

# THE WOODLAND OBSERVER

FEBRUARY 2021



NIPISSING NATURALISTS CLUB

# THE WOODLAND OBSERVER

From the editor:

## Winter At Last?

Real winter seems to have arrived overnight with the piles of fluffy white stuff and a cold snap. The unseasonably mild temperatures and low snow cover had us wondering if a typical winter would ever arrive.

If you were taking advantage of the warmer temperatures to go outside, tell us the things you noticed. What caught your curiosity enough that you later looked it up on-line? What did you see that made you stop and smile? What experiences with nature made you recall something from childhood? Share your discoveries so we can print them in the

newsletter. We're happy to receive book reviews, photographs, and other writings for inclusion in the newsletter.



Speaking of submissions, Keith Pearson (our new Vice-President) is looking for your GPS files and pictures of your outdoor adventures. See his **Topo Maps Canada** article. Other articles include kudos to Fred who stepped down as Club-President at the last Annual General Meeting (Thank you, Fred, for all the work you've done); a reprint of February 2018 article on snow fleas that were out during the warm weather; and a book review on **The Ice at the End of the World**, which looks at the history of the exploration of the Greenland ice cap--did you know the US army had a small town complete with movie theatres and churches hidden under the ice?

We also have a guest article from someone who discovered how healing it was to feed the birds as she recovered from surgery and other stressful events of the past year.

And be sure to check Keith's article on **How to Use Zoom**. He explains how to log-in, and mute your microphone so you don't accidentally distract everyone with inadvertent background noises.

*Barred Owl*

## Kudos to Fred!

*By Grant McKercher*

Fred Pinto, our long-time Club President, stepped down from the Board of Directors after the Annual General Meeting in January. He had been a Board member for nine years and served as President since 2014.

I want to take this opportunity to extend thanks to Fred for all the work and dedication that he brought to his years as a Director and President of the Nipissing Naturalists Club. His passion for the natural world, combined with his leadership, teaching and communication skills, has helped the Club move forward significantly with new projects and endeavours. By instilling enthusiasm and providing supportive leadership he has encouraged all of us to become involved in many initiatives including Bat Monitoring research, the Motus Tower Tracking installation, the Louise de Kiriline Lawrence Nature Festival, and Chimney Swift Monitoring, to name a few. His continued involvement with the Friends of Laurier Woods (currently President) has also kept the Club connected to this vital nature advocacy group that grew from a visionary Nipissing Naturalists' initiative started in 1990 by then-President Ted Price, and Dick Tafel.

The past year of pandemic has been an exceptional challenge for everyone in many ways. The Club has been affected by the social restrictions required to control spread of the virus, and we have not been able to have our face-to-face meetings and outings which provide important venues for social connection. Despite that, Fred and other members shifted gears and have continued to arrange speakers for "on-line" presentations. It has been one way to keep Club members engaged while we wait for an easing of pandemic restrictions. I am pleased to hear that Fred will continue to be the Speaker Coordinator for the Club.

Thank-you again Fred, for all you have done, and continue to do, for the Club and the Nipissing nature community. It is very much appreciated!



*Photo Above: Fred Pinto – Stepping- Stones Trails – July 2019 by G. McKercher*



*Left Photo: Distant Fred on Lake Nipissing rocky islands looking for shorebirds – August 2019*

# Topo Maps Canada

Many of our members enjoy hiking and snowshoeing. This is an enjoyable pastime and is most fun when shared with others.

Before the current lockdown, a couple of friends and I explored some of the trails our community that we are so fortunate to have right at our back door. Once the current restrictions are relaxed, we will be heading out again for some much-needed exercise, fresh air, and companionship.

To enhance our experience, we use the Topo Maps Canada iPhone app to track and record where we have been. You can even share the GPS files the app creates with other trekking enthusiasts.

Why not download the app and head out to take in our beautiful surroundings and start your trail map collection? Don't forget to take a camera and send in some nice photos to our photo contest.

[nipnatsphotos@gmail.com](mailto:nipnatsphotos@gmail.com)

When you do head out, be sure to take proper precautions. Social distancing with your friends, follow current restriction guidelines, dress warm with layers, carry emergency items like a paper map, matches, cell phone, flashlight, knife, first aid kit, trekking poles, snack, water. We carry a small backpack, so we have extra space for warm clothing and supplies.

