue Mountains has agreed to provide space for the nursery at Tomahawk Field in Thornbury, where soil preparation is the next step. Volunteers will collect seeds for this nursery this summer and fall.

Tree Trust TBM’s website is at <https://treetrust.ca/partner/townofthebluemountains/>. Tree Trust chapters are also active in Meaford, Centre Wellington, Stratford-Perth and Toronto Island.

## SIMARD AND RYAN: PROTECT B.C.’s MOTHER TREES

Issue #31 of **The Village Green** profiled the work of Canadian forest ecologist Suzanne Simard and her research that suggests trees in a forest are interconnected in a network of communications via fungal filaments that connect each tree to other trees in its vicinity. Simard’s work also describes “mother trees” – the large old trees in a forest that have produced many nearby offspring and support their own offspring more than the children of other trees.

More recently, Simard and Aboriginal knowledge researcher Teresa Sm’hayetsk Ryan of B.C.’s Tsm’syen Nation authored an article entitled *Opinion: Western Canada Must Stop Clearcutting Its “Mother” Trees* (published in *The Scientist*, on May 1). Says the article:

*“The biggest, oldest trees are connected to almost all of the other trees through their mycorrhizal linkages. Most importantly, these trees transmit carbon, nitrogen, and defense signals to new seedlings, facilitating the recovery of the forest after disturbances. These intertwined cycles of life and death are well known to the Aboriginal people of the Pacific Northwest. The ancient Aboriginal stewardship based on principles of reciprocity included practices such as prescribed spring burning, coppicing or pruning to induce desired stem traits, and allowing the biggest salmon to spawn to enhance populations, and resulted in magnificently forested landscapes, often mistaken for pristine and untouched by early colonial immigrants. Thousands of years of rich Aboriginal stewardship produced a tapestry of heritage intertwined with biodiversity and abundance that far exceeded basic subsistence needs.*

*In the century and a half since the European colonization of western North America, many of these lush resources have disappeared. Only 8 percent of British Columbia’s iconic, large-treed old-growth forests remain... Salmon stocks have likewise been decimated to a few percentages of their pre-colonization levels...*

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*Aboriginal people have long known that roots and fungi provide strong connections between the trees in the forest, much like relationships bind people together in societies. These trees are part of interconnecting complex adaptive systems that span centuries. Remarkably, the trees recognize and favor their own offspring, sending them more resources through their roots than they send to other nearby tree seedlings. As they near the end of their millennium lifespan, the ancients begin to transmit remaining carbon energy and wisdom to their offspring.*

*The last of these ancient mother trees are being felled with impunity... This exploitation needs to stop. Destruction of mother trees in old-growth forests has severe implications for many life forms and for many generations to come."*

Simard's and Ryan's article is at

[https://www.the-scientist.com/reading-frames/opinion-western-canada-must-stop-clearcutting-its-mother-trees-68663?utm\\_campaign=TS\\_DAILY\\_NEWSLETTER\\_2021&utm\\_source=hs\\_email&utm\\_medium=email&utm\\_content=129659609&\\_hsenc=p2ANqtz--DqQZF1ZHD6q\\_dOwCcynPdHSbgixDtGwrUzW0GxDYvpmeFhh\\_4xHhsylUMB7vZRX80lcT0deP\\_TUyHj-JrxOYjiKb-Kg](https://www.the-scientist.com/reading-frames/opinion-western-canada-must-stop-clearcutting-its-mother-trees-68663?utm_campaign=TS_DAILY_NEWSLETTER_2021&utm_source=hs_email&utm_medium=email&utm_content=129659609&_hsenc=p2ANqtz--DqQZF1ZHD6q_dOwCcynPdHSbgixDtGwrUzW0GxDYvpmeFhh_4xHhsylUMB7vZRX80lcT0deP_TUyHj-JrxOYjiKb-Kg)

## PICKERING LOVES POLLINATORS (They bees big on bugs)

On May 27 The City of Pickering announced it has partnered with Pickering Butterflyway Rangers of the David Suzuki Foundation to create a Butterflyway project, focused on creating habitat for pollinators such as bees, butterflies and birds. Pickering and Ajax residents got involved in the initiative earlier this year by becoming "Butterflyway Rangers" and creating the Pickering-Ajax Butterflyway Group on Facebook. Their goal as Rangers is to help establish "highways of habitat" for the threatened pollinators in their community. This project aligns with the City's commitment and involvement with the tri-national Mayors' Monarch Pledge to help pollinators.

As part of the Butterflyway project, the City has provided the group with 250 Butterflyway signs for Pickeronians (*I invented this word: Editor*) to display on their lawns if they have planted pollinator-friendly gardens at their homes. Said Pickering Mayor Dave Ryan:

*"Our pollinators play an intrinsic role in the health of our environment and community. It is important that we continue to increase action and awareness to better protect these critically important species in Pickering."*

Information on the David Suzuki Foundation's Butterflyway Project is at <https://david Suzuki.org/take-action/act-locally/butterflyway/>.

The Mayors' Monarch Pledge in which Pickering is also involved was started the U.S. by the National Wildlife Federation, then spread to Canada and Mexico. Twenty years ago, more than one billion monarch butterflies migrated from eastern Canada and the U.S. to spend their winters in alpine forests in central Mexico. By 2014, there were only 35 million monarchs left – a drop of more than 90% – and their future remains in peril. While there has been a slight rebound in their numbers, they still add up to only 20% of their former numbers. Through the Mayors' Monarch Pledge, communities commit to create monarch habitat and engage their residents in educational and conservation projects. Ontario municipalities involved in this initiative have included Toronto, Vaughan, Whitby, Pickering, Ajax, Clarington, King City, Markham, York Region, Richmond Hill, Zorra Township, Carling Township, Whitestone and Middlesex Centre.

Information on the Mayors' Monarch Pledge is at <https://www.nwf.org/MayorsMonarchPledge/About>.

