

Spore-Addict Times



MONTHLY MEETING:

WHEN? Monday, July 27, 2015 – The fourth Monday of the month.

WHAT TIME? 6:30 pm; The meeting will come to order at 7:00 pm.

WHERE? Bear Creek Park, Administration Building

Website: www.pikespeakmushrooms.org

Contact: PPMsmail@gmail.com

PROGRAM:

Mushroom Identification using Kit Scates' Easy Mushroom Guide to Gilled Mushrooms (Brian)

How to "Bag & Tag" specimens for scientific study & submission to Herbarium (Hoa)

National Science Foundation Project - Dr. Nhu Nguyen doing research on Suillus (Brian)

Last Month's Meeting Notes:

(For those who may have missed it, I am including most of Hoa's excellent notes.—Ed.)

We had a special guest – Vera Evanson, curator of Sam Mitchel Herbarium of Fungi, talk about what we do and why we do it.

Where & What:

Curator of the Sam Mitchel Herbarium of Fungi, started with Sam Mitchel. Knew him in 60s, 70s, & 80s. Sam Mitchell was a doctor, did house calls. Started his interest of fungi in the 60s and started a group in Denver.

Sam started a mushroom club, which later became the Colorado Mycological Society;

more importantly started the herbarium - which now include, specifically, fungi. 70-80 herbarium of fungi in US. Almost every university has a collection; well collected & documented, even if not well understood.



Vera and Tom Abbott with her new book. Photo by Pat Gustavson

When:

Established a collection of preserved fungi at the Denver Botanic Gardens in 1965. Sam Mitchel had a fascination for myxomycetes (slime mold). Sam would say: imagine a swamp, and in that swamp, a creature (alligator) creeps around, eats everything it comes across, then crawls up on the bank and turns into a tree ... this is what myxomycetes do. Myxomycetes engulfs and eats everything, then becomes small mushroom-like fruiting bodies.

Why:

Why do we have an herbarium? To preserve for perpetuity. We have specimens over 100 yrs old. specimens speak for what we have - physical proof that CO has these mushroom. The collection is a voucher of where and when they were found. The Herbarium has 27k specimens in little boxes with lots of

documentation and it's very important that we have these inserts/tags w/ information (name, where found, what county, what state, date, environment, etc.) There is a growing interest in climate change now, looking at times for when living organisms fruit (flowers, plants, and fungi). So very important to date and put name down for credit.

Even if a mushroom appears to be common, we might not know that it grows at certain elevations or locations if we don't have a record of it.

Emphasis: document your collection b/c they are valuable and important to all of us. Take notes when you collect specimens. What you found, where you found it, what's growing around it; what it's growing on, etc.

We are all citizen scientists. Because we don't have a lot of real-world mycologists, we depend on citizens who like to collect and learn about fungi.

Mushrooms are beautiful and valuable! They recycle and rot ...

You want all the leaves, needles, pine cones, etc. to rot. Fungi is responsible for making soil. A handful of loam has something like 40,000 genomes in that handful. It consists of bacteria, insect parts, but mostly fungi.

The recycling is part of it. As you know, fungi have mycelium, life structure they send out branches (microscopic), exoenzymes exude out of mycelium, and break down organic material and take what they can use in the body of their mycelium.

Like us, fungi consume organic matter for energy. We ingest; fungi absorb. Rotters & recyclers, parasites (live and damage the plant.) Mutualism/symbiotic relationship between fungi and plants; brings nutrients to trees. Plants are absolutely dependent on fungi at higher elevations.

Three actions of fungi: 1) rotters & recyclers, 2) parasites, 3) mutualism/symbiotic

Vera tells a story about citizen scientists.

Cercopemyces crocodilinus, found in the soapstone prairie east of Ft. Collins under Mountain Mahogany during a BioBlitz in 2009. Looks kind of like a big white amanita with scales/crackly surface on its cap. Took a couple-few years to determine that it is a new genus of mushrooms, but it is all due to citizen scientists.

It was named *cercopemyces* after *Cercopes*, a mythical, magical, mischievous pair of forest creatures that were hard to capture (as the pair of mushrooms found in CO & UT). *Crocodilinus* because their caps look like the skin of a crocodile. Don't know how active these mushrooms are because there have only been two records found in the US.

Summary/Moral of story: Citizen Scientists discovered a new genus of mushrooms!

This mushroom will be featured in a book that Cathy Cripps and Michael Kuo are writing. For more information, check [mycoportal](#), or just Google it.

When you submit a specimen, don't expect an immediate answer/result, especially if it's a rare find. It needs to be studied, get peer reviews, etc. On a slow day, the herbarium gets hundreds of specimen submissions.

One more thing...