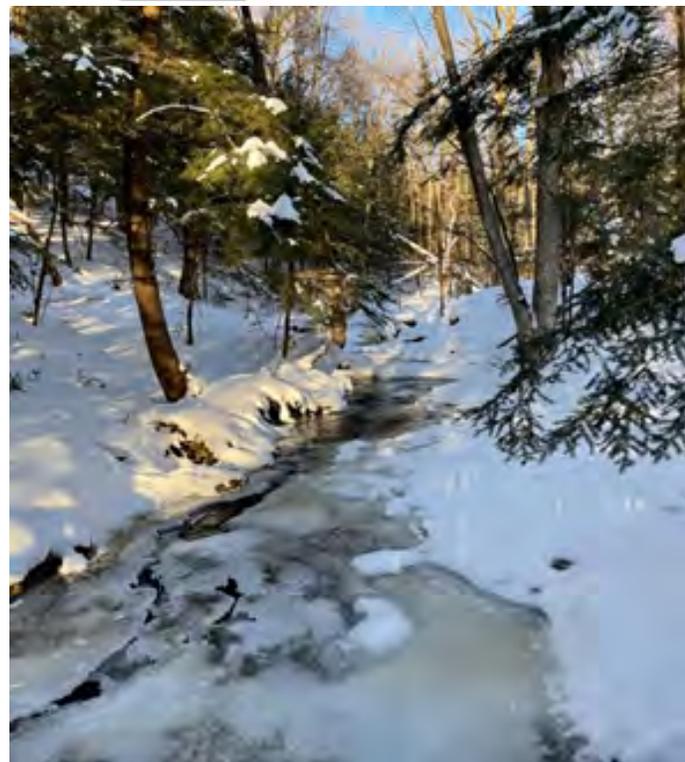
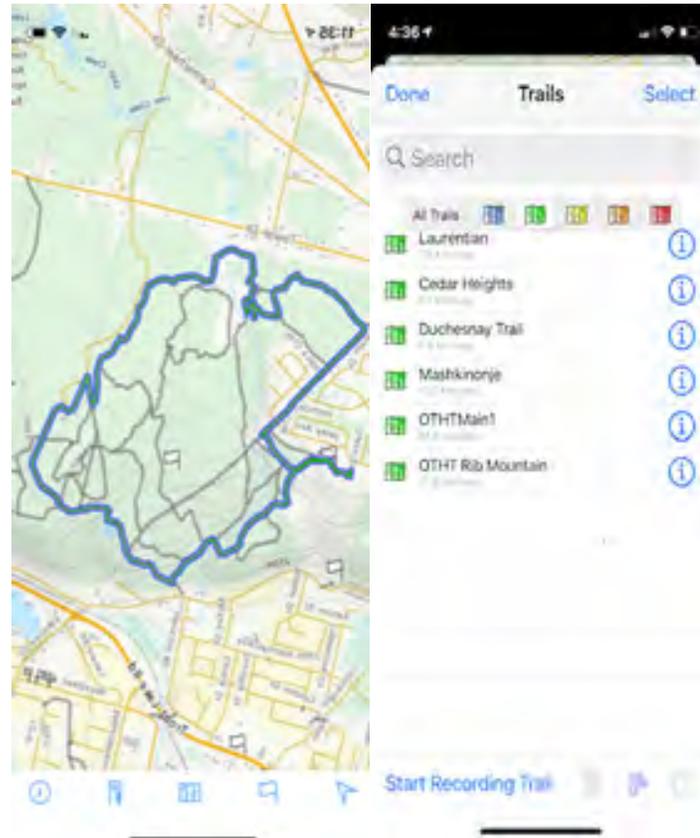
If you record some trails, I would love to get your GPS files and please share your photos.

[pearsonmini@gmail.com](mailto:pearsonmini@gmail.com)

Here is a good place to get started.

<https://discoveryroutes.ca/>

Enjoy and stay safe!  
Keith Pearson



## Interesting Winter Find

*Editor's Note: The article below is reprinted from The Woodland Observer, February 2018. Renee thought it fitting to share again as our unseasonably warmer January temperatures had the snow fleas out in abundance.*

*By Renee Levesque*



Snow fleas: Almost without fail on a warm winter's day, we are bound to see swarming little black dots in the snow. And if we look carefully, we will even see some hopping or jumping. These are snow fleas, tiny arthropods, no bigger than the period at the end of this sentence. They are not really fleas. They don't bite or feed on animals or humans. They are Dark Blue Springtails.

Most springtails are not active in winter, but the Dark Blue Springtails produce a sort of antifreeze that enables them to be active. They are a common species living in damp areas of soil or under leaf litter where they feed on fungi, algae and decaying organic matter. They prefer a rich organic soil, so if you see some in your yard, it is a good sign. They rarely cause plant damage.) There are thousands to millions in a cubic metre of soil! We don't see them until it gets mild in the winter and their dark bodies are contrasted against the white snow. I first saw some at my place over the very mild weekend of January 20 and 21 as pictured at the side of the page. Magnification of snow fleas is at the top of the page.)

The thawing snow forms channels from the soil to the snow surface. Some may find their way back to the soil, but most will die. It is not known why they come to the snow's surface; maybe it's triggered by overcrowding under the snow or maybe it's just a response to warm weather.

Springtails don't use their legs to jump the way fleas and grasshoppers do nor do they have wings that allow them to fly. Instead, they use a special little appendage called a furcula, a fork-like structure at their hind end that folds under their body. It is like a spring that causes the springtail, hence its name, to jump over 100 times its body length.

Like insects, springtails have six legs, but they are not true insects because they have many non-insect features. They have their own classification, Entognatha Hexapoda, and are ancient organisms: fossils 400 million years old have been found!

Take a look at the [You Tube video on Nature Walk with Mark Fraser](#): Look for the springtail's furcula.

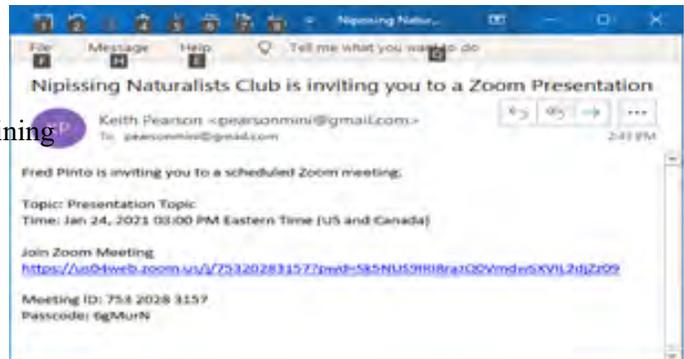
*Sources: Ask an Entomologist, Snow Fleas, Gwen Pearson; Nebraska Extension: Community Environment, University of Nebraska, Keith Jarvi; Wikipedia.*



