

SPORE PRINT

FALL 2021

KEEP CALM AND FORAY ON



The Alberta Mycological Society (AMS) worked hard this year to overcome the social restrictions from the pandemic and the drought conditions of the heat dome this summer.

Despite these challenges, the AMS is proud to have hosted a number of forays in the Red Deer, Calgary, and Edmonton regions, the Great Alberta Mushroom Foray (GAMF) in Lac La Biche, AB, a variety of virtual presentations, and our Annual General Meeting.

Read more about these great events in this Spore Print issue and stay tuned to our emails for events we're planning for 2022!

FEATURED MUSHROOM: *Volvopluteus v. gloiocephalus*
(aka *Volvariella speciosa*, the grey *Volvariella*)

A gilled, saprophytic mushroom with a shiny grey cap (viscid in damp weather) growing globally in a wide climate range on decaying hardwood and wood chips. It can be characterized with a white, modest to flaring volva that completely enwraps the youthful mushroom in the egg stage.

This mushroom is not recommended for eating and often reported as **poisonous**.

Gills: white turning pink, ventricose, serrate, remote from stalk.

Spore print: deep pink.

Stalk: white, solid, stringy inside, sometimes hollow, thinner at the top and widening at the bottom.

TAXONOMY:

Kingdom: Fungi

Division: Masidiomycota

Class: Agaricomycetes

Order: Agaricales

Family: Pluteaceae

Genera: *Volvopluteus*

Species: *V. gloiocephalus*

Inside this Issue:

FEATURED
MUSHROOM

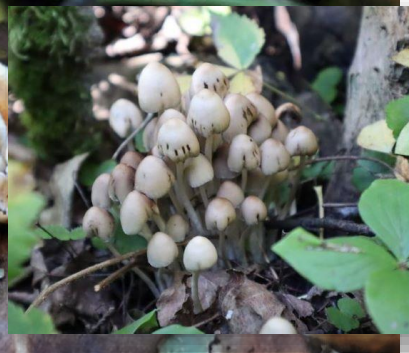
GREAT ALBERTA
MUSHROOM FORAY
(GAMF)

FORAYING AHEAD

WILD MUSHROOM
SOUP RECIPE

AMS GRADUATE
AWARD





LOCATION: Lac La Biche, AB
(Portage College)

DATE: September 3 – 6, 2021

ATTENDANCE: 56 people

KEYNOTE SPEAKERS:

Dr. Roland Treu, Ph.D.
Dr. Michael Beug, Ph.D.
Dr. Patrick Leacock, Ph.D.
Martin Osis, former president AMS
Mr. Léo Piquette

FEATURED EVENTS:

Natural History of Lac La Biche
Mr. Léo Piquette, Historian

Introduction to Mushroom Identification Workshop
Martin Osis, former President AMS

Introduction to Forays Workshop
Martin Osis, former President AMS

Introduction to Mushroom Description Workshop
Martin Osis, former President AMS

Fungi and Plants, an Enduring Relationship Presentation
Dr. Roland Treu, Ph.D.

Wild Mushroom Live Cooking Demonstration
Josh Smith, Regional Foray Coordinator &
Karen Slevinsky, AMS President

Should I Have Eaten That? Presentation
Dr. Michael Beug, Ph.D.

Fungi in the Tree of Life Presentation
Dr. Patrick Leacock, Ph. D.



GREAT ALBERTA MUSHROOM FORAY (GAMF)

What is GAMF?

GAMF brings people from around Western Canada together to learn about mycology, explore nature, enjoy foraying together, discover great mushroom species, and help identify the diverse mushroom species growing in Alberta.

What is a Foray?

A mushroom foray is the exploration of an outdoor location to search for, identify, and learn about the fungi growing in the area.

Who Attends GAMF?

GAMF is open to anyone, including people who know nothing about mushrooms to citizen scientists to amateur mycologists. We bring mycologists, experienced foragers, and fungi specialists to the event to share their knowledge with everyone.

So How Does GAMF Work?

We want to make sure everyone feels welcome, learns a ton about fungi, makes new friends, and leaves with amazing memories! We work hard and play hard at GAMF. This Spore Print describes the 2021 GAMF events starting with day one!



GAMF Welcome & Evening Social

Léo Piquette, a nature lover, historian and social rights advocate, welcomed GAMF participants to Lac La Biche and gave a wonderfully insightful history of this area.



