



Fall 2022

# Fungi Kingdom News

The newsletter of the Pioneer Valley Mycological Association

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It was such a relief to finally start getting some rain this fall. All of a sudden, mushrooms were bursting everywhere! On a recent walk, pholiotas were all over the place, as in this image of *Pholiota aurivella/limonella*. The whole trunk of this dead birch was covered with them. Beautiful! Our formal walk season is over, but it is still possible to find many fungal treasures out in the woods, so keep on looking!

© Karen Hidalgo



The display room early on during COMA's annual Clark Rogerson Foray in Hebron, CT over Labor Day weekend. Participants went on to discover plenty of fungi during the course of the weekend. For two perspectives on attending the foray, see articles on pages 3 and 8.

## In this issue ...

- 3 COMA foray
- 5 Russulas at Laurel Park
- 8 First year reflections
- 10 Book Review







## Pioneer Valley Mycological Association

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### OUR MISSION STATEMENT

The Pioneer Valley Mycological Association is dedicated to enhancing the public's knowledge and appreciation of the fungal kingdom by providing ongoing educational programming in the form of guided mushroom walks, lectures, newsletters, information on multi-day regional and national forays, and citizen science projects. Because fungi are integral components of complex ecosystems, we are committed to advocating for responsible and sustainable study and collection methods. We focus on, but are not limited to, the three counties of the Pioneer Valley in western Massachusetts (Franklin, Hampshire and Hampden).

PVMA is a member of the Northeast Mycological Federation ([www.nemf.org](http://www.nemf.org)) and the North American Mycological Association ([www.namyc.org](http://www.namyc.org)).

[www.PVMAmyco.org](http://www.PVMAmyco.org)

Also visit Dianna Smith's educational site [fungikingdom.net](http://fungikingdom.net) for articles, fungi photos, and more.

### We Welcome Your Submissions!

This is your newsletter; we'd love to have you contribute to it!

Prose, verse, photos, drawings, recipes, scientific observations – send them all to:

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### From the President...

Earlier this summer, we all wondered if it would ever rain. The *Farmer's Almanac* cheerfully told us to expect rain by mid-September, and that's exactly what happened. Our mushroom season was saved! While it wasn't the incredible season we had last year, the past few weeks have been wonderful. My own back woods have filled up with fungi, and I can see by all your social media posts that your spots have been bountiful too.



We've welcomed many new members this year, and I have really enjoyed meeting and getting to know each of you. Besides the fungi, it's the people who continue to make our club a welcoming and fun community. Thanks so much for joining us! And thanks for sticking it out with us on the many early summer walks with barren woods, with your senses of humor, optimism, and interest in anything we managed to find.

- Jessica



Photos © Sue Lancelle



"Aborted entoloma" or "shrimp of the woods" is one of the mushrooms that seemed to have popped up in great numbers in our area after the rains started this fall. *Entoloma abortiva* parasitizes various species of *Armillaria*, producing the lumpy white blobs that can be found near the normal looking *Entoloma* fruiting bodies. Both forms are edible.



# PVMA at the Clark Rogerson Foray: The Value in Volunteering

**By Jess Benson Evans**

Every September, the Connecticut-Westchester Mycological Association (COMA) hosts their annual Clark Rogerson Foray at Camp Hemlocks in Hebron, Connecticut. This “small” foray generally attracts attendees from across the Northeast, and registration is capped around 80 attendees. I was able to attend in 2019 but the pandemic and life as a single parent made it difficult for me to attend over the past few years.

All the stars aligned this year, and I was able to sign up for my second-ever Clark Rogerson foray. Our PVMA group included Vice President Mary Obrzut, club mycologist Dianna Smith, Treasurer/Membership Chair Mike Ostrowski, and members Karen Hidalgo, Brenda Clark, and Anna and Rudi Seitz. Beyond bringing dishes for the Saturday-night potluck, almost all of us also volunteered to help with various aspects of the foray.