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## ONTARIO ENHANCES BLUE BOX PROGRAM

On June 3 the Ontario government announced it is expanding blue box services to more communities, standardizing the list of materials that can be recycled across the province and making producers of products and packaging responsible for the cost and operation of the program. Said Jeff Yurek, Minister of the Environment, Conservation and Parks:

*“Producers and municipalities have been advocating for an enhanced, producer-led Blue Box program for over a decade and I’m proud that our government has finalized these improvements. Our goal is to ensure our program remains convenient, affordable and right for communities. That’s why we are creating a stronger and more effective blue box service that will have some of the highest waste diversion targets in North America to promote greater innovations in recycling technologies and increased use of recycled materials.”*

The enhanced Blue Box program will:

- Expand collection to all communities outside the Far North by 2026
- Standardize what can be recycled across Ontario
- Accept common single-use and packaging-like products such as paper and plastic cups, foils, trays, bags and boxes sold for home use
- Collect single-use items that are distributed or sold to consume food and beverage products, like stir sticks, straws, cutlery and plates
- Expand services to more facilities such as apartment buildings, municipally run or non-profit long-term care homes and retirement homes, and schools
- Expand collection to more parks, playgrounds and transit stations, more than tripling the number of public space recycling bins funded under the current program.

The changes to the program will also move the costs of the Blue Box program away from municipal taxpayers by making producers of products and packaging fully responsible for managing the life-cycle of their products, resulting in an estimated savings of c\$156 million annually for municipalities.

The Province says that combining 253 local programs into a single provincial collection system managed by producers will improve recycling operations, encouraging producers to find efficiencies to make recycling simpler and easier, while also driving innovation by rewarding producers who make their products easier to recycle.

Some of the first municipalities scheduled to adopt the new producer model include Kenora, London, Toronto and Hawkesbury.

The transition to the enhanced Blue Box program will be staggered from 2023 to 2025 to ensure a smooth transition for municipalities and producers, so there is no interruption to service for residents.

Communities already participating in curbside blue box collection will continue to receive the service as they transition to the new producer-run model, including those with populations under 5,000.

Ontario’s overall waste diversion rate has stalled, and about 70% of the province’s waste materials continue to end up in landfills.

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## FEDS LAUNCH CANADA GREENER HOMES GRANT PROGRAM

The Canadian government has announced a Canada Greener Homes Grant program that will provide up to \$5,600 in federal support per household for a basket of home improvements meant to save energy:

- Insulation (up to \$5,000)
- Air-sealing to improve air-tightness (up to \$1,000)
- Replacing windows and doors (up to \$5,000)
- Installing heat pumps and hot water equipment (up to \$5,000)
- Installing solar panels (up to \$5,000)
- Resiliency measures like batteries, foundation waterproofing and roofing membranes (up to \$2,625)
- Installing a smart thermostat (up to \$50 but must be combined with another retrofit).

Materials and equipment must be bought in Canada or from a Canadian online distributor. The program also provides EnerGuide evaluations (worth up to \$600) and expert advice to homeowners so they can plan their retrofits, and recruitment and training of EnerGuide energy advisors to meet the increased demand.

These are the application rules:

- Applicants must prove they live in the house. Landlords living off-site are not eligible.
- The home must be a single or semi-detached house, a row house, a townhome, an all-season cottage or some types of mobile home or houseboat.
- Most condos aren't eligible, but condo owners in low-rise buildings may qualify.
- First Nation band councils, land claims organizations and Indigenous housing management bodies can apply for the grant.
- New homes are not eligible.

Canadians can apply through the program's web site at <https://www.nrcan.gc.ca/energy-efficiency/homes/canada-greener-homes-grant/23441>. Says the web site:

*"Buildings, including our homes, account for 18% of Canada's greenhouse gas emissions. We want to help Canadians make where they live more energy-efficient. This means homes will be more comfortable and more affordable to maintain while also supporting our environmental objectives. The Canada Greener Homes Grant will help homeowners make their homes more energy-efficient, create new jobs across Canada for energy advisors, grow our domestic green supply chains, and fight climate change."*

But there are strings attached. Homeowners don't get the money upfront. The grant arrives after they've spent the money. And to qualify, a homeowner must first undergo an energy audit at their own expense, hire contractors, pay for materials and pass a follow-up energy audit, all paid for out of pocket.

These conditions may well discourage low income homeowners from applying and may again turn out to be yet another discriminatory program. And because high demand for the program is driving up wait times for energy advisers and contractors, applicants will likely have a longer wait than they'd like for home improvements to begin.



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## **ESCARPMENT BIOSPHERE CONSERVANCY: A GOOD GREEN FRIEND**

The civic coalition that hopes to be given three months by the Municipality of Grey Highlands to develop an environmentally sound proposal for shaping the future of municipal and adjacent Beaver Valley lands includes The Escarpment Biosphere Conservancy (EBC). This organization deserves better public acclaim for its competence and success in transitioning private land into public good all along the Niagara Escarpment.

The Escarpment Biosphere Conservancy is the largest Ontario-focused land conservation agency dedicated to preserving natural systems. Its areas contain 63 of Ontario's native species at risk or of concern. Through a combination of conservation agreements and nature reserves, EBC provides habitat protection for aquatic and land animals and plants, as well as hiking and adventure trails. It annually delivers over c\$28 million worth of ecosystem services including flood prevention for surrounding areas, better air and water, support for biodiversity and carbon sequestration to curb global heating. It takes a strategic focus and it seems adept at pulling the donation levers, large and small, to preserve high priority Escarpment ecosystems.

Its most recent success well illustrates its work. On May 4 it announced that it has conserved Heaven's Gate, 2,100 acres of pristine land and water along Lake Huron's north shore between the Provincial Parks of Killarney and La Cloche – home to at least 12 at-risk species, three lakes, two mountains and part of a third. In a mere 90 days, EBC raised c\$1.766 million to do it, fulfilling Heaven's Gate's late former owner's wish that the property remain conserved for generations to come. Together with EBC's recent acquisition of Willisville Mountain, the Heaven's Gate purchase means there is now a 500-square-kilometre conservation zone in this area, encompassing quartzite mountains, pristine lakes, wetlands and a robust forest ecosystem including stands of ancient hemlock and yellow birch. Through this purchase, the entire east-west Heaven's Gate Hiking Trail is now protected.

EBC's website is at <https://escarpment.ca/>. Not a bad partner and ally in further protecting the Beaver Valley.

