

JUNE 2024



SPORE PRINT

Official Newsletter of the Alberta Mycological Society



A NEW SEASON IS HERE!

A new foraging season is upon us! The smell of rain combined with the fresh shoots of grass, and the budding trees signal only one thing, mushrooms!

Already, our members are finding morels in the province. In the beginning, the spring looked to lead us into another dry year, but May brought rain and the results are showing. This year shall bring a fun foraging season. Everyone's favorite, morels (*Morchella sp.*), are starting us off strong.

The Alberta Mycological Society is ready for a fantastic season, with exciting events, fruitful forays and more! Keep an eye on your email, Facebook and Instagram for announcements.



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<https://www.albertamushrooms.ca/where-can-i-forage/>

Basic Guidelines to Foraging

BY E.WITTKKE

Foraging, an ancient and longstanding tradition, involves responsibly harvesting fungi, and other natural materials for food, medicine, or craft. Here's a guide to foraging mushrooms:

Know What You're Foraging For: Before you start foraging, educate yourself about the fungi in your area. Learn to identify them correctly, including any poisonous look-alikes. If you are not 100% confident in your ability to identify a mushroom, do not ingest it. Many mushrooms can cause an allergic reaction, so even if something is deemed edible, only partake in a small portion the first time.

Respect Legal Regulations: Ensure foraging is legal in the area you're exploring. Be aware of regulations or restrictions that are in place when foraging on public lands or protected areas. Always obtain necessary permits if required. Remember as a general rule, it is not permitted to forage in Provincial Parks. If you want to forage always check with Park Wardens. Foraging is never permitted in National Parks.

Practice Leave-No-Trace: Minimize your impact on the environment by practicing leave-no-trace principles. Garbage is damaging to plants and their habitats. Ensure all items brought with you leave with you. Remember do not litter. Also, pick up any garbage found in the environment to leave it better than you found it.

Forage Responsibly: Harvest in moderation. Only take what you need, and avoid over-harvesting to preserve the natural balance. When harvesting mushrooms for food, always leave a reasonable portion of the growing mushrooms behind. Also only take what is needed to identify when harvesting for identification.

Respect Private Property: Obtain permission from landowners before foraging on private property.

Avoid Endangered Species: Do not forage for plants or fungi that are endangered, threatened, or rare. Take a photo instead of pulling the organism from its habitat.

The earth has
music for
those who
listen

WILLIAM SHAKESPEARE





Basic Guidelines to Foraging

Use Proper Tools: Use appropriate tools for harvesting to minimize damage to plants and the surrounding environment. For example, use a knife or a tiny shovel to remove mushrooms to keep the ground intact around the base of the mushroom.

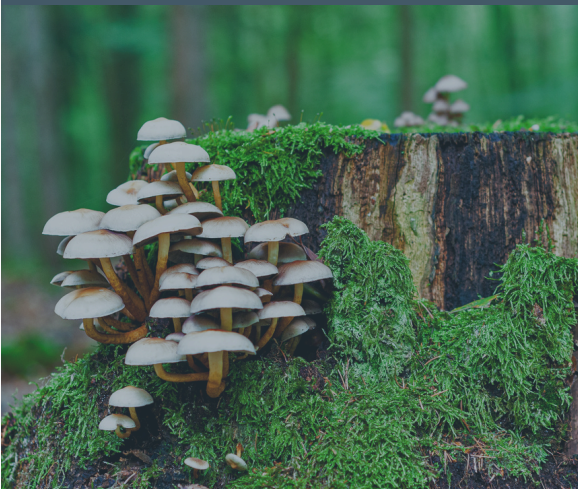
Share Knowledge and Respect Traditions: Share your knowledge of foraging with others while respecting indigenous traditions and cultural practices related to foraging. Learn from experienced foragers and elders in your community.



Be Prepared for Emergencies: Familiarize yourself with potential risks associated with foraging, such as poisonous plants or encounters with wildlife. Carry a first-aid kit and know how to respond to emergencies. Foraging in a group is always safer than going alone.

By following these guidelines, you can enjoy the benefits of foraging while minimizing your impact on the environment and respecting the rights of others.

Have fun out there!



**INSTITUTE FOR
CONTEMPLATIVE
ECOLOGY**



The Inaugural Calgary Spore Social!