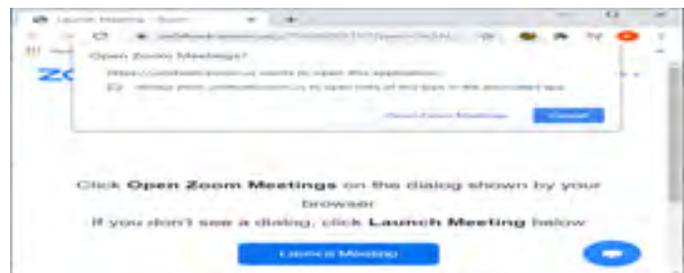
# How to Use Zoom

Fred Pinto has arranged some great Zoom presentations with knowledgeable, interesting speakers and there are more to come. If you would like to sit in on these, but are uncomfortable with joining zoom presentations, here are 4 simple steps to join.

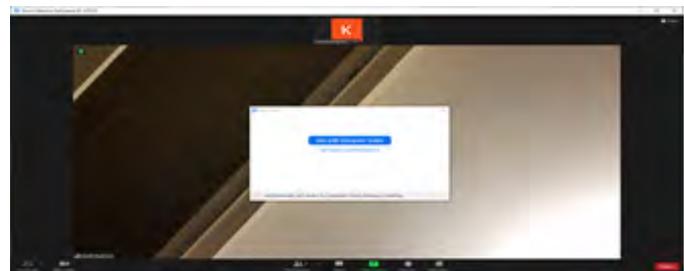
All members receive an email similar to this a couple of days prior to a presentation. Just before the meeting time, open the email and **click the link**.



On this screen click the **Open Zoom Meeting** button.



Then click "**Join with Computer Audio**". This will allow you to hear the presentation.

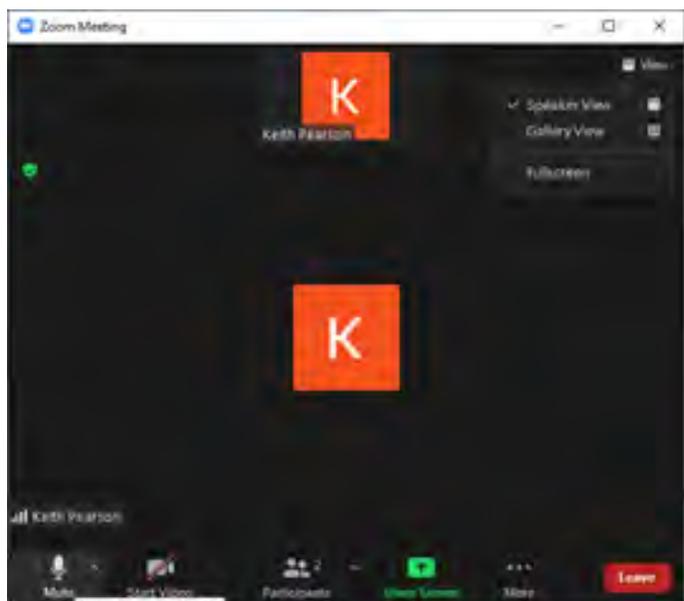


You are in the meeting!

When you move the cursor over the screen you see two buttons at the bottom.

**Mute** and **Start Video** .

If **Mute** is off, there will be no red line through the microphone symbol. Other users can hear you and any sounds around you. We suggest you press this button to **Mute** yourself when others are talking so you do not interrupt them with unintentional sounds or throat clearing. Turn off **Mute** when you want to speak. You can also temporarily turn off **Mute** by pushing and holding the space bar. Once you let the space bar go, **Mute** is turned back on automatically.



If you do not want to be seen by others just click the **Start Video Button** so it has a red line. Check our previous newsletters for summaries and pictures from past meetings.

<https://www.nipnats.com/newsletters/>

## Upcoming Zoom Talks

February 16, 2021

Kat Lucas

Toronto Zoo's Great Lake's Aqua-Links Program



Kat Lucas is the Aqua-Links Program Assistant at the Toronto Zoo. She has a passion for conservation education and connecting others with the environment. She graduated from the University of Guelph with a Bachelor of Science, Zoology and a Master of Environmental Science with a focus on aquatic toxicology and fish reproduction.

Kat will talk about how our Great Lakes support a diverse array of plants and animals, with rich ecosystems that are unique in the world. The lakes provide us with fresh drinking water, food and recreational opportunities. This session will focus on some of the species at risk in our Great Lakes and our role as individuals to protect this sensitive ecosystem.

## Previous Zoom Talk

### Adventures in Beekeeping

Charles Hendry is a retired MNRF biologist whom worked in Moosonee, Cochrane and Timmins for most of his 30-year career. He has been retired for 4 years and lives in Mallorytown, Ontario, near the shores of the St. Lawrence River. He's had it in mind for 20 years to try beekeeping once he retired. He started in 2017 and through trial, error and success continues to learn what it really takes to be a good beekeeper.

**There was a draw at the meeting for a jar of honey.**



**Adventures in Beekeeping:  
A Novice's Experience**

The COVID Edition

Virtual Presentation  
Nipissing Naturalists Club  
February 9, 2021

Charles Hendry  
Mallorytown, Ont.