GAMF Launch & Opening Remarks

Nancy Broadbent, President and CEO of Portage College gave a warm, supportive welcome to GAMF and our vision. Karen Slevinsky, AMS President, kicked off GAMF with inspirational words to focus our energies and introduced our foray leaders and other knowledgeable fungi enthusiasts.



Introduction to Mushrooms Workshops

Martin Osis, AMS former president provided a 3-part workshop with a foray component to teach attendees who are new to fungi and foraging how to identify mushrooms, record their characteristics on mushroom ID cards, how to foray safely, and how to describe mushrooms meaningfully.



Group Forays

Foray leaders with geographical coordinates led groups out to different locations, travelling caravan style. At each location, people checked-in, listened to safety practices, established a meeting time, and walked together to look for mushrooms. Knowledgeable AMS members are always identified so new mushroom enthusiasts can travel with them, learn from them and ask questions.



Mushroom Identification

After the forays, people returned back to home base to use their identification books and identify their exciting finds. This young mushroom enthusiast, Léa Mills, has discovered the biggest *Collybia dryophila* mushroom that Martin Osis has ever seen!

Mushrooms are grouped on tables by their characteristics such as gilled, toothed, pored, polypores, and by genera.



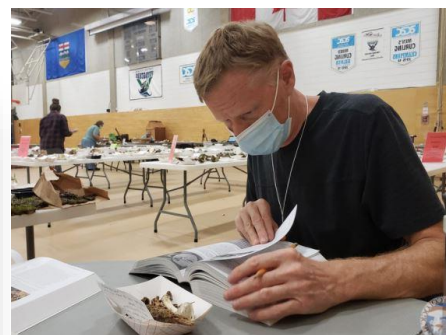
FORAY LOCATIONS:

(Permits are required for foraging.)

- Plamondon Fen
- Plamondon Dunes
- Churchill Park – Kinglet Trail
- Churchill Park – Night Life Trail
- Square Lake
- Shaw Lake
- Touchwood Lake
- Beaver Trails
- Grazing Lease Pines
- Churchill Park – Birch Wetland
- North Buck Lake (Early Bird)
- Poachers Landing (Early Bird)

Foray Leaders:

- Robert Simpson**, AMS Treasurer
- Christine Costello**, AMS Membership Coordinator
- Lisa Oishi**, AMS Director-at-Large
- Candice Cullum**, Regional Foray Coordinator
- Josh Smith**, Regional Foray Coordinator





THE MUSHROOM DATABASE:

It's vital we document the fungi we identify in a database for scientific purposes and further our understanding of our ecosystem.

Step 1: After we identify the mushroom, we record the mushroom in our database.



Step 2: Then we photograph the mushroom in its fresh "fruiting" form.



Step 3: The mushrooms are dried for preservation and DNA analysis.



Step 4: The dried specimens are submitted to Canadian Herbaria.



Fungi and Plants, an Enduring Relationship by Dr. Roland Treu, Ph.D.

About 90% of plant species have mycorrhizae, implying a nutrient exchange between plant roots and fungal cells for the benefit of both partners. Mineral elements, such as phosphorus and nitrogen, are provided by the fungus which in turn receives plant carbohydrates. Mycorrhizae played a major role in enabling plants to move from water to land approximately 400 million years ago. Mycorrhizal fungi can also mediate the movement of nutrients between plants, emphasizing the central role of mycorrhizal fungi for many ecosystems. Forestry and agriculture benefit from the various practical applications of mycorrhizae.

Dr. Roland Treu attended GAMF and gave a superbly informative and entertaining presentation live in Portage College's theatre.



Should I Have Eaten That?

By Dr. Michael Beug, Ph.D.

"Drawing on my over 50 years in the woods hunting mushrooms and over 40 years on the North American Mycological Association (NAMA) Toxicology committee, I describe the common identification mistakes that people have made when out mushrooming. This talk features the

most dangerous mushrooms and what happens when you eat a poisonous species. You will also learn what features I look for when seeking my favorite edible mushrooms. I describe how to tell the good ones from the bad ones. My stories are both of the mistakes that people have made leading to poisoning and of the disappointment felt by people when they realize that they have left choice edibles behind." – Dr. Beug, Ph.D.