## **CHEVRON SHAREHOLDERS TO MANAGEMENT: "CUT EMISSIONS"**

On May 19 shareholders in the oil company Chevron Corporation endorsed a proposal to cut "Scope 3" emissions generated by the use of the company's products, a move that underscores growing investor pressure on energy companies to reduce their carbon footprint. The vote was 61% in favor, despite management objections. Scope 3 emissions are the result of activities from assets not owned or controlled by the company, but that the organization indirectly impacts in its value chain.

The proposal doesn't require Chevron to set a target or timeline, but support for it is a sign of growing investor frustration with companies that are stalling in addressing climate change.

## **POTSDAM INSTITUTE: MEETING 1.5°C GLOBAL WARNING LIMIT WILL BE TOUGH**

Germany's Potsdam Institute for Climate Impact Research has examined 400 climate scenarios in terms of whether they will allow the world to meet the target of limiting global warming to no more than 1.5°C, the target espoused by the Intergovernmental Panel on Climate Change. The findings are sobering: only 50 scenarios avoid significantly overshooting 1.5°C. Of those, only 20 make realistic assumptions on mitigation options.

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The scenarios looked at the degree to which each scenario made realistic assumptions about whether the world can sufficiently pull the five “mitigation levers” necessary to limit warming:

1. reducing energy demand
2. decarbonization of energy use and production
3. removing carbon dioxide from the atmosphere
4. adopting land use practices that make the land a net carbon sink (changing agricultural practices, re-wetting peatlands and afforestation for example)
5. cutting emissions of the powerful greenhouse gas methane from animal production and from leaks in oil and gas extraction.

Of the 20 scenarios that make realistic assumptions, each contains at least one lever that must be pulled at the "challenging" level rather than merely at the "reasonable" level.

The bottom line of the study – there is a chance, however slim, that the world can limit global warming to no more than 1.5°C, but to do so, the world must make a sustained major successful effort to pull all five mitigation levers. None of them can be neglected.

A media release on the Potsdam Institute study is at <https://www.pik-potsdam.de/en/news/latest-news/few-realistic-scenarios-left-to-limit-global-warming-to-1-5degc>.

## CANADIAN STUDY: CLIMATE CHANGE MAKES US SICK

As if the gloom broom hadn't already swept up enough nightmares recently, the Canadian Institute for Climate Choices has issued a report, *The Health Costs of Climate Change: How Canada can adapt, prepare, and save lives*, that outlines the challenges we face. Says the report's executive summary:

*“Climate change is not just an environmental and economic threat, it is also a threat to public health. Climate change will make existing health inequities worse and increase costs to Canada’s health system and economy – unless governments work together to invest in preparation and prevention.”*

Among its key findings:

- As temperatures rise, concentrations of ground-level ozone (a major component of smog) will increase. With the temperatures projected for the end of the century, average summer ozone concentrations could increase by 22%. As ground-level ozone increases, so do deaths and healthcare costs.
- Warming temperatures from climate change will create ideal conditions for the spread of the ticks that carry Lyme disease.
- Heat waves will become more frequent and severe. Even under a low-emissions scenario, heat-related hospitalization rates will increase by 21% by 2050 and double by 2100. Costs of death and reduced quality of life from heat-related deaths will range from c\$3.0 billion to c\$3.9 billion per year.
- Impacts on mental health could be among the costliest climate-related health impacts because of the psychological effects of weather-related disasters and of accelerated permanent changes to landscapes and ecosystems.
- Health systems in Canada face physical risks to health infrastructure. Weather-related disasters from climate change threaten the country's hospitals, clinics and emergency response facilities, but less than 20% of health authorities have assessed the vulnerability of their facilities to climate change risks. As well, about 8% of our health centres are in flood risk zones.

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The report proposes four broad policy-wonky ways to deal with these threats:

1. All levels of government should implement health adaptation policies to address the symptoms and root causes of climate-related health threats.
2. Canada's emerging national adaptation strategy should map all key adaptation policy levers across government departments and levels of government against top climate health impact areas (English translation: all our governments should have policies for dealing with all climate-related health problems).
3. Central agencies in federal, provincial, and territorial governments should explicitly incorporate health resilience into climate lenses to inform cost-benefit analyses and policy decisions. (English translation: look at health resilience when you do climate planning).
4. Governments should invest in research on emerging, unknown and local climate change health impacts.

The report is at <https://climatechoices.ca/reports/the-health-costs-of-climate-change/>.

## G7 ENVIRONMENT MINISTERS VOW TO ADOPT STIFFER CLIMATE TARGETS

At meetings on May 20 and 21, G7 environment ministers (Canada, Japan, U.S., U.K., France, Italy and Germany) agreed to deliver climate targets in line with limiting the rise in global temperatures to 1.5C – far more ambitious than the previous 2C maximum. The G7 ministers were joined by delegates from India, Australia, South Africa and South Korea – nations that had guest status at the meeting.

Ministers also agreed to stop direct funding of coal-fired power stations in poorer nations by the end of 2021. They also made a commitment to safeguard 30% of land for nature by 2030, to boost wildlife and help soak up carbon emissions. The G7 ministers decided too that more cash is needed to help fast-growing economies such as India and Indonesia to adopt clean technologies. Said the ministers:

*“We acknowledge with grave concern that the unprecedented and interdependent crises of climate change and biodiversity loss pose an existential threat to nature, people, prosperity and security. We recognise that some of the key drivers of global biodiversity loss and climate change are the same as those that increase the risk of zoonoses, which can lead to pandemics... We recognise that climate change and the health of the natural environment are intrinsically linked.”*

The G7 ministers' statement of joint commitments is at <https://www.g7uk.org/g7-climate-and-environment-ministers-communiqué/>.

## CHINA CREATES CLIMATE LEADERS' GROUP

In the pantheon of world climate heroes, China's Vice Premier Han Zheng doesn't have a place yet – but he's worth watching. Han has been designated the head of the “Leaders' Group for The Works Of Carbon Peaking And Carbon Neutrality” a body whose first meeting was recently announced by China's state news organ CCTV. The meeting at which the creation of the group was announced included the heads of almost all key ministries, including the minister of finance, the minister of science and technology, the minister of ecology and environment and the governor of China's central bank.