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## Reflection

*This is a short article written by a someone who wishes to remain anonymous, but who wants to share her nature experience with us.*

Over the past several months we have all had to adapt to a new way of living. For many of us that has meant fewer activities, less socializing, more time at home. In addition to that, I was also recovering from hip surgery, so had less mobility. Hmmm. So how would I deal with this changed way of living life?

I have always loved being outdoors, walking, cycling, skiing, swimming, canoeing, etc., the main purpose being to have enjoyable exercise. But, I would now need to shift my focus, as movement was more difficult.

A friend offered to take me to the paved trails off Lakeshore Drive, towards Callander, where I would be able to walk in safety with my walker, albeit slowly. So off we went, every morning that weather and health permitted. Along the way, my friend would point out different varieties of lichens and fungi, roll over tree stumps to check for little creatures, name the bird calls we could hear, show me how various ferns propagated....on and on it went. I was fascinated and our walks became a source of pleasure for me, apart from the usual goal of exercising.

We would alternate between walking from Decaire Road towards Lakeshore Drive, and from Decaire towards Callander. One day as we were walking towards Callander we noticed a few people standing quietly at the edge of the trail. We could see that birds were flying around them. As we got closer the people were getting ready to leave, so I asked them what they were doing. Turned out they had been feeding the birds and squirrels.

So before our next walk we bought seed to do the same. We noticed that there were certain stretches of the trail where the birds would hop around in the trees close to the trail, so we stopped and held out our hands hoping they would come for the seed. At first they just flew around us, not landing, so we would scatter a bit of seed by the grass and move on. Then we came to a part of the trail where there were many more birds, and squirrels, and tried again. I sat quietly on my walker with seed in my outstretched hand, and my friend stood quietly a few feet away doing the same. And we waited.



Then the birds started to come. Mostly they were Chickadees and a few Nuthatches. I couldn't believe how I felt when these tiny frail birds landed on my hand. They were so light, so fragile-seeming, so vulnerable. It might sound silly, but I felt such a connection with them, such tenderness, such gratitude at their trust. It deepened my sense of our connection with nature. I guess it was like an example of "stopping to smell the roses." Until this point I had seen nature as something I loved and enjoyed, but this was on a different level. I was no longer the spectator, but a participant. The experience did wonders for my stress level, my healing, my joy in life.

I can now get through a day without having to seek out companionship during the lockdowns because I scatter seeds and peanuts down my access ramp at home, and spend many enjoyable periods watching the antics of various squirrels and birds as they jostle over the goodies. How agile those squirrels are, chasing each other up, down, and around the trees in the front yard. I finally have time to sit and watch rather than be heading out to the YMCA, and meeting friends for various activities. Those busy times will return, but I will not forego my nature walks.



## Book Review

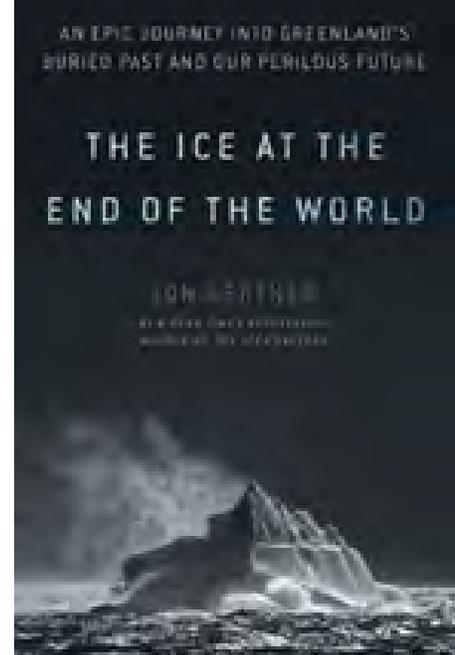
**The Ice at the End of the World: An Epic Journey into Greenland's Buried Past and Our Perilous Future**

**By Jon Gertner**

**Random House 2019**

**408 pages**

*By Chris Connors*



If you like books that get your adrenalin running and your heart pumping, then you'll like the first few chapters. Would the explorer Fridtjof Nansen and his team even make it across the ice floes to the Greenland shore? They were trapped on a disintegrating floe that the current was taking out to sea. The waters boiled and swelled and broke off pieces of the ice as they drifted further away from land.

You can't assume the explorers make it safely either. The ones crossing the ice would write their journals as they traveled, and then place them in cairns to be retrieved by the next explorers. You could be reading first-hand accounts of the crossing by men who later died in that crossing. Each obstacle seems more insurmountable than the last: you can feel the despair of the crews, who after weeks of harrowing superhuman toil arrive within a day of their goal only to find impassable barriers.



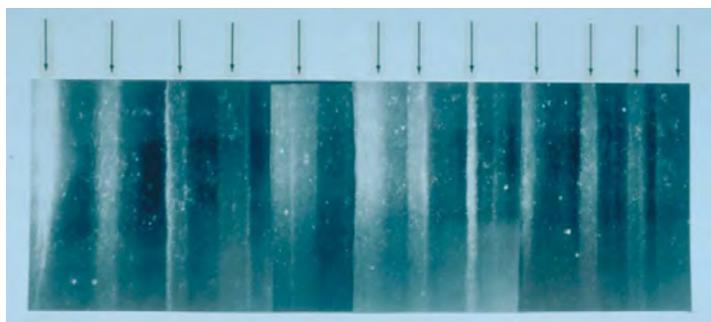
*Georgi and Loewe under the ice (Alfred Wegener Institute/Archive of German Polar Research)*

Harrowing stories are plentiful during the early days of expeditions. A team stayed all winter under the Greenland ice sheet with no possibility of getting in or out till spring. One had gangrenous toes that his team mates had to remove without recourse to any medical supplies.