Dr. Beug joined us at GAMF by Zoom. You can check out his [presentation here](#).



Live Cooking Demonstrations

Absolutely delicious soups and mushroom dishes were prepared live for our attendees using wild mushrooms collected during forays for a tasty treat for a hard day's work!



At GAMF, we taught members how to take a mushroom spore print! (see the picture to the right).



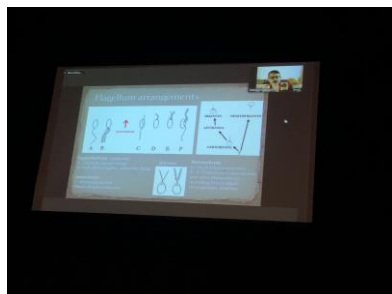
Fungi in the Tree of Life

By Dr. Patrick Leacock, Ph.D.

Dr. Patrick Leacock gave us a rare opportunity to learn the complex science behind fungi classification. Dr. Leacock also joined us at GAMF by Zoom. You can check out his [presentation here](#).



(Above) We have incredibly talented AMS members who create art from the Artist's Conk and can weave amazing (and much sought after) baskets!



GAMF is always a wonderful experience where people share knowledge, adventure together, and have fun! If we didn't see you this year, we hope to see you next year!

Words from Martin Osis, former President AMS:

It was a pleasure to give the Introduction to Mushroom Identification course. Next year, I'm looking to make some changes to the course content to reflect the changing nature of mycology. I may develop a workbook handout to go along with the course. I would like to prioritize seats to those who have never taken it before.

The "How to Describe a Mushroom" and the ad hoc *Lactarius* and *Russula* sessions were a success. In the future, workshops can include some mushroom craft sessions as well such as paper making, dying with mushrooms, making medicinal tinctures and other preparations, canning mushrooms, cooking or preserving mushrooms. We have had photography workshops plus workshops on particular mushroom genera involving guest mycologists in the past.

The mushroom ID on the floor went amazingly well. I have a good grasp of the simpler, non-cryptic specimens and had great help from the society's better identifiers. At GAMF, mycologists collaborate more on the floor and have short discussions on the various characters that we are seeing. Often one of the four or five mycologists will just know the mushroom, but when the expertise is limited, so is this discussion. I regret I didn't have more time to examine the *Polypores* and *Russulas*, but most remaining unidentified mushrooms were *Cortinarius* species and duplicates.

So overall we did very well! I think our new members did amazing work on some really tough identifications!



(Above) Dr. Roland Treu hard at work identifying fungi.



Contributions to the Success of the 2021 Great Alberta Mushroom Foray

Special thanks to **Portage College** and the college's President **Ms. Broadbent** for supporting our Vice President **Michael Schulz'** request to make Portage College the location for the laboratory portion of the Great Alberta Mushroom Foray (GAMF). Thank you, **Michael**, for leading the GAMF setup and organizing the laboratory materials and space at Portage College. Both the facility and the people at Portage College proved that it was an outstanding location.

Several Alberta Mycological Society (AMS) Board members deserve appreciation for their great contributions to the success of 2021 GAMF. **Martin Osis** is a life time member of the AMS and not currently on the Board but he has held almost every position on the Board. At this year's GAMF he led two workshops: *Introduction to Mushroom Identification* and *How to describe a mushroom*. As well he spent most of his free time that weekend identifying and storytelling. What steadfast loyalty! Thank you, Martin.