On another note, there's a study on *Leccinum*s right now due to a growing number of reports of gastric distress/poisoning from consuming these previously considered edibles. So, gather all *Leccinum*s we can and document locations and environment. Mycologists will do genetic research so we can learn what is causing gastric distress to some people who eat *Leccinum* and got poisoning. There is some speculation that it's due to being undercooked but there may be other variations from mushroom to mushroom that might be the underlying cause.

Vera Has a New Book!

Vera did not address edibility in her new book not because of liability concerns, but mainly because it just wasn't required by the publisher (although, her lawyer did advise her not to discuss edibility as well). For the most part, most new books published are not talking about edibility for both liability reasons and to discourage the increase in foraging. Foraging is creating a destructive atmosphere for our environment. Many places are requiring permits now b/c of the destructive nature of foraging.

If you are looking for a book that goes over edibility of fungus, Vera highly recommends the book: "[North American Mushrooms: A Field Guide To Edible And Inedible Fungi](#)", by Orson Miller, which talks about edibles.

If you'd like to learn more about mushrooms and mycology, come to the Mushroom Fair at the Denver Botanic Gardens - Sept. 6th, 11am - 5pm (Sunday), you'll have to pay to get into the botanic gardens, but then it's free to go to the fair.

Foray Report — by Hoa Pham

PPMS Foray #2: Woodland Park/ Teller County

Date: 6/14/2015

Total Foray Attendance: 14

It was a great day for a foray! 50% chance of rain, but the rain missed us, choosing to stay south of our location and we only had a few drops while we were there. The foray began around 9:30am in a forested area near Woodland Park where Michael and I took the newer/less experienced forayers to an area where we knew there were morels to be had (we had tagged some during our scouting the previous week) to show them what to look for and train their eyes on these sneaky buggers. Mike and Brian took off to check out an area that hadn't been scouted.



Photo by Hoa Pham

We met back at the parking area around 11:30 for lunch and identification. We were so lucky to have Lee with us as there were so many neat specimens that everyone brought back that she could identify and tag. Many specimens will be heading up to the Herbarium from this foray!

Official foray was adjourned around 12:45pm, but many of us stayed back to explore further.

Cool species found:

Agaricus sp. Gloeophyllum sepiarium Verpa conica
Polyporus varius Fomitopsis pinicola Trametes sp.
Trichaptum bifforme Bjerkandera adusta Pluteus sp.
Gomphidius roseus Phellinus tremulae
Gyromitra melaleucoides Tremella mesenterica
(jelly on hard wood) Dacrymyces palmatus (jelly on conifer)
Lycogala epidendrum (slime mold, a myxomycete) - and many others that have yet to be identified!

Mason and Esther found the Heliocybe sulcata. Tina and Trevor found these sweetheart Polyporus varius! Michael and I found Gyromitra melaleucoides.

We also found a bunch of different species of morels. K— found her first morel and everyone found at least one morel, except Brian. Though, I don't think he was really looking for them since we found two right off the trail near the parking area on our way back to the car.

The Annual Snowbanker's Foray:

... was cancelled this year.

PPMS Foray #3: Women's Business Park & The Crags

Date: 6/21/2015

Total Foray Attendance: 29

What an honor to have Vera Evanson join us on a foray! She has a wealth of knowledge and is more than happy to share it with anyone who has a passion to learn about all things mycological! And apparently, quite a few of us wanted to learn!

This is probably our largest foray group to date! Twenty-nine attendees in total (including the esteemed Vera Evanson).

After corralling the whole group, we headed to the Women's Business Park in Divide and started our foray around 10:45/11am. While collecting a cluster of what was probably some Gymnopus dryophilus or Rhodocollybia (can't remember 'cause I got distracted) I came across a newly emerged butterfly! Its wings were still wet and floppy. So I got it perched on an Aspen trunk, out of harm's way before heading back to our gathering spot for lunch and identification.

We gathered around 12:30 for lunch and identification. There were quite a few specimens found and everyone vying for Vera's attention.

After lunch, most of us headed off to the Craggs to continue the foray where we found some ginormous black morels - credit goes to new member Trevor Kenyon for spotting the first one on our way back to the meeting spot for identification. Some other notable finds were Leccinum, and Gyromitra esculenta.



Vera Evenson identifying specimen

Official foray was adjourned around 4:25 pm, some stayed back to explore further.



Foray members signed this polypore for Frieda Davis, who is leaving us for California at the end of August.

Some species and genera found at the Women's Business Park:

Leucopaxillus, Clytocybe, Rhodocollybia butyracea, Flammulina, Ganoderma applanatum (artist's conk), Cortinarius, Inocybe geophylla var. lilacina, Gymnopus dryophilus, Peziza, Stropharia, Psathyrella.