BY SEAN CAMPBELL

Calgary's first membership and donation drive was a success. I would like to thank the Alberta Mycological Board for their support, and in particular Nadia, Christine, Mel, Melanie, Barb and Elle. Thanks to the Ruberto Ostberg Gallery! Gary McMillan's weird little critters were the perfect backdrop to Simon Metke's specimens! Big thanks to Simon as well! Those reishi antlers were beautiful. I don't know anything about reishi antlers yet, but I'm excited to start experimenting. The evening would have been a dreary affair without Simon's lovely specimens and mycological knowledge. Speaking of mycological knowledge, special thanks to Martin and Bill for making the trek.

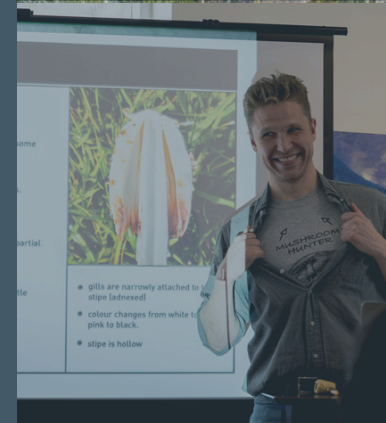
Anyhow, thanks to Khalid for the mushroom cocktails! I wasn't sure how he was going to pull that off, given his insane schedule, but he knocked it out of the park. As did Trent, our chef. Once the dishes did start coming out, Chef said, or at least inferred, that they were much appreciated, "They were like ravenous wolves! I couldn't even get the dishes to the table!" I corrected him on the spot, of course, "No chef, they were like truffle pigs." Haha! The adorable kind of course, folks! Thankfully, we were still able to get some of the tapas to Barb. Oh! A thank you to Barb's physician! I hope that paw's healing up quick! I can't lead the Calgary forays! You know what happened last time!...Anyhoo, I think I was even able to convince management to start keeping some mushroom dishes on the menu, permanently. Khalid was a big fan of the cajun tempura enoki, and Anna loved the gochujang oyster mushroom scallops! Speaking of, if anyone wants the recipe, I can email it to you. I have permission to share.

Finally, to the second inaugural blunder of the evening. Apologies for the shaky parts of the presentation. I learned two valuable lessons that evening. Don't try to organize and present an event on the same night, and as Neal, the bigshot architect who looks like he's talking about a fairly large puffball in the photos, told me: "Sean, amplify... always amplify."



Shiitake Mushroom Ricotta Crostini

Shiitake mushrooms sautéed in thyme garlic butter served on a whipped ricotta crostini





UPCOMING EVENTS



FORAYS

Find More Foray Information on Our Website

Kananaskis Wilderness
Wednesday Foray

JULY 3 @ 5:30PM - 8:30PM

Private Land Foray -
Athabasca Region

JULY 13 @ 10:00AM - 2:00PM

Beaver Hills Mycoflora - Elk
Island National Park

JULY 14

SUMMER SOLSTICE & FORAY

JUNE 21 (4PM) TO JUNE 23 (12PM)
EVERGREEN COMMUNITY HALL
CONDOR, ALBERTA

*Camping. Forays.
Feasting & Friends*

WILD MUSHROOM EXPO

MAIN EVENT

AUGUST 4
10 AM - 5 PM
DEVON COMMUNITY CENTRE
DEVON, ALBERTA

PRE-EXPO FORAYS

AUGUST 3

SET UP

AUGUST 3

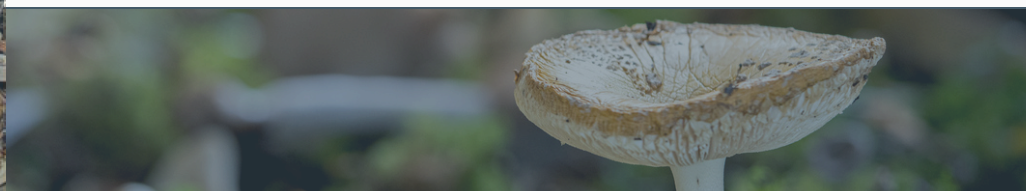
GREAT ALBERTA MUSHROOM FORAY

AUGUST 30 - SEPTEMBER 2
COLD LAKE, ALBERTA

*Forays. Presentations.
Experts & Food*



The Myco Gardener





BOARD OF DIRECTORS

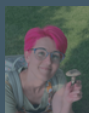
PRESIDENT

Karen Slevinsky



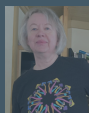
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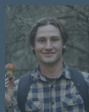
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DIRECTOR