Over that winter, one of the team dug down by hand 52 feet into the ice--what else are you going to do while living in an ice cave for 6 months--where he claimed he could date the ice at the bottom of the shaft. His collected data intrigued scientists. If you could age the ice, then how far back could you age it?

Twenty years later, in the 1940s teams drilled down to 500 feet; then 1,350 feet in the 1950s. By the early 60s, they were down about a mile, and in the 80s ended up with two miles of ice core. It wasn't until the 60s though that physicists figured out a way to measure and date the carbon isotopes found in the trapped bubbles in the ice. It appears that 10,000-15,000 years ago there was a temperature change of 10° C (18° F) in less time than a human lifespan. This contradicted the idea that such changes only happened over thousands of years.

It was such an astounding, and worrying, find that several drilling programs were initiated over the next



30 years to see if it was a real result or an artifact from ice layers that were overly distorted by the lateral flow of the ice cap. Bad news was the abrupt jump in temperature

**GISP2 ice core, 1855 m, summers indicated by arrows**

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did happen; good news is that rapid temperature change maybe only happens when the earth is near ice age temperatures. If it happened now, we wouldn't have time to find new areas in which to grow our wheat and other crops.

Some of the drilling programs only happened because researchers were able to piggy-back on the US army projects. The army built Camp Century under the ice as a bit of Cold War posturing. It had theaters, churches, bars, barbershops, and all the other amenities of a small town. Geologists were asked to drill into the ice to measure flow rates of the glaciers, which they did because drilling would also answer questions about the earth's past. They found the glaciers were flowing faster than thought, and the Camp was abandoned in the late 60s as the ice began to crush the town. Unbeknownst to most of the inhabitants, Camp Century was just the cover for Project Iceworm-. That was a plan to build 3 km worth of tunnels under the ice so they could install a vast network of ballistic nuclear missiles that would serve as a "first strike" on Russia. When the town was abandoned, the semi-mobile nuclear reactor that powered some of the town was removed, but radioactive waste, along with human sewage, PCBs and other industrial chemicals were left to be buried. At the current rate of ice melting Camp Century may be exposed later this century, and contaminated melt water from the site may flow into the sea decades earlier.

The book is a fascinating read on the recent history of the Greenland ice as well as a look at what is possibly in store for it, and us, in the future. It is full of colourful characters, people who became living legends, such as Peter Freuchen, who, at dinner parties, would tower over Nazis and bellow, "I am a Jew!". He probably wasn't wearing the fur coat of a polar bear that he killed himself, but at 6' 7" was probably just as intimidating. He was arrested by direct order of Hitler and sentenced to death, but he escaped.

His grandson, Peter Ittinuar, was the first Inuk in Canada to be elected as an MP. This is a compelling book that blends the European exploration of the Greenland ice with the science that arose to answer those early questions. It conveys the intense psychological struggles of the explorers to such an extent you get a sense of their exhilaration when they succeed. The characters, mostly forgotten now, are brought to life and given a well-deserved introduction to the general public. The book has won awards, and is probably one of the best books I read in 2020. Highly recommended.



*Peter Freuchen with his third wife. His coat is made from the fur of a polar bear that he killed himself.*



*Fridtjof Nansen*



*Knud Rasmussen*



*A young Peter Freuchen*

## Liking Lichens

Lichens are world-wide with 17,000 described species, and 2,500 species just in Canada. These numbers are underestimates because there are new ones being discovered every year. Troy McMullin of the Canadian Museum of Nature discovered 300 new species in Parc National de la Gaspésie, bringing the total in just that park to over 600. In 2018 McMullin also discovered a new species, a stubble lichen, in Guelph. A former student from Nipissing University became an expert on lichens and discovered three new species never described before. Lichenologist Irwin Brodo describes how he fell face-first onto the ground while getting out of a boat on the BC coast and spotted a brand new species just in front of his nose.



#



7



*Fruticose lichens*

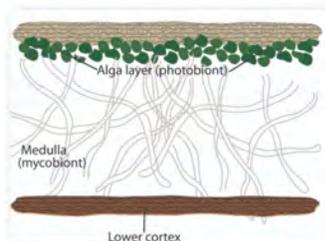
They are one of the few living things that are able to revive from an air-dried state. In technical terms, they're desiccation-tolerant. During the summers and winters they can become so dry they crumble with the slightest pressure. Some can stay in the dried state for months only to revive and begin growing again when the rains return. They can live in extreme conditions that other life cannot, and may be the predominant life-form in places like the Arctic, the Antarctic and alpine regions.

Lichens do have a weakness though—air pollution. The number and types of lichens in an area provide a strong indication of the quality of the air.



### What are lichens?

Before we look at how lichens are used to monitor air quality, let's look at what makes up a lichen. Most sources will tell you that lichens are a partnership between a fungus and an alga. The algae lives inside the fungus where it is protected from the environment, and the fungus can live off the sugars the algae produces.



*Cross-section of a lichen*

In reality, it isn't quite this simple partnership. It is more of a controlled parasitism than a partnership. Sometimes the fungus isn't content just to feast on sugars excreted by the algae. It will burrow into the algae to feed on it directly. In extreme cases, a fungus will consume most of its algae then will go dormant until the algae can repopulate the fungus by reproduction or being blown in by the wind.