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The creation of this group, and the designation of Han as its head, suggests that China is marshalling leadership at its highest levels to redefine China's approach to curbing global heating – a welcome sign given China's contribution to the causes of human-induced climate change.

Han's position and background suggest he will have a major influence on Chinese climate policy. He is a member of the Standing Committee of the Politburo of the Communist Party of China, which is the seven-member group that makes the country's most significant decisions. Formerly the party chief and mayor of Shanghai, Han has been overseeing China's climate and environment-related initiatives in recent years. It seems that it was largely Han's influence that led China to sign a *U.S.-China Joint Statement Addressing the Climate Crisis* on April 16. The statement said, in part:

*"The United States and China are committed to cooperating with each other and with other countries to tackle the climate crisis, which must be addressed with the seriousness and urgency that it demands. This includes both enhancing their respective actions and cooperating in multilateral processes, including the United Nations Framework Convention on Climate Change and the Paris Agreement... Both countries intend to develop by COP 26 in Glasgow their respective long-term strategies aimed at net zero GHG emissions/carbon neutrality... Both countries intend to take appropriate actions to maximize international investment and finance in support of the transition from carbon-intensive fossil fuel based energy to green, low-carbon and renewable energy in developing countries."*

## AMNESTY INTERNATIONAL: JUSTICE FOR CLIMATE MARTYRS

Amnesty International recently announced progress in legal proceedings to achieve justice after the killings of two climate activists. The progress took place after thousands of Amnesty International supporters took part in campaigns for justice for Berta Cáceres and Julián Carrillo.

### **Berta Cáceres**

On April 6, a precedent-setting trial began in Honduras of a company executive accused of being an "intellectual actor" in the March 2016 killing of river defender Berta Cáceres after years of threats against her life. The contract killers who carried out the assassination had been convicted, but not those who gave the orders and paid for the crime. Berta Cáceres was an environmental activist, indigenous leader and co-founder and coordinator of the Council of Popular and Indigenous Organizations of Honduras. She won the Goldman Environmental Prize in 2015 for a grassroots campaign that pressured the world's largest dam builder to pull out of the Agua Zarca Dam on the Gualcarque River in Honduras.

### **Julian Carrillo**

On March 5, the second of two men accused of Julián Carrillo's murder was found guilty and sentenced to jail in Mexico. Indigenous environmental, land and territory defender Julián Carrillo was shot to death on October 24 2018, after receiving death threats for his work denouncing illegal logging and mining as well as the violence of armed criminal groups in his territory, the homeland of his Rarámuri Indigenous community in the Tarahumara mountains in Chihuahua, northern Mexico. His death was part of a series of killings: five members of his family were murdered between 2016 and the time of his own death. The Rarámuri lost their land titles in the 1990s and since then, outsiders have illegally logged their forests and grown crops on their land. The murder of Julián Carrillo occurred a few weeks after members of the community denounced to government authorities the existence of a mining concession to exploit natural resources in the territory.

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## MORE HEAT – MORE DEATHS

According to a study entitled *The burden of heat-related mortality attributable to recent human-induced climate change* published recently in the journal *Climate Change*, 37% of heat-related deaths globally in the past three decades were attributable to climate change, demonstrating that global heating is already having severe impacts. The percentage of heat deaths linked to climate change varied widely across the world. The proportion was much higher in Central and South American countries, Kuwait, Iran and the Philippines. The percentages were much lower in the US, Canada and much of Europe.

The study team took temperature and mortality data from 43 countries between 1991 and 2018, and modelled a counterfactual world without the 1.1°C of warming the world has seen to date. The difference was used to estimate the number of climate-linked heat deaths.

Chloe Brimicombe of the University of Reading, U.K. says the estimate of 9,702 deaths a year from heat caused by climate change is an underestimate because the research only looked at the four warmest months in each country. *“Heat-related deaths have and do occur outside these months. This is especially true in the tropics where heat extremes can occur all year”* she says. The real number may be higher too because the study couldn't get data for large parts of the world. India and most of Africa were omitted because of lack of data.

Friederike Otto of Oxford University, who has studied the lack of data on heatwaves in Africa and their links to climate change, says it matters that much of the world map in the study is empty. Says Otto, *“In most countries in the world, heatwaves are not recorded at all. This paper shows we do not have enough data and, importantly, awareness, to quantify the impacts of climate change on lives.”*

## U.N. LAUNCHES DECADE OF ECOSYSTEM RESTORATION

June 4 and 5 witnessed the Virtual Launch Gala inaugurating the U.N. Decade on Ecosystem Restoration. The events featured messages from world leaders, activists and celebrities. Says the U.N. website on the Decade (<https://www.decadeonrestoration.org/>):

*“There has never been a more urgent need to revive damaged ecosystems than now. Ecosystems support all life on Earth. The healthier our ecosystems are, the healthier the planet – and its people. The U.N. Decade on Ecosystem Restoration aims to prevent, halt and reverse the degradation of ecosystems on every continent and in every ocean. It can help to end poverty, combat climate change and prevent a mass extinction. It will only succeed if everyone plays a part.*

*The U.N. Decade on Ecosystem Restoration is a rallying call for the protection and revival of ecosystems all around the world, for the benefit of people and nature. It aims to halt the degradation of ecosystems, and restore them to achieve global goals. Only with healthy ecosystems can we enhance people's livelihoods, counteract climate change, and stop the collapse of biodiversity. The U.N. Decade runs from 2021 through 2030, which is also the deadline for the Sustainable Development Goals and the timeline scientists have identified as the last chance to prevent catastrophic climate change.*

*The United Nations General Assembly has proclaimed the U.N. Decade following a proposal for action by over 70 countries from all latitudes.”*

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The U.N. Decade comprises ten strategies:

1. **Empower a global movement:** No single entity can steer this endeavor. The U.N. Decade is therefore designed to connect and empower the actions of the many. Groups and individuals can become informed about restoration opportunities in their area. They can join an initiative already underway or start their own.
2. **Finance restoration on the ground:** Organizations on the ground are often underfunded. Restoration's benefits far outweigh the costs, but initial investments in the billions are needed. Governments, international lenders, development agencies and businesses all must up their support, and individuals can donate time and expertise.
3. **Set the right incentives.** Leading on restoration is often not rewarded. Caring for nature can mean foregoing some of the financial gains of less sustainable practices. Agricultural and fishing subsidies that often finance harmful practices could be used to support restoration instead. In the long-term, healthier ecosystems produce bigger harvests, more secure incomes and a healthier environment.
4. **Celebrate leadership.** The past years saw great momentum around restoration. Campaigns to plant trillions of trees have captured imaginations and communities have come together for mass planting festivals. Under the Bonn Challenge, 60 countries committed to restore 350 million hectares of forest landscape. Indigenous peoples have defended their ecosystems for generations. The U.N. Decade will celebrate leaders and encourage others to step up.
5. **Shift behaviors.** Forces driving ecosystem destruction often reflect global trends. Deforestation, depletion of fish stocks and agricultural soil degradation are all caused by global consumption patterns. The Decade and its partners will encourage restoration-friendly consumption, from shifting diets to promoting restoration-based products.
6. **Invest in research.** Practices that work in one ecosystem may harm another. As the climate changes, uncertainties arise. Returning to a former state may not be desirable as hotter temperatures or shifting rainfall call for more resilient plants and crops. Scientific understanding of how to restore and adapt ecosystems is still developing. Investments are needed to identify the best practices to restore our planet – one plot at a time.
7. **Build capacity.** Thousands of restoration initiatives are underway. The Decade will be fueled by their vision, expertise and dedication, but these practitioners often face barriers keeping them from taking their projects to scale. Critical sectors such as finance need more data and insights to make informed decisions. The Decade will build the capacity of marginalized groups such as indigenous peoples, women and youth – those we lose most from ecosystem destruction – to take a role in restoration.
8. **Celebrate a culture of restoration.** The power to revive the environment does not lie with governments, experts and practitioners alone. Shifting from plundering the planet to healing it is a cultural challenge, so the U.N. Decade's strategy calls on artists, storytellers, producers, musicians and connectors to join the restoration movement.
9. **Build up the next generation.** Youth and future generations are most affected by the destruction of ecosystems. They will also benefit the most from the creation of sustainable jobs in a restoration economy. The U.N. Decade's strategy makes a link between the wellbeing of youth and the goals of restoration. Education for restoration will make today's children ecosystem ambassadors, provide skills for sustainable jobs and ensure that the Decade's achievements outlive its timeframe.
10. **Listen and learn.** Restoration practitioners are asked to, take a survey to help the U.N. learn more about practitioners and their needs.

# THE VILLAGE GREEN

Number thirty-three, June 8, 2021

## UNESCO: WORLD MUST PROTECT BLUE CARBON SINKS

A recent report from UNESCO (the United Nations Educational, Scientific and Cultural Organization) highlights the importance of the ocean's blue carbon sinks, the danger that these areas will become emitters of CO<sub>2</sub> if not preserved, and the importance of the carbon sinks that lie within UNESCO World Heritage sites. The report also says that carbon markets are one way to raise funds to preserve marine carbon sinks. The report, *Blue Carbon and UNESCO Marine World Heritage*, can be accessed at <https://whc.unesco.org/en/blue-carbon-report/>.

"Blue carbon" is organic carbon – mainly from decaying plant leaves, wood, roots and animals – that is captured and stored by ocean and coastal ecosystems. Seagrass meadows, tidal marshes and mangroves – "blue carbon" ecosystems – are among the world's most intensive carbon sinks. By sequestering and storing carbon from the atmosphere and ocean, blue carbon ecosystems mitigate climate change. But conversion and degradation of these ecosystems can also release billions of tonnes of CO<sub>2</sub> and other greenhouse gases into the ocean and atmosphere, contributing to global heating.

UNESCO's marine World Heritage sites comprise 50 unique ocean places across 37 nations. This report is a first assessment of blue carbon assets across these sites, revealing their outsized role as custodians of blue carbon resources, including the largest areas of seagrass and mangroves in the ocean.

Despite covering less than 1% of the globe's ocean area, marine World Heritage sites and their surrounding areas comprise at least 21% of the global area of blue carbon ecosystems and 15% of global blue carbon assets. These carbon stores are equivalent to about 10% of global greenhouse gas emissions in 2018.

Preserving and restoring these World Heritage carbon sinks costs money, and the report suggests that carbon markets are a way to raise some of the funds. Companies or nations wishing to meet their carbon reduction targets can invest in these carbon sinks, thereby giving the investors ownership of the carbon savings that result from their investment. Says the report:

*"Conservation may be funded, at least in part, by emerging opportunities in blue carbon markets. Accessing these opportunities requires demonstrating that any carbon benefits derived from conservation and restoration are directly related to these actions, and that in their absence the habitat would have been degraded, leading to carbon emissions."*

But carbon markets have become savvy in terms of the reliability of investments. Early in the history of carbon markets, some investment opportunities turned out to be scams or shams – tree planting schemes, for instance, in which the trees were never planted or died from neglect or were cut down for fuel. The UNESCO report says that carbon investment in its marine Heritage sites would be a safer bet:

*"A return on investment for marine World Heritage sites is high. And the investment is relatively lower-risk. Funding from carbon projects requires that carbon stocks are permanent, often for 100 years. Because the World Heritage designation includes a commitment to conserve in perpetuity, it provides greater confidence in the permanence of carbon stocks. World Heritage designation also enjoys a strong commitment of individual nations and the international community as a whole to safeguard these unique places for future generations."*

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## ISLAND NATIONS: DIRTY SHIPPING SHOULD PAY

The Marshall Islands and the Solomon Islands have made a landmark proposal to the International Maritime Organization (IMO) to charge shipping companies us\$100 for every tonne of CO2 equivalent their vessels emit. If accepted, this rule would take effect in 2025. The two countries making the proposal are appropriate activists for this change because they are Pacific island nations threatened by land loss due to rising sea levels caused by global heating. The joint proposal calls for the tax to be applied to all ships without exceptions, thereby raising us\$91.9 billion per year based on 2018 emissions levels. The money could be used for two purposes, say the sponsors:

1. Up to 51% of the revenues would go toward climate change mitigation and adaption efforts.
2. Up to 33% would go towards research and implementation of decarbonization in the shipping industry.