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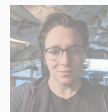
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FORAY COORDINATOR

Ryan Armishaw



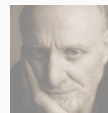
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DIRECTOR

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DIRECTOR

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albertamushrooms.ca



EMAIL US!

contactus@albertamushrooms.ca



PRESIDENT'S MESSAGE

As I sit here writing, giant wet snowflakes are falling. It's May 1, 2024, and I couldn't be happier. This moisture and cooler spring temperatures bode well for a nice spring 'shroom flush. A cool welcome to the morel season but I wish a very warm welcome to our 2024 Board of Directors. We have Martin Osis (Secretary) and Ryan Armishaw (Foray Coordinator) who are both new to the Board this year, but each has served in prior years. We have Paul Welke (Volunteer Coordinator), Elle Wittke (Spore Print Editor), Claudia Torres and Ethan Zapach, four newly elected Directors. Rick Watts was re-elected this year and Mel Hohn steps into role of Vice President. For a complete listing of the AMS Board please refer to the previous page.

So, what's in store for 2024? We will be starting the year as always, searching for the ever-elusive early morels, the true morels and this year (a first in a long while) we are on the hunt for a forage-able patch of burn morels. Next, we plan to forage for oyster mushrooms on dead poplars in central Alberta and about the same time gather for a summer solstice event. For an idea of the upcoming planned events see our Event page at www.albertamushrooms.ca/Events/ For exact dates and details please be sure to read your emails from AMS - the email with the signature 🍄 in the subject line.

Notwithstanding our spring foray plans, our new Board of Directors have been planning the rest of the year for you as we now know that

- the Wild Mushroom Expo will be held at the Devon Community Centre in Devon Alberta, on August 3 and 4, 2024;
- the Great Alberta Mushroom Foray will be held in Cold Lake at the Energy Centre on August 31 to September 2, 2024; and
- one of our new events has just taken place to great success: The Calgary Spore Social attracted 95 participants who snacked on a collection of mushroom amuse-bouches at The Artist Lounge in Calgary.

Also new this year is our attempt to engage West Fraser into talks to preserve old growth forestry ecosites in the Hinton Forestry Management Area so as to ensure the viability of the large white hedgehogs, conifer boletes and likely others yet to be identified. Our first meeting with West Fraser is June 1, 2024. We are hopeful that we can play a role in some habitat protection.

Finally, I am pleased to announce that the Alberta Mycological Society is the successful recipient of an Alberta Conservation Association Large Grant of \$17,700 to be disbursed over 2024 and 2025. These funds will go toward supporting our Fungarium and the society as a whole.

This year I will be using [iNaturalist Canada](https://www.inaturalist.org/) to record all my fungal finds. Learn more about iNaturalist monthly from Hanna Davidson every fourth Wednesday of the month starting April 24 and running to September 25, 2024 on Zoom. Look for your invitation with the 🍄 in the subject line. Enjoy 2024!

BY KAREN SLEVINSKY



JEFF NASH, PRESIDENT'S
AWARD WINNER 2024
VIDEOGRAPHY OF THE MUSHROOM EXPO



MELANIE JONES, PH.D.
PRESIDENT'S DINNER SPEAKER



ALBERTA CONSERVATION INFORMATION MANAGEMENT SYSTEM

BY JOSHUA WASYLIW

How You Can Contribute to Alberta's Environmental Conservation

Alberta has many species of fungi and lichens, with over 3,000 known species (and subspecies) identified in the province. But fungi and lichens tend to be overlooked and under sampled, so there are likely many more species to be discovered. Currently, over 1,000 lichens and fungi in Alberta are considered rare and are 'Tracked' by the province of Alberta.