PVMA members attend the 2022 COMA foray in Hebron, CT

As foray chair/registrar Joe Brandt noted before the foray began, “Veteran foray attendee or not, you all should know that (aside from the invited mycologists) the entire event is produced and run completely by volunteers; we have no paid staff. ‘Many hands make light work’ is a time-honored saying, which could not be truer than it is for the logistics involved for the Clark Rogerson Foray.” This means that every meal set out for attendees, every neatly arranged stack of bedding ready for the bunk, every hour of open swim time at the pool is planned and completed by volunteers. I saw this in action during several stints in the kitchen, washing dishes at the large sink as I watched the carefully choreographed dance of COMA members preparing our evening meals.

During the short hours I spent helping out, it was evident that the amazing folks of COMA were highly dedicated to creating what I believe is one of the best foray experiences out there. Volunteers were up late into the night serving hors d'oeuvres for the social hours or preparing collected mushrooms for Sunday's mycophagy and up early the next morning to ensure coffee was brewing for attendees. A number of attendees helped wash tables, collect dishes, tidy common spaces, and pack up everything at the conclusion of the foray. This volunteerism is a major part of what makes the Clark Rogerson Foray great – the sense that everyone is working together.

Beyond kitchen and dining-related tasks, other volunteer roles were also available. Late on Sunday evening, perhaps 10 p.m., I wandered into the room where all the collected mushrooms were identified, sorted, and registered. Foray mycologists were still working to finish up the last of the identifications, and the dedicated registrars were still recording each identified specimen for the foray's totals. As they registered each mushroom, I helped move the collected specimens to their correct places on the foray tables.



PVMA club mycologist Dianna Smith gives a “table talk” in the fungi sorting/ID room.

I have to admit that volunteering to help with this task also serves a purpose for my learning! The more exposure I have to new species, even through others' identifications, helps me to commit each new mushroom to memory. There were a few new species brought into the foray that I hadn't encountered before, so the extra time spent helping in this area really helped me to learn those species.

The first of these species was *Cortinarius lewisii*, which



seemed vaguely familiar. Perhaps I also found it in 2019, at the same location, during the same foray? Perhaps! This beautiful *Cortinarius* has rusty golden tones to the cap, a dry cream-colored stipe, and white basal mycelium. Another new-to-me species from the foray tables was *Stropharia kaufmanii*, collected by



*Cortinarius lewisii*

several different attendees. This beautiful golden-capped mushroom has a scaly white stem and a purple-brown spore print. Finally, Arleen Bessette identified a beautiful polypore I'd never seen before,



*Stropharia kaufmanii*

*Bresadolia craterellus*. At first glance, I was certain it was *Neofavolus alveolaris*. However, this specimen had a round, radially wrinkled cap with a depressed center and 1mm angular pores as opposed to *N. alveolaris*' kidney-shaped cap, lack of central depression, and 1-2 mm elongated or diamond-shaped pores.

© Jessica Benson Evans



*Bresadolia craterellus*

When I left the foray on Monday morning, the current collected total was 366 distinct mushroom species, with 38 of those being first-time finds at the foray! Camp Hemlocks' grounds were full of fungi, with more popping up as the foray went on through the weekend. On our second walk day, Sunday, the PVMA seven were thrilled to find the most fungi we'd seen all summer as we forayed at Gay City State Park. Throughout the woods you could hear us exclaiming, "YES!" and "OH MY GOSH" periodically. For a year in which the entire Northeast was in various stages of drought, this felt admirable. It was the foray we all needed!

© Jessica Benson Evans



The "artist's conk," *Ganoderma applanatum*, put to good use at the COMA foray.





# Brittlelegills in Laurel Park, Northampton

By Peter Russell

As many people are already aware, I live in Laurel Park, Northampton, and for the last three seasons I have been recording the fungi in the park. In previous newsletters I have shared some of the amanitas and boletes I have found, in this newsletter I want to share some of brittlelegills (*Russula* genus).