The proposed \$100 levy is higher than the European Union's existing carbon price, which doesn't include shipping, and stands today at about us\$47.90 per tonne of CO2. The proposers recognize that a us\$250-\$300 levy per CO2 equivalent by 2030 would be needed for a transformational change to happen, but they see benefits from an initially low price that would be gradually increased. One of those benefits would be to persuade the International Maritime Organization to buy in, or be pressured into buying in to the idea: the IMO is notoriously dominated by the shipping industry.

Cargo ships are major sources of air and water pollution, and their fuel oil is largely responsible. Pitch black and thick, "bunker" fuel is made from the dregs of the refining process and has a very high sulfur content. When burned it produces noxious gases and fine particles that harm human health and the environment, especially along major shipping lanes.

## OUR READERS KNOW A THINK OR TWO

### 2. Hydrogen – Electricity Link

Alan Cooper, a dear reader from Vancouver, read the last issue's description of a pilot project to produce fuel from carbon captured from the atmosphere. He had this to say about the energy implications of such fuels:

**"The issue includes a report about the efforts at Squamish in BC to use electricity to produce fuel. In this instance it is by CO2 capture and reformation to produce a traditional hydrocarbon fuel (with the same net zero overall greenhouse gas effect as production of pure hydrogen, but perhaps quicker adoptability into existing engines and systems). If this becomes economical – as eventually it must if we are to stop burning mined fuels – then it will place a huge demand on our electricity generation capacity, making full use of anything we can generate from (dare I say?) Site C, as well as any other non-greenhouse gas sources such as wind, solar, and (dare I say?) nuclear."**

**Editor's note:** Site C dam, mentioned by our reader, is a hydroelectric dam under construction on the Peace River in northeastern B.C. If completed in 2025 it will become B.C.'s fourth largest producer of hydroelectricity. The construction of this dam is highly controversial because of its adverse environmental impact.



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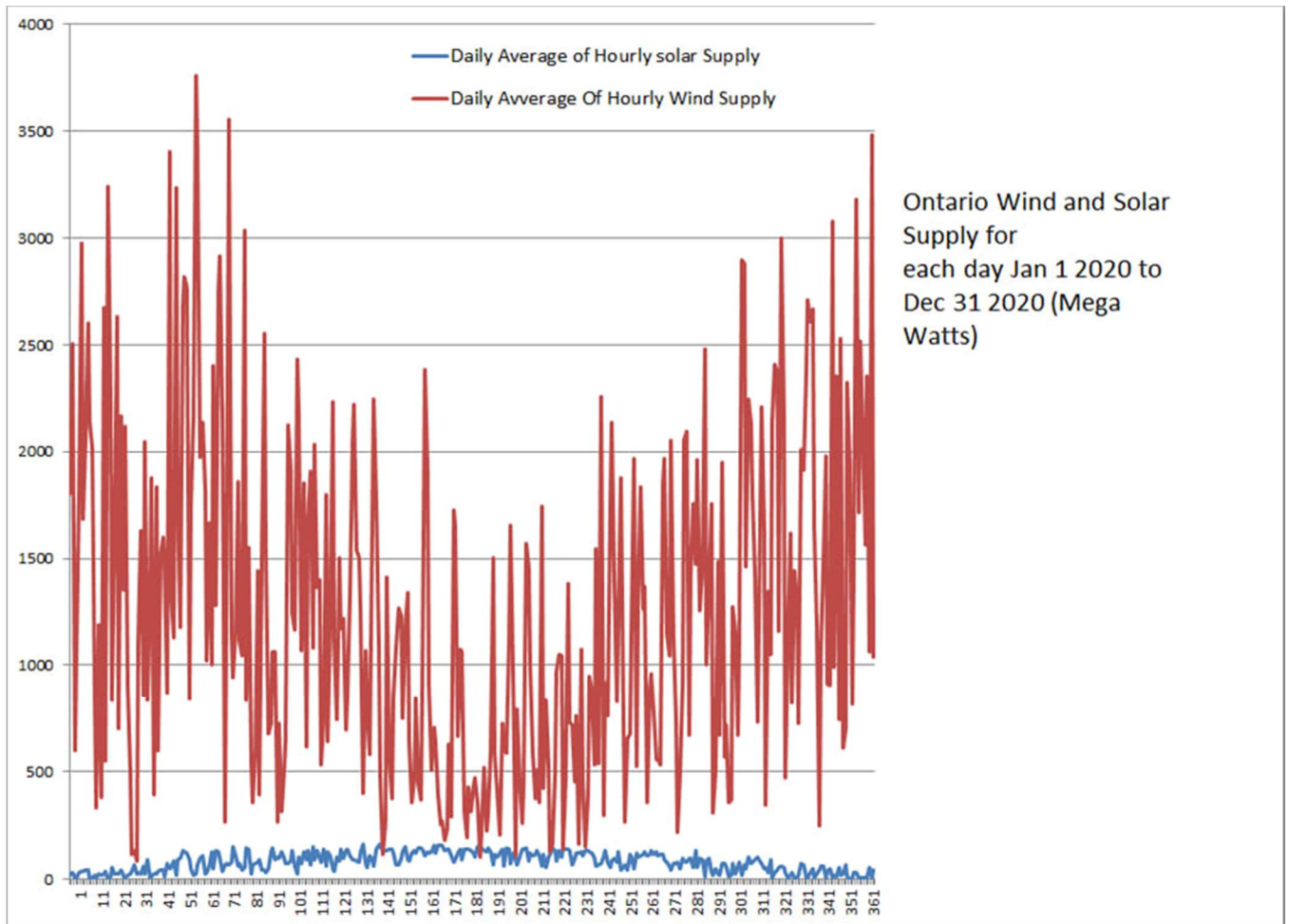
## 2. Wind and Sun: The Power Ontario Gets from Each

**Village Green** reader and master reasoner David Lang has once again shared with us some interesting energy calculations that show how far we need to go if we want wind and solar energy to become major chunks of our energy supply. Says Lang:

**“Recently I received electricity supply data by hour and type of generation for Ontario from the Independent Electricity System Operator (IESO). Below is a graph of wind and solar supply averaged by day for 2020.**

**This chart really puts solar generation in Ontario into perspective versus wind. I was surprised that solar supply was so small.**

**If you look at the summer period on the graph you might estimate that the wind and solar supply would total about 700 Mega Watts. The summer demand peak in Ontario is about 24 Giga Watts so wind and solar together might supply about 3% of the summer peak demand.”**



# THE VILLAGE GREEN

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## IN MY HUMBLE OPINION: WAYFARING STRANGERS

Three events are taking place over the next few months that should remind us that much of the world's population will end up mired in misery because of climate change, and that many of them will become climate refugees.