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In 2016, the tale became even more complicated with the discovery there's a third partner in some lichens—a type of yeast—that makes the relationship between fungus and algae work. Somehow, the yeast and the algae can turn genes in the fungus on and off in order to give the fungus its unique growth form. The fungus component may be feeding off the algae directly or indirectly, but the algae dictate how the fungus will appear.



*Squamulose lichen*

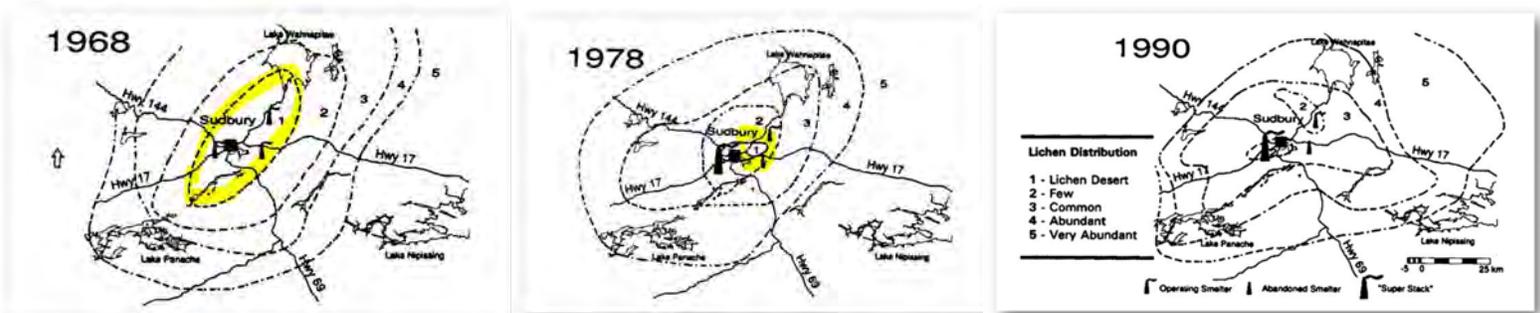
Lichens come in three main forms. There's **crustose**, which is the kind that grows on rocks like a crust. There's **foliose**, which is the kind that grows a leaf-like body (think "foliage"); and there's **fruticose**, that has pixie cups, or a long-flowing body, or branching extensions that make the ground look like it's covered in cauliflower. It's so extensive that caribou utilize it as a food source in the winter, often digging down through the snow to access it. There is a fourth form called **squamulose** that has overlapping scales (it can be a blend of the characteristics of the other lichens).

## Lichens and Air Quality

Lichens have a set of characteristics that make them well suited for biomonitoring purposes. They're wide-spread, they have well-known tolerance rates to pollution (we know which ones are most susceptible to air pollution and at what levels), they have a high surface area compared to their size and weight, and they have slow growth rates. This means they can easily absorb and retain various pollution compounds.

Sampling lichen diversity is not as expensive as chemical analysis. You can set up a dense monitoring grid, which is far cheaper than setting up numerous stations for analyzing the various chemical compounds found in air pollution.

Starting in the 1960s, Dr. Peter Beckett and other researchers at Laurentian University in Sudbury, mapped the number of lichens found around the city. In his book chapter, [Lichens: Sensitive Indicators of Improving Air Quality](#), he provides maps of the distribution of lichens around the city. In 1968, near Sudbury's operating smelters they found no lichens, a "lichen desert" as they called it (see yellow highlights). The further away from the city, the more lichens they found. In 1978, six years after the superstack was built to spread pollution away from the city, the lichen desert had grown smaller, and more lichens were found closer to the city. In 1990, after passage of legislation that had companies cleaning or scrubbing their emissions, the lichen desert was gone, and lichens were returning to the city.



*Return of the lichens with improving air quality in Sudbury (P. Beckett)*

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Other cities, such as Montreal, also use lichen diversity maps to find areas where air quality is a longer-term concern. In the Montreal map purple indicates the lichen desert.

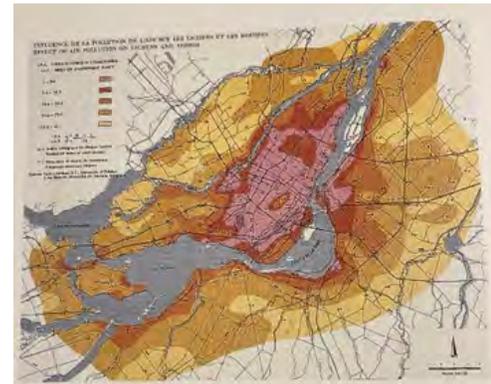
Leaded gas usage shows up in a lichen species at Plummers Island in Maryland. Lead increases from about 50 micrograms/gram of lichen before the advent of leaded gasoline to over 1200 micrograms/gram of lichen in the 1960s to 1980s. When lead was phased out of gasoline, the levels dropped back to the low baseline again.

Lichens were also used to monitor radioisotopes after the Chernobyl nuclear explosion. Samples of the reindeer lichen, *Cladina rangifera*, were collected across the Maritime provinces, and analysed for radioactive isotope uptake. Their results were used to confirm that the radioactive cloud reached a plume height of 10,000 m as it passed over the Maritimes 11 days after the explosion.