To recap, Laurel Park is an old Methodist summer camp on the outskirts of Northampton that celebrates its 150th anniversary this year (2022). Created in 1872, it was one of many Methodist summer camps built around that time. It's now a wooded parkland where 108 cottages share the space with the trees. One very special feature about Laurel Park is that unlike most surrounding forests that are predominantly young secondary growth, many of the trees at Laurel Park are large mature specimens that already existed when the Park was first created 150 years ago. The significance of this is that you get different fungi associated with mature trees as opposed to young trees. Laurel Park has many examples of late stage fungi such as *Russula* and *Amanita*. At the right time of year, with the right weather conditions, it is a great place to look for fungi!

The area I have been recording is really quite small, as can be seen in the Google satellite map. From a tree inventory taken in 2022, there are just under 400 large mature trees with white pine, hemlock and various oaks being the most frequent, but also with hickory, red maple, sweet birch and 16 other species. The soil is very sandy so we get few trees such as sugar maple that prefer more nutrient rich soil.



A Google satellite map showing the 108 cottages of Laurel, many obscured by the crowns of the 400 odd mature trees under which they nestle.

To date I have 160-plus identified species and have many other dried collections awaiting examination. All of these I have entered in an iNaturalist project "[Fungi Of Laurel Park](#)." In many cases identification has been confirmed with DNA barcoding. The most frequent groups of macrofungi so far collected have been the boletes (21 species) and the amanitas (19 species). It is somewhat surprising that some other groups are represented by so few species. For example, the genus *Cortinarius* is one of the largest groups of mushrooms, many species of

which can be found in the local woods, yet only two species have been found in the park so far (both of which have yet to be assigned to species).

The brittlelegills, *Russula* genus, are easy to match to genus with their often highly colored caps, stout squat appearance, caps often wider than the height of the





The boletes and the amanitas are the most frequently recorded groups of fungi in Laurel Park. Here is an atypical reddish-capped *Boletus chippewanensis* (left) and *Amanita muscaria* var. *guessowii* (right).

mushroom, gills fully attached to the stem, and flesh that is very brittle (e.g., the gills usually flake if rubbed gently). But assigning to species is almost always difficult as there are many species with overlapping characteristics and variation. Equally important is that no modern literature on the American species is easily available to refer to. For example, there are over 100 red-capped *Russula* species alone!



*Russula roseipes*, from the park, just one of the 100+ red-capped *Russula* species.

I have over 17 different collections of *Russula* as of 2021 and all have been DNA barcoded but only 10 can confidently be assigned to a species (i.e., there are no named matching entries in the DNA barcode repository, Genbank). There are several new collections from 2022 so the *Russula* genus probably rivals *Amanita* and the boletes in abundance of species. Not many russulas that are common in the surrounding woods have been recorded in the park. Instead, most seem to be rarely recorded species. Whether using DNA barcoding is identifying what people usually overlook or whether Laurel Park has different mushrooms than the surrounding area remains to be seen.

There are some known poisonous russulas such as *Russula subnigricans* or *Russula emetica* (the sickener) though these have not yet been recorded in the park. Some such as the green brittlegill, *Russula paravirescens*, are sought-after edibles, and in some cultures, such as Russian, most brittlecaps would be collected and eaten.

What follows are some illustrations and brief notes of

the Brittle Caps so far recorded in Laurel Park.



The purple bloom russula, *Russula mariae*, is a distinctive mushroom, although it can be quite variable in color. It has a cap with a white dusting (or bloom) some part of which is purple and a white stem colored with purple. It is mild tasting and is considered a good edible *Russula*. It is one of the most common russulas in the park, being mycorrhizal on the oak trees.



There are over 100 red-capped russulas and assignment to the correct species can be very difficult. This *Russula* was identified by DNA barcoding as *Russula lilacea*, but that species is described as having a cap with purple colors, not bright red. Its common name is the lilac brittlegill. However there is one red variety described, *R. lilacea* var. *concolor*, that is mycorrhizal on hardwoods. There are few records of this species on iNaturalist.