Thank you, **Barb Shworak** and **Melanie Fjoser**, for your volunteer hours: entering data and monitoring the collection process: i.e. bossing us around! Thank you, **Rick Watts**, for taking hundreds of specimen photographs this weekend, as well as taking our group photo. Thank you, **Liz Watts**, for preparing and setting up the DNA extraction station, and for processing the specimens for the drying station. Thank you **Rosemarie O'Bertos** for meeting me at the storage last Monday and loading up your KIA with all our supplies, then driving them here and unloading. Whew! Thank you also for having the incident report forms, membership forms, expense forms, etc. You play the role of Past President well! Thank you, **Josh Smith**, for leading some of GAMF forays and preparing a glorious mushroom soup. Thank you, **Christine Costello**, for quietly going about accepting all of our GAMF registrations, sending out countless emails helping our members orient themselves with respect to this event and other AMS events. Thank you, Christine, for helping with the finances and for leading a foray here. It should be noted that Christine is the BIG FIXER should you have any login issues with our website. Thank you, **Robert Simpson**, for leading a foray both morning and afternoon of both of our days here – a physically and mentally taxing role. Thank you also for spending long evenings here assisting with identification. Thank you, **Candice Cullum**, for leading forays here (and I might add in central Alberta). Candice puts the AMS on the map by constantly scouting areas that show great fungal promise. As well thank you Candice for your spore print demonstration and for sharing your fungal crafts with us. I am close to the end of my list, I now have only three people left to thank – Brent, Lisa and Erica. If Christine is the fixer of memberships and registration then Brent, Lisa and Erica are the fixers of this great event. Thank you, **Lisa Oishi**, for your procurement of the permits, and for working on the foray lead packages. Thank you Lisa and **Brent Martell**, for leading the pre-GAMF foray on Friday. With their work we had something to examine and talk about over a glass on Friday night. Thank you, Lisa and Brent, for organizing and cleaning tables and generally keeping the GAMF looking and feeling great. And now Erica, thank you **Erica To** for being the fixer of everything! As an example: Erica spent \$600 shopping for this event. By herself. Think about it. Shopping is hard work. Making the list, going to Superstore, then Shoppers, and then even going to Costco, on our behalf. (And worrying: do we have enough of this and that!) Erica updated the AMS website for GAMF. She went about booking the AV person here to prepare the theatre for our speaker, and she served as the technical host for the in-person and Zoom speakers. A very extra special and warm thank you to Erica for her outstanding volunteerism.

Lastly, I must **thank you for attending** our event, without participants the show simply does not go on, and thank you **Richard Slevinsky**, for indulging my interest. Thank you all. Thank you, Richard.

Karen Slevinsky
President AMS

P.S. To anyone I may have missed, thank you for your assistance and your wine. This event requires many great people, and it is hard to remember to thank each individual, so thank you to those who I have missed.



FORAYING AHEAD BY HANNAH BROWN

This year I decided to take up mushroom foraging to participate in a wonderful project called “The Cautious Optimist,” which involves learning a skill that would be useful in an apocalyptic climate setting. So when I went to the Great Alberta Mushroom Foray, I knew I had a lot to learn. The weekend was filled with characters, both fungi and *Homo sapiens*, and my partner and I attended as many forays as possible. Led by experts, we learned how to better recognize *Russula* species by noting the colours of spore prints and bruising.

The Forays

Skulking through the woods and staying quiet so as not to disturb the slumbering mushrooms, we spotted two very exciting mushrooms – the *Laccaria purpureo-badia* and the *Pseudohydnum gelatinosum* fungi!

After I had been doing most of the harvesting, I asked my partner, Greg, to help, and he just happened to harvest the most challenging mushroom we’d come across.



(Above) *Laccaria purpureo-badia*



We still aren’t sure what it is...

Even Martin Osis didn’t know.



(Above) *Pseudohydnum gelatinosum*



The Lectures

We were both astounded by the sheer volume of different fungi species; 5.1 million out of the 8.7 million on earth is a pretty jaw-dropping ratio. We learned a lot from the lectures and found them highly entertaining, especially when Dr. Michael Beug's voice glitched when he was talking about eating Destroying Angels. The Zoom call slowed down so his voice sounded extra *doomy* when he said that eating them "will result in death." It was good to hear some myths around tasty mushrooms being edible as well. I always love learning about the beautiful symbiotic relationships between fungi and plants too and seeing the applications of using soil filled with mycorrhizae to help restore biodiversity in damaged ecosystems. I remember when I first learned about mycorrhizae in my second-year biology class. I thought they just made the plant grow better; I had no idea how essential they really were to the overall vitality of a forest and how much communication happens between plants, thanks to mycelium networks.

The Treats

Karen and Josh made us delicious creamy and buttery treats with honey mushrooms, oysters, and various *Suillus* species.



Unfortunately, we didn't get around to eating the scaly hedgehogs (*Sarcodon imbricatus*). We were tuckered out from all the shenanigans of the weekend!

The Friends

People who love mushrooms enough to spend \$150 on a weekend conference are pretty cool people. It's gratifying to see people of all sorts, and with all sorts of knowledge and stories, come together to share their love and appreciation of all things fungal. Some attendants knew a lot about foraging plants, some knew of the medicinal properties of mushrooms, and some were enthusiastic about creating fungal art. Sharing such wholesome appreciation is an excellent foundation for friendship.