The first of these events is the hurricane and cyclone season. The Atlantic hurricane season starts in early June and runs until November. Most reputable storm forecasting centres predict a higher than average number of tropical storms and hurricanes this season. Tragically, severe hurricanes may make landfall in Central American and Caribbean communities that have not yet recovered, in terms of infrastructure and economy, from previous years' storms. They are like wounds not given a chance to heal – wounds made worse by the pandemic.

Cyclone season in the Indian and Pacific Oceans usually runs from April to December. Already this year, Cyclone Tauktae, one of the strongest tropical cyclones to ever hit the west coast of India, killed 174 people and did us\$2.1 billion in damage when it made landfall in mid-May.

Another annual tragic event is now taking place in the Mediterranean and in the Atlantic off the coast of northwest Africa – the dangerous summer migration of refugees to Europe from North and sub-Saharan Africa and the Middle East, often on crowded boats. This season already shows signs of being worse than most: so far this year, for example, around 14,000 refugees have reached the coast of Italy, compared to 4,237 the previous year, according to the Italian Interior Ministry. But not every refugee makes it alive. Hundreds or thousands will drown on the way, and more would perish were it not for rescue groups like Doctors Without Borders. This organization alone has saved 81,540 people in the Mediterranean since 2015. This flow of humanity originates in climate, economic and political conditions in their homelands. Even the economic and political conditions that drive them to migrate have climate degradation as an underlying factor.

The third event on our horizon is less dramatic and more positive. By August, U.S. President Joe Biden will have on his desk a report that will shape U.S. policy on climate refugees, and that may have spin-off effects on other nations. He will receive the report because of an Executive Order he signed on February 4. It said, in part:

*“Sec. 6. Climate Change and Migration. Within 180 days of the date of this order, the Assistant to the President for National Security Affairs (APNSA)... shall prepare and submit to the President a report on climate change and its impact on migration, including forced migration, internal displacement, and planned relocation. His report shall include, at a minimum, discussion of the international security implications of climate-related migration; options for protection and resettlement of individuals displaced directly or indirectly from climate change; mechanisms for identifying such individuals, including through referrals; proposals for how these findings should affect use of United States foreign assistance to mitigate the negative impacts of climate change; and opportunities to work collaboratively with other countries, international organizations and bodies, non-governmental organizations, and localities to respond to migration resulting directly or indirectly from climate change.”*

I've used the phrase “climate refugee” in this op ed piece because the people it describes are seeking refuge from economic and environmental hazards. Yet the above except from the Executive Order follows the lead of many government documents describing fleeing populations: it refers to “migration”, not refugees.

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In fact, world authorities have been playing a game of definition around this form of human misery for some time, probably for a simple reason. By international law, people defined as refugees are entitled to protection under the law – a level of protection not afforded to people we call “migrants”. And governments (or at least their lawyers) shy away from language that extends their obligations. This narrowing of those who are protected isn’t new: the 1951 Refugee Convention only protects those fleeing war and persecution, leaving an enormous gap in international law. And parallel structures rather than unified ones have developed at the international level through the U.N. and other bodies to address refugees and migrants (although the two streams are trying harder now to work together).

The short-term increase in the number of climate refugees from storms and other dramatic climate events will likely pale compared to what’s ahead, particularly as climate change produces “crisis by creep” – the slow-onset changes to the climate that will force growing numbers of people to migrate to earn a living and support their families. Heat and drought will make parts of the world uninhabitable, but not overnight, and the very lack of drama associated with slow-onset disasters (at least in the eyes of comfortable distant observers) means the world will put off recognizing and dealing with the problem until the tallies of the dead and displaced creep from the thousands into the millions: the U.N.’s International Organization for Migration estimates that environmental factors may lead to the migration of between 25 million and 1 billion people by 2050.

So perhaps the climate migration report commissioned by Joe Biden will help ring the alarm bells earlier. Perhaps it will lead to greater sympathy and support for climate refugees in the face of hardening public attitudes in the developed world toward both migrants and refugees. Perhaps it will help convince us that our venerable First World policies and practices of exploiting those parts of the world that are now most at risk from climate change must stop – that we must invest massively in helping those parts of the world to lessen their risks and to survive the risks they can’t avoid. If not, we may end up becoming fortresses at our borders – and that’s a policy of xenophobic self-defense that won’t work in the face of up to a billion displaced fellow human beings.

In the midst of all these great issues caused partly by the burning of fossil fuels lies a tiny irony. The *Geo Barents*, the ship owned by Doctors Without Borders that has helped save so many refugees, started its life as a vessel searching for gas and oil deposits in the Gulf of Mexico.

Respectfully submitted to the *polis*,  
John Butler

## SHE SAID / HE SAID

**“Factory farms are responsible for more than 70 percent of the ammonia emissions in the U.S. Yet while pollution from power plants, factories and vehicles is regulated under federal laws, Big Ag continues to skirt any regulations for the air pollution from factory farms.”**

Tarah Heinzen, Legal Director, Food & Water Watch

**“A small but mighty group of Hunter/Gatherers came together on Saturday, May 29 to pick up 5,469 items (from May 23-29). This brings us closer to our goal of collecting 250,000 items by the end of this year. We hope all will help us reach this lofty number over the next six months!”**

e-mail from Owen Sound Waste Watchers, June 1, 2021

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**“Nature, the True Engine of Our Economy: Climate change, land-use, food production and human health are all deeply interconnected. Transforming the land sector towards more sustainable practices could contribute an estimated 30% of the global mitigation needed by 2050 to deliver on the 1.5°C target. By any measure Nature’s contribution to the global economy is significant and some estimates hold it at greater than annual global G.D.P., estimated at \$87.79 trillion in 2019. Building conservation and Nature-based solutions into our asset base and supply chains can, therefore, offer significant economic growth opportunities for countries and businesses alike – including in areas such as the circular bioeconomy, ecotourism and green public infrastructure. It is time to define the benefits we derive from the Natural world and account for Natural Capital on companies’ balance sheets. Without this, firms cannot tell the true value of their asset base, nor how damaging their operations may be.”**