This type of information and more is available from the Alberta Conservation Information Management System (ACIMS). ACIMS is the biodiversity data center for Alberta and a member of the international NatureServe network of Conservation Data Centers. Important functions of ACIMS include:

- Collecting information on tracked species
- Updating species status ranks
- Providing species lists for the province

ACIMS has a focus on non-fish and wildlife (vertebrate) species, such as vascular plants, fungi, lichens, slime molds, invertebrates.

How can you help contribute to our conservation data center?

1. Submit data for rare species to ACIMS.

- If you find a species that you think is rare, record key information like: species name, date, location, key characteristics for identification, reference source, habitat information, and other comments. Take pictures, collect a sample (if appropriate, based on number observed), and confirm the identification with an expert.
- Consider using an app like iNaturalist to record the information. Once the identification is confirmed, contact ACIMS to determine the best way to submit your data.

2. If you find a new species not included on the ACIMS list, let us know. Once the identification is confirmed, contact ACIMS to determine the best way to submit your data.

How can you benefit from ACIMS?

1. Use the ACIMS search tool or shapefiles to search for locations of tracked species of fungi.
2. Find species list of fungi for Alberta to help guide your forays.

If you have any questions about the work that ACIMS does, use the link below for more information

(<https://www.albertaparks.ca/albertaparksca/management-land-use/alberta-conservation-information-management-system-acims/>).



WILD MUSHROOM EXPO

WILD MUSHROOM CAFE
VENDORS
LECTURES
FEATURED CHEF
&
MUSHROOMS!

DEVON, ALBERTA

DEVON COMMUNITY CENTRE
AUGUST 4
10 AM - 5 PM

CELEBRATING

HELENE M.E. SCHALKWIJK-
BARENDSEN
1921 - 2010

FOUNDING MEMBER OF THE EDMONTON
MUSHROOM CLUB, MYCOLOGIST,
PAINTER, AND AUTHOR OF OUR
FAVOURITE BOOK "MUSHROOMS OF
WESTERN CANADA".

FOR MORE INFORMATION CHECK OUR WEBSITE: ALBERTAMUSHROOMS.CA
OR WATCH US ON SOCIAL MEDIA



WILD MUSHROOM EXPO

DEVON, ALBERTA

DEVON COMMUNITY CENTRE
20 Haven Ave, Devon, AB
T9G2B9

AUGUST 4
10 AM - 5 PM



WHAT'S HAPPENING

SATURDAY, AUGUST 3, 2024
PRE-EXPO FORAYS

SATURDAY, AUGUST 3, 2024
SET UP AT DEVON COMMUNITY
CENTRE

SUNDAY, AUGUST 4
EVENT DAY!

SET UP: 8 AM
TAKE DOWN: 5 PM - 7 PM

WHY IT'S FUN!

THE WILD MUSHROOM EXPO IS OUR SIGNATURE PUBLIC EVENT OF THE YEAR, AND THE MAJOR FUNDRAISER FOR AMS AS WELL. THERE WILL BE HUNDREDS OF MUSHROOMS DISPLAYED, AND WE NEED YOUR HELP TO MAKE THIS AS SUCCESSFUL AS IT HAS BEEN FOR THE PAST 20+ YEARS. OUR GUESTS WILL BE ASTONISHED AT THE VARIETY OF FUNGI AND WILL BE ASKING PERTINENT QUESTIONS, MOSTLY "CAN I EAT THIS?", BUT SOME VERY THOUGHTFUL QUESTIONS WILL ARISE AS WELL. WE WILL BE SHOWING OFF ALL THAT WE KNOW ABOUT MUSHROOMS IN A ONE DAY EXTRAVAGANZA!

ACCOMMODATIONS

DEVON LIONS CAMPGROUND
BEAUTIFUL LOCATION ON THE RIVER

BOOK NOW ON THE DEVON LIONS
CAMPGROUND WEBSITE. SITES GOING FAST!

HELP OUT

- VOLUNTEER SUNDAY!
- PICK AS MANY DIVERSE MUSHROOM SPECIMENS AND HABITAT FEATURES AS POSSIBLE, EVEN IF IT'S FROM YOUR BACKYARD.
- PARTICIPATE IN THE SATURDAY FORAYS: DONATE ALL YOUR SPECIMENS
- BRING YOUR FORAGED MUSHROOMS TO THE VENUE: SATURDAY OR SUNDAY MORNING
- HELP SET UP: SATURDAY

VOLUNTEERS NEEDED!