All in all, the weekend was an experience that Greg and I won't forget. We learned about new and beautiful areas to camp and explore, I got a new book for identifying mushrooms on a wider level than just for edibility, and though I ripped my favourite pair of pants (again), I learned a valuable lesson in dressing for the activity.



Wild Mushroom Soup

By Karen Slevinsky

So you've gone on a foray, or maybe you came to the Great Alberta Mushroom Foray this September. Or maybe you have small bits of wild mushrooms frozen or dried, just brimming with potential. Then you have the finest ingredients to make wild mushroom soup.

What you need is 4 cups of choice wild mushrooms. I have used the following combinations with great success.

- 2 c horse mushrooms (*Agaricus arvensis*)
- 2 c assorted such as inky cap* (*Coprinus atramentarius*) oyster (*Pleurotus ostreatus*), and fairy ring mushrooms (*Marasmius oreades*)

Or

- 2 c honey mushrooms (*Armillaria*)
- 2 c assorted such as *Suillus/Leccinum*, hedgehogs (*Hydnum repandum*), man on horseback (*Tricholoma equestre*)

Of course, for choice soup, if you are lucky enough to have found a good amount of morels and or verpes; half or all of your mushrooms could be these mushrooms. *Shaggy mane may also be used or used instead of inky cap. Whichever mushrooms you have on hand, you could make a very delicious soup by combining species. (Just a note - inky caps should **not** be eaten with alcohol or it can make you ill!)

4 c of finely diced **mushrooms** (cleaned and washed)

Place in a 1.5 to 2 L saucepan

Add **water** just to the level

Gently heat/hot simmer until the water vaporizes (about 30 min)

Midway, dice a **small onion** (2-3 tablespoons max) and add to cooking mushrooms.

When the water vaporizes but mushrooms do not stick add 2 to 5 teaspoons of **butter** (to glaze the mushroom), 2 to 4 tablespoons of **flour**, 1.5 teaspoon of **salt**, and one small clove of **garlic** (diced or smashed). Stir gently.

Add 3 cups **milk** and cook while watching and stirring. 30 to 40 minutes. Soup will gently thicken. (At this point, after about 1 hour, you may set aside and finish in time for the gourmet meal you are preparing.)

Lower the heat (or reheat) and add 1 cup of **whipping cream**. Cook for 10 minutes but do not allow the soup to boil.

Season with pepper and salt (if necessary), serve with a **garnish** of parsley, chopped green onions, or dried chili peppers. Enjoy!



(Assorted Mushrooms)



(Diced in the pot)



(Milk in pot, no cream)



(Finished soup with a slightly different mushroom combination than shown at the top.)



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Josh Smith – Director-at-Large

Erica To – Director-at-Large



AMS Graduate Award

With the goal of enhancing fungal research, the Alberta Mycological Society (AMS) is proud to champion the AMS Graduate Award with the University of Alberta (U of A).

Incoming or existing MSc or PhD students are selected based on academic achievement and interest in the field of mycology/fungal studies as demonstrated through the student's research project.

With the creation of this award, AMS wishes to inspire university students to pursue fungal research to foster an appreciation for fungi and their role in our ecosystem. The AMS hopes that many more people will become just as enthralled and interested in mushrooms as we are!

AMS has committed to funding this award at \$2,000 per year for five years. If donations towards this award exceed \$50,000 in five years the funds are placed in the Endowment foundation at the U of A enabling this award to be presented into perpetuity. So, we encourage all members to donate. Your donations are made directly with the U of A and you will receive a taxable donation receipt from the U of A. If the Endowment produces more than \$2,000 per year there will be more than one award presented.

[Click here](#) or the picture of Alberta's *Leccinum boreale* mushroom below to donate!



You can also contact Michelle Ngo, Assistant Director, Leadership Annual Giving from the U of A by telephone (780)492-9487 or email mngo1@ualberta.ca to make a one-time or recurring donation by credit card or EFT transfers. Cheques can be written out to the "University of Alberta" and mailed to: *University of Alberta, University Development, 3-501 Enterprise Square, 10230 Jasper Ave, Edmonton, AB, T5J 4P6.*



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