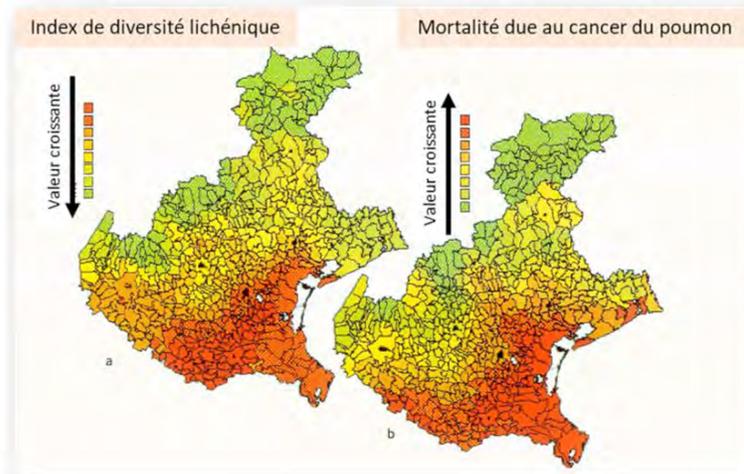
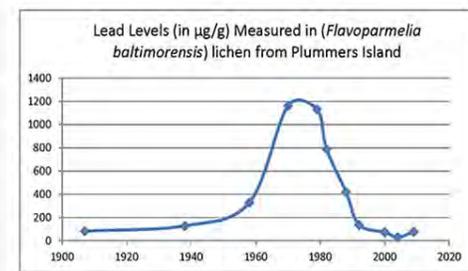
In another study, researchers in a county in Italy used lichens as a proxy for air quality and found that lichen diversity inversely correlated with mortality rates, and with lung cancer. In other words, the fewer lichens due to air pollution, the higher the death rates and incidents of lung cancer; it was a stunning visual demonstration of how the things that impact the lichens are also impacting us.

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Next time you're out hiking, look at the lichens around you. You'll not only get a bit of pleasure at examining their hidden beauty, you'll also get the pleasure of knowing that if the air is clean enough for the lichens to flourish, it's also clean enough for you too.



81. Map of the Index of Atmospheric Purity values of lichens and mosses in and around Montreal, Quebec, shows the deterioration of epiphytic vegetation as one approaches the built-up area. Purple = "lichen desert" where no lichens are found; yellow = areas with relatively normal lichen growth; other colors = intermediate conditions. An "island" of improved lichen growth in the city core centers on an isolated mountain (Mount-Royal), reaching above the heavy layer of pollution and providing a refuge for some lichens. (From Leblanc and Desloover, 1976.)



Lung cancer, mortality, compared to lichen diversity in Veneta region in Italy. Lichen diversity map on the left; mortality map on the right. Orange indicates low diversity, high mortality



Reindeer lichen, *Cladina rangifera*



Close-up of reproductive bodies



Corticolous species grow on tree bark

## The Butterfly, The Ant, and The Rabbit

“When one tugs at a single thing in nature, he finds it attached to the rest of the world”.

This quote is misattributed to naturalist John Muir who originally said “When we try to pick out anything by itself, we find it hitched to everything else in the Universe” ([My First Summer in the Sierra, Chapter 6, Mount Hoffman and Lake Tenaya; July 27 entry, 2nd paragraph](#)).

Still, the sentiment holds for both. There are connections among individual species that we’re unaware of until we either try to improve something only to have it backfire. Nearly every time a country embarks upon a program to increase one species at the expense of another “undesirable” species, it creates larger problems, or even makes the [original problem it was supposed to solve worse](#).



This article, though, is about a how when we tug on a butterfly, we find it hitched to the rest of nature. This butterfly is the Large Blue (*Maculinea arion*). Its success is tied to that of rabbits and ants. It took independent teams of researchers decades to put the story together, each set not realizing at the time they held a piece of the puzzle.



**Range of the Large Blue butterfly**

The Large Blue is a butterfly of Europe. Its range runs from Spain, and all across the continent to the far tip of Russia. Its food sources are a variety of wild thyme species that can grow in a wide range of habitats, and on soil types from acid soils to alkaline soils. Given that the butterfly’s food grows nearly everywhere on the continent it is no surprise the butterfly itself has such a large range. However, there is a surprise.

The butterfly itself is only found with certain areas of that range, and even in those areas, it can be rare despite the plentiful food sources. There was no obvious reason why it was rare across its range, but there was a clue in its caterpillar stage. As a caterpillar it secretes a honeydew substance that ants like. One ant species in particular, the red ant *Myrmica sabuleti*, likes the honeydew so much they adopt the caterpillar and take it back to the nest. This adoption is a mistake.



**Ants "adopting" the Large Blue**

Once the caterpillar is in the nest, it wanders over to the ant nursery and begins to eat the ant grubs. It can stay in the nest for up to 2 years, consume over a thousand grubs, and grow a 100x larger before pupating and emerging as a butterfly.

This caterpillar strategy though works best with the *sabuleti* ant. Other red ant species (e.g., *M. scabrinodis*) like the honeydew as well; and they too will adopt the caterpillar. However, unlike the *sabuleti* species, this ant species grows suspicious of the caterpillar and often kills it.

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Therefore, the Large Blue's success is tied to the ecological conditions in which the sabuleti ant lives, and the Large Blue's decline is tied to ecological conditions of the scabrinodis ant. As it turns out, the caterpillar-loving ant, sabuleti, needs closely cropped vegetation from heavy grazing. In these closely cropped areas, sabuleti does well. If the grass grows a bit longer, sabuleti numbers decline and another species of ant takes over—the scabrinodis species, which tend to kill the caterpillars. And this is where the rabbits fit in.