Mystery Mushroom (see back page) – Photo by Hoa Pham

PPMS Foray #4: Rampart Range

Date: 7/12/2015

Total Foray Attendance: 20

All in all, it was a great day to foray. We had a week's worth of soaking rain, and then had a beautifully sunny day to explore a small part of Rampart Range and all the mushrooms that were popping up from said rain!

Our first stop was at the Rainbow Gulch trailhead for the start of our foray. After about 1.5 hrs of exploration we regrouped, did some identification and then headed further south on Rampart Range

Rd to our second stop. We spent about 75 minutes foraging at this location before gathering to have lunch, identify mushrooms, and chit chat getting to know all the new members. The foray officially ended at 1:30pm.



This will be a bumper year for some choice edibles as we found quite a number of chanterelle patches and some button hydnums - both are about 2-3 weeks from full maturity. So keep your eyes peeled for that distinctive peachy orange color while out hiking or foraging on your own! As a safety precaution, NEVER eat anything you don't know with 100% certainty, there have been plenty of poison reports from amateur hunters mistaking lookalikes for the real thing. Some might give you a mild case of gastric upset, but there are plenty that will either kill you or make you wish you were dead, so PLEASE keep that in mind!

Bits & Pieces:

El Niño Update:

Scientists are now saying that the current El Niño event may last into early spring 2016 and there is a 90% chance of it lasting through the upcoming winter. There's also an increasing chance El Niño may become strong, perhaps the strongest since the 1997-1998 episode which was a barn-buster mushroom season in Colorado. Here's a [link](#) to the full story.

Woman Gets New Liver After Mushroom Poisoning:

A 52 year old Canadian woman was poisoned by eating *Amanita bisporigera*. She developed symptoms approximately 12 hours after eating the mushrooms – severe abdominal pain,

nausea, vomiting and diarrhea. Her liver eventually failed after a day and she needed a liver transplant. Read full story [here](#).

Safe Mushrooms Cause Most Poisoning Cases

The Wall Street Journal/ Ann Lukits

A study at a European hospital found the majority of mushroom-poisoning cases involved people consuming edible mushrooms, not toxic ones, says a report in the journal *Human & Experimental Toxicology*. Unsafe collection methods and storage of mushrooms considered safe to eat caused most of the illnesses, the study found.

Wild-mushroom foraging is popular in many countries, but edible mushrooms can become contaminated with toxic microorganisms if they aren't stored properly or consumed soon after picking, the study suggests.

Fragments of decaying mushrooms may remain in the stomach for three days, causing gastrointestinal symptoms, according to the study. These symptoms may be due to low activity of trehalase, an intestinal enzyme.

For the current study, researchers reviewed the medical records of 457 people, 25 to 62 years old, treated for mushroom poisoning in Kraków, Poland, from 2002 to 2009. Symptoms such as nausea and vomiting occurred up to four hours after ingesting wild mushrooms and lasted one to three days. Hospitalization was required in 5.3% of cases.

The subjects underwent blood tests and provided information about mushroom gathering, storage, and consumption. A spore analysis of the subjects' stomach contents identified the species.

Edible mushrooms were responsible for 87.5% of the illnesses, with poisonous mushrooms accounting for the rest. Most of the mushrooms were gathered by patients and some were purchased at markets or from other collectors. Of patients sickened by edible mushrooms, close to a third consumed mushrooms more than two days old and about 25% stored the mushrooms in plastic bags. Harvesting mushrooms at 77 degrees Fahrenheit or higher and carrying mushrooms in plastic bags for more than three hours in hot weather contributed to their toxicity, the researchers said.

Fewer than 1% of the estimated 10,000 mushroom species in North America are poisonous, according to the North American Mycological Association.

The Pikes Peak Mycological Society, a nonprofit organization dedicated to the advancement of mycology, publishes Spore-Addict Times monthly from April-September. Membership is open to anyone wanting to study mycology. Annual dues are \$25 for individual and family memberships (\$30 for a printed newsletter). **Submission of ideas, articles, reviews, letters, artwork and recipes are welcome.**

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Last month's entry was [Suillus granulatus](#)

Mystery Mushroom

It is summer and I just popped out of a cow pie. My cap is conical and covered in chalk-white meal. My thin white stem is slightly thickened at the cottony base. My gills are white now, but they are going to turn black pretty soon.

What am I?

The Spore-Addict times is the official newsletter of the Pikes Peak Mycological Society (PPMS) and is published monthly April - September. All articles appearing in this newsletter may be freely reproduced, unless otherwise noted, for use in other newsletters provided the source and author are acknowledged. We consider this to be a reciprocal agreement for clubs that send their newsletter to us unless we are advised to the contrary.

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