REASONS TO VOLUNTEER
FREE ENTRY
FREE MEAL & DRINK TOKENS





How a humble mushroom could save forests and fight climate change...

BY PAUL W THOMAS

HONORARY PROFESSOR DEPARTMENT OF BIOLOGICAL AND ENVIRONMENTAL SCIENCES, UNIVERSITY OF STIRLING
IN COLABORATION WITH THECONVERSATION.COM. REPRINTED WITH PERMISSION

The conversion of forests to agricultural land is happening at a mind-boggling speed. Between 2015 and 2020, the rate of deforestation was estimated at around 10 million hectares every year.

Compared to 2012, the UN's Food and Agriculture Organization (FAO) is predicting a massive increase in agricultural demand of 50% by 2050. In South America, around 71% of rainforest has been replaced by pasture and a further 14% has been lost to the production of animal feed. One of the key successes of COP26 was a pledge from world leaders to end deforestation by 2030.

From a climate and carbon point of view, we know that cutting down trees at this scale is devastating. But the impacts run deeper: 75% of the world's accessible fresh water arises from forested watersheds. And with 80% of the world's population facing a threat to their water security, trees play a very significant role in stemming desertification and preventing soil erosion. They also protect against flooding in coastal areas as well as being home to a huge number of species, many of which are important crop pollinators.



So what can we do? We know that different foods have different footprints. Reducing the quantity of animal-based products will have a huge impact. In fact, eating less meat is one of the most potent changes that people in the west can make to help save the planet.

But what if we could go further? What if, instead of having farming and forestry in direct conflict, we could develop a system that allows food production and forest on the same parcel of land?



Miraculous mushrooms

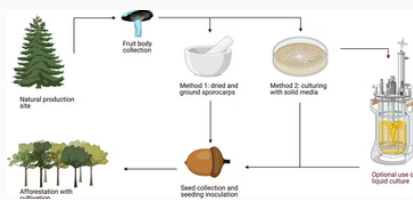
This is exactly what our latest research focuses on, looking at fungi that grow in partnership with trees, in a mutually beneficial arrangement. This is a common association and some species can produce large mushroom fruiting bodies, such as the highly prized truffle. Aside from this delicacy, cultivation of these species is a new and emerging field. But progress is especially being made in one group known as milk caps, that include a beautiful and unusually bright blue species known as *Lactarius indigo*, or the blue milk cap.

High in dietary fiber and essential fatty acids, this edible mushroom's blue pigmentation means they are easy to identify safely. With extracts demonstrating antibacterial properties and an ability to kill cancer cells, the blue milk cap could also be a source of pharmacological potential.

In our paper, we describe how to cultivate this species, from isolation in the lab to creating young tree saplings with roots inoculated with this symbiotic fungus. These trees can then be planted at scale in suitable climate zones ranging from Costa Rica to the US. As the tree and fungus's partnership matures, they start to produce these incredible mushrooms packed with protein.

The agriculture on cleared forested land is dominated by pastoral beef production where around 4.76-6.99kg of protein per hectare per year is produced. But, if this system was replaced with planting trees hosting the milk cap fungus, the same parcel of land could produce 7.31kg of protein every year. The mushrooms can be consumed fresh, processed or the protein content can be extracted to produce other food items.

This would lead to more food production, with all the benefits forests bring and without the environmental burdens of intensive farming such as fertilizer, water use or the growing of additional feed. Beef farming contributes to climate change by emitting greenhouse gases, but as these fungus-inoculated trees grow, they draw down carbon from the atmosphere, helping in our fight against the climate crisis. So, as well as producing more food, the process can also enhance biodiversity, aid conservation, act as a carbon sink for greenhouses gases and help stimulate economic development in rural areas.



In Mexico, harvesting is often a family activity where fungi are traded informally or exchanged for goods and in neighboring Guatemala, the blue milk cap is listed as one of the most popular edible mushrooms. So there is economic potential and community empowerment at a smaller local scale as well as trading opportunities for national and international corporations.

We believe this approach is cheaper – or more cost effective – than beef farming. But this is a new technology and like all new innovations, support is needed. This means further research and proper financial investment to develop the technology to a point where agribusinesses feel confident to invest at scale.