Article 7 of *Terra Carta*, a January 2021 market-oriented statement of earth-affirming principles, modeled on England’s Magna Carta of 1215, and championed by Charles, Prince of Wales. See <https://www.sustainable-markets.org/terra-carta/>

**“In the midst of the ecological challenges around us, there is a critical need to understand how we have arrived at this dilemma and the impact that Western culture has had on the health of the planet and all of its inhabitants. We are becoming increasingly aware of the many ways humanity has set itself apart from the rest of the planet’s ecosystems, how Western culture has lost both its roots in Earth and an appreciation for the sacredness of creation. Theology is uniquely positioned to address these concerns.”**

from the home page of the Elliott Allen Institute for Theology and Ecology, St. Michael’s College, University of Toronto

**“The U.S. Drought Monitor, which is updated weekly, puts 84% of the U.S. West in drought, with 47% in the most extreme drought status. Some of California’s most parched areas run along its border with Nevada. On the Nevada side of the border, Lake Mead – the reservoir created by the building of Hoover Dam – is drying up as flow from the Colorado River has declined 20%, with signals pointing to climate change. A drier West also means the likelihood of earlier and more large-scale wildfires. Yet, despite adding 15 million more residents, California is using no more water than it did 30 years ago. Still, this does not seem to be enough. Farmers and ranchers are being asked to avoid irrigation. New Mexico farmers were asked to avoid planting anything if at all possible. Some farmers are tapping into groundwater. The upshot is that water will get more expensive, as will the crops that depend on water to become the food on our tables.”**

Mark Pattison, *Drought parching western U.S. brings water shortages, wildfires*, EarthBeat, June 1, 2021

**"Indigenous peoples are not vulnerable. We face hunger, poverty, malnutrition and other challenges, but we have preserved food and knowledge systems for centuries. The problem is that more and more, we see our rights threatened. More and more our leaders are being killed. More and more we are losing our lands and territories. We are being placed by outsiders, in policies and short-sighted programs, into situations of vulnerability, but I repeat: We are not vulnerable."**

Anne Nuorgam, Sami Indigenous leader and politician from Finland, who chairs the U.N. Permanent Forum on Indigenous Issues

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**"Carbon-based energy companies would come into communities and offer local government and policymakers jobs, prosperity, and wealth for their communities. In reality, distant stakeholders benefited most. With power in the hands of the industry, local communities were often left to deal with the worst effects of the industries' presence. Time and time again, I could see this happening."**

Leo Alicante, engineer and founder of clean tech startup Quioveo Energy,  
*Why We Need Equity and Justice in Climate Action*, B The Change newsletter, June 2 2021  
<https://bthechange.com/why-we-need-equity-and-justice-in-climate-action-54d61aa8904f>

**"In our worldviews, we are beings who come from the Earth, from the water and from corn. The Lenca people are ancestral guardians of the rivers, in turn protected by the spirits of young girls, who teach us that giving our lives in various ways for the protection of the rivers is giving our lives for the well-being of humanity and of this planet."**

Honduran Indigenous activist Berta Cáceres, assassinated in 2016

A summer river being crossed  
how pleasing  
with sandals in my hands!

**Yosa Buson (1716-1784)**

## "GREEN LEAF FROM OLD RAG" DEPARTMENT

(In which we rehabilitate old poems for those in search of new visions of the natural world)

**Editor's Note:** Bob Hope of Owen Sound provided the first article in this edition of *The Village Green*. It's about natural burial. At about the same time Bob drafted this article, I stumbled across a poem published in the *Flesherton Advance* on August 25, 1921, about an Anglo Saxon saint who would make a fitting patron for those working hard to establish natural burial grounds.

St. Swithin, who died in 863 CE, was Bishop of Winchester. At his request, on his death he was buried outside the walls of Winchester Cathedral, where people could walk across his grave and where the rain could fall on him. Much later, when his devotees had his body disinterred and placed in the cathedral, St. Swithin got his revenge by bringing a horrendous storm upon Winchester. This incident led to the folk belief that if it rained on his saint day (July 15), it would rain for the next 40 days:

***"St Swithin's day if thou dost rain  
For forty days it will remain  
St Swithin's day if thou be fair  
For forty days 'twill rain nae mare."***

The poem on the next page presents us with a version of St. Swithin who loved the whole natural world ("*He craved for blossom, bird and bee*").

Not surprisingly, St. Swithin is the patron saint of those seeking relief from drought.



# THE VILLAGE GREEN

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## St. Swithin

“Bury me,” the bishop said,  
“Close to my geranium bed;  
Lay me near my gentle birch.  
It is lonely in the church,  
And its vaults are damp and chill!  
Noble men sleep there, but still!  
House me in the friendly grass!  
And for censors bid the breeze  
Waft me its perfumeries!”

Dying Swithin had his whim,  
And the green sod covered him.  
Then what holy celebrations  
And what rapturous adorations,  
Joy no worldly pen may paint –  
Swithin had been made a saint!

Yet the monks forgot that he  
Craved for blossom, bird and bee,  
And, communing round his tomb,  
Vowed its narrow earthen room  
Was unworthy one whose star  
Blazed in Peter’s calendar.

“Who,” they asked, “when we are gone  
Will protect this sacred lawn?  
What if time, irreverent gust,  
Should disperse his holy dust?”

Troubled by a blackbird’s whistle,  
Vexed by an invading thistle,  
They resolved to move his bones  
To the chaste cathedral stones.  
But the clouds grew black and thick  
When they lifted spade and pick,  
And they feared that they has blundered  
By the way it poured and thundered.

Quoth the abbot: “Thus, I deem,  
Swithin shows us we blaspheme!  
He was fond of wind and rain:  
Let him in their clasp remain!”

Forty days the heavens wept,  
But St. Swithin smiled and slept.

Daniel Henderson

**For information about *The Village Green*, or to subscribe to it (free), please contact John Butler at 519 923-6335 or [agora@xplornet.com](mailto:agora@xplornet.com)**