*Caterpillar eating ant grubs*

Rabbits can be heavy grazers in a pasture. In the 1950s, a virulent disease (Myxomatosis) killed the rabbits. With the grazing pressure reduced, the grass grew longer. When the grass grew longer the sabuleti ants (the caterpillar lovers) declined, and the scabrinodis ants (the caterpillar eaters) increased. When the scabrinodis ants increased, the Large Blue declined.



*A rabbit contemplating connections*

The success of the Large Blue is now tied to the success of the sabuleti ant rabbit and the success of the rabbit, which in turn have its success tied to other factors that still aren't fully outlined.

For example, the Myxomatosis virus is dependent upon the success of biting insects, and the density of the rabbit population, which is dependent upon food sources and predator numbers.

If predators decline (because of their own connections to other bits of nature) this would let the rabbits increase to the point where the virus could easily infect most rabbits, which in turn affects the ants, which in turn affects the Large Blue. Then if you looked at the factors that cause predators populations to rise and fall, you'd find more connections to other parts of nature.

Each time we've looked at one species, we find it is hitched to completely different species in ways both subtle and obvious. Those links connect us all, and that is marvelous thing to contemplate.



*Still contemplating*



*Not a Large Blue, but a small blue also contemplating*

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## Banff Mountain Film Festival

Lefebvre's Source for Adventure Presents the Banff Centre Mountain Film Festival in the comfort of your home. Click to view: <https://filmfest.banffcentre.ca/?campaign=WT-166249>  
**Proceeds go to Nipissing Naturalists and The Canadian Ecology Centre.**

**A reminder of some Virtual Viewing basics:**

- Individual programs: \$15 USD (3-day rental period)
- Bundle (2 programs): \$28 USD (14-day rental period)
- The rental period begins immediately upon viewing (as soon as the customer presses play).
- Films can be re-watched within their rental period.
- On the website, customers will need to have an internet or Wi-Fi connection to view the films, and they are available only through online streaming (not download).

## Winter Photo Contest

Just a reminder the Nipissing Naturalists Club is currently running a photo contest and will be accepting entries from members until April 30, 2021.

Voting, using an emailed Google Form, will be open during the first week of May. The winners will be announced at the May meeting and the winning photos will be published in the May 2021 Woodland Observer.

You may submit one photo per category for each member, including each member of family memberships. Please identify who took the photo and in which category to enter the photo. There is no age limit. If you take a better photo later, submit that to replace your original entry. You may send substitutions as often as you like.

Send your entries to [nipnatsphotos@gmail.com](mailto:nipnatsphotos@gmail.com)

Here are the categories:

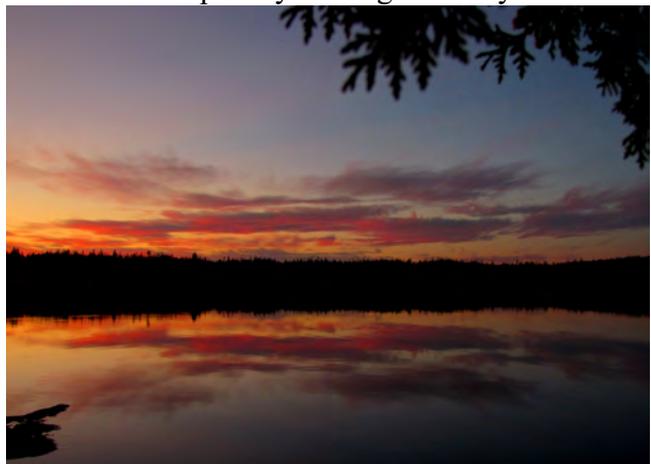
- **Wildlife**
- **Scenery**
- **People Enjoying Nature**
- **Photographers Nature Choice**

We cannot wait to see your photos!

Check out the winners from our last photo contest in the October newsletter:

[2020 Spring Photo Contest Winners](#)

Keith Pearson - Director





**Speaker Coordinator**

Fred Pinto [fredpinto1@gmail.com](mailto:fredpinto1@gmail.com) 705-476-9006

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## Membership Renewal Notice

If you have not already paid your 2021 Nipissing Naturalists Club membership fee, it is time to renew your membership in this great club dedicated to nature and its enjoyment.

- **One Year Single membership \$ 20**
- **One Year Family membership \$ 30**

Renewal for **Bird Wing** can also be included with your **Nipissing Naturalists Club** renewal. One Year Single **Bird Wing** \$ 5

An e-mail transfer can be sent to [sturge@sympatico.ca](mailto:sturge@sympatico.ca) or a cheque can be sent to our Club Treasurer, Connie Sturge, at 537 Hwy 534, Powassan POH 1Z0.

If you send a cheque, please make the cheque payable to “**Nipissing Naturalists Club Inc.**”.

If you are also paying for Bird Wing by cheque, please send a **separate cheque** for that payable to “**Bird Wing**”.

Keith Pearson, Membership Director

Contributors this issue: Fred Pinto, Victoria Reimer, Renee Levesque, Keith Pearson, Grant McKercher

## Bird Wing

Dick Tafel, Chairman: [rtafel@sympatico.ca](mailto:rtafel@sympatico.ca). 705-472-7907

Gary Sturge, Treasurer

Renee Levesque, Bird Wing Scribe

Monthly Bird Wing and Bird Bash reports are sent to members by email and posted on Nipissing Naturalists Club’s website: <https://www.nipnats.com/bird-wing/bird-wing-meetings-outings/>, and <https://www.nipnats.com/bird-wing/bird-bash-reports/>.

Editor: Renee Levesque: [rlevesque1948@gmail.com](mailto:rlevesque1948@gmail.com).

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