But even with support, there must also be demand for the end product. Doubtless with health and environmental concerns in mind, the proportion of meat eaters who have reduced or limited the amount of meat they consume has risen from 28% in 2017 to 39% in 2019, according to market research. And sales of meat-free foods are expected to reach £1.1 billion by 2024. Clearly there's a market, as ordinary people endeavour to do their bit for the planet. With so much at stake we must urgently pursue the promising options that fungi provide.



The Beaver Hills and the Continental Mycoblitz

BY RICK WATTS

In 2012 the Alberta Mycological Society conducted a number of scientific forays in Elk Island National Park, culminating in the Great Alberta Mushroom Foray (GAMF) that same year. More than 300 separate species of macrofungi (mushrooms) were vouchered, cataloged and entered into the society's database. Specimens of interest were preserved and sent to the Canadian National Mycological Herbarium (DAOM) in Ottawa.

Designated as a UNESCO biosphere reserve in 2016, the Beaver Hills is an area of rolling uplands located to the east of Edmonton in the Cooking Lake Moraine. It is relatively undeveloped and consists of more than 1,500 square kilometers of "knob and kettle country," characterized by mounds of glacial deposit. The area uniquely represents an island of dry mixed-wood boreal forest surrounded by Aspen parkland. As a result, its wildlife includes a mixture of boreal and parkland species such as moose, black bear, lynx and mule deer, with the occasional elk, cougar or wolf. The Beaver Hills Biosphere is a collaboration between Strathcona, Leduc, Beaver, Lamont, and Camrose counties, with additional stakeholders in the form of Parks Canada, Alberta Parks and Nature Conservancy Canada. Protected areas make up more than a quarter of the Biosphere.

This year, in collaboration with the Alberta Mycological Society, the Friends of Elk Island Society is embarking on the Beaver Hills Mycoflora project: A three-year undertaking that builds on the 2012 AMS data by collecting, identifying and vouchering fresh specimens across the Biosphere, with the additional DNA sequencing of select specimens. This will support Parks Canada's mandate to conserve and manage species of concern, while also providing baseline mycological data for the Beaver Hills Biosphere. It will inform management planning cycles and will be included in the NatureServe rankings for the Canadian Endangered Species Conservation Council's Status of Wild Species Report.

The project as a whole started with a pilot foray in the fall of 2023 with a small number of volunteers collecting specimens from the Elk Island Golf Course. With the warm weather this spring, the project has officially entered its first field season with two forays in May. The team may not have found verpas and morels as expected, but several specimens of the "rosy goblet" *Microstoma protractum* were collected! This is a cosmopolitan species, but one which has not been sighted in Elk Island for quite a few years. Future forays are planned for the Strathcona Wilderness Centre, Beaver Hills Biodiversity Trail, Elk Island National Park, and more throughout the season to ensure an accurate representation of mycodiversity across the complete biosphere.

On the weekend of August 16 - 18 of this year, we will be hosting a camping foray near Hastings Lake during the summer Continental Mycoblitz, a citizen science project relying on observations made on iNaturalist. Sites visited will include Miquelon Lake, Ministik Lake Bird Sanctuary, and several Nature Conservancy Canada properties. Please mark the dates on your calendar - we hope to see many of you there!

Please note that collection of mushrooms is not allowed in any parks or protected areas without written permission. This applies to the general public, members of the Alberta Mycological Society, and members of the Friends of Elk Island Society. Membership of these societies does not confer any special privileges. Leaders of the Beaver Hills Mycoflora Project have obtained permits from Parks Canada, the Province of Alberta, Nature Conservancy Canada and Strathcona County. These permits allow collection for scientific purposes only and apply to named individuals and groups under their supervision.

The Beaver Hills Mycoflora Project is generously funded by the Edmonton Oilers Community Foundation and the TD Friends of the Environment Foundation. Participation in the project is open to volunteers from both societies. More information can be found on the Friends of Elk Island Society website at <https://www.elkisland.ca/projects/mycology> and the society's Meetup page at <https://www.meetup.com/elkisland/>.



PHOTO CREDIT: RICK WATTS

THANK YOU TO OUR CORPORATE MEMBERS



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