*Russula pseudopeckii* is a rarely recorded *Russula*; there are only two other records on iNaturalist. However its presence in the park was confirmed by DNA barcoding. It is a very pretty *Russula* with a matte red cap and a white stem infused with the same red color.



Another red *Russula*, *Russula flavissicans*, is often recorded in the oak-hickory forests of North America. It has a dull reddish cap, and white stem which, like the gills, discolours brownish.



The foetid russulas are a group that have dull brown, yellow, or orange colors and "foetid" odors that are variously described as rancid, disagreeable, marzipan, etc. One such foetid russula is *Russula foetentula*, with its orange-brown cap, a smell that has been described as like maraschino cherries and an acrid taste. It is common under the conifers and hardwoods in the park.



*Russula pectinatoides* is another foetid russula. This species has a very faint odor (again of maraschino cherries) and tastes mild. There are several close look-alikes, but one distinguishing factor is the presence of pimpl lines on the cap

margin. It is common in the park under the conifers and hardwoods.



The firm russula, *Russula compacta*, is a large sturdy mushroom whose stem is difficult to compress. It is fairly distinctive in that the white cap stains brown when bruised, the gills stain reddish brown and it has a foul odor. It is occasional in the park under hardwoods and conifers. It has a similar appearance to the blackening russula, *Russula dissimulans* (below) that slowly turns red and then black when cut; it is also occasional in the park.







*Russula corallina* is a rarely recorded *Russula* with no records on iNaturalist. However it is common in the park, being one of the first to fruit in the summer and its identification has been confirmed with DNA barcoding. Given the difficulty of identifying these small reddish russulas, it is probably overlooked elsewhere. It is a small *Russula* with a dull pink cap that fades with age, a white stipe that is sometimes flushed pink, white gills, and a slightly acrid taste.

## Reflections on my first year as a PVMA member

### By Karen Hidalgo

Like a lot of people, I became very interested in mushrooms during the summer of 2021. The pandemic found me spending more time outdoors, and the rain made the prolific and diverse mushrooms hard to ignore. It was amazing! I had been walking past mushrooms most of my life and barely noticing them. Suddenly, the forest came alive in a new way. A walk in the same place would be completely different, because there were different mushrooms every time. Also, it added another layer of magic and mystery to the forest, knowing that even when they weren't fruiting, all kinds of fungi were living secretly in the soil and the rotting logs and sticks.

As I found more and more beautiful and distinctive mushrooms, I thought about the "mushroom guy" at Tuesday Market in Northampton, who sells mushrooms that he grows as well as mushrooms that he forages. I thought of a friend who had told me, the year before, that he was going to look for oyster mushrooms at Mount Tom. At the time, I had catalogued this information as interesting, but like most Americans, I thought of wild mushrooms as dangerous. Around August of 2021, though, I began to wonder if I might be able to eat some of the mushrooms I was finding, and of course that only added to my growing devotion to finding and eventually, identifying mushrooms.

I started watching Adam Haritan's YouTube Videos.

Adam recommended joining your local mushroom club, so I did!

### Timeline of My First Year

**October 2021:** I joined PVMA, after the walks were done for the season.

**November 2021-April 2022:** I watched a lot of videos about mushroom identification by Adam Haritan of Learn Your Land. I bought books and looked through them. I watched videos by Tom Wessels, too, to learn more about the forest, and bought two of his books as well. I kept meaning to join one of the zoom lectures offered by PVMA but never made it.

**May 2022-August 2022:** I started going on PVMA walks. As we all know, it was a very dry season, and the fungi, along with plants and animals, were impacted by the drought. On each walk, we found at least a few fruiting bodies, although a few times we characterized the gatherings more as "tree walks," which were also great.

The people I met on the walks were friendly, welcoming and supportive. This was a great way for me to begin to expand upon my knowledge of mushrooms, mushroom identification, and learning resources. I am grateful to the whole cast of characters on the walks – the experts, the experienced amateurs, and fellow new amateurs



who have been on this journey of mushroom discovery with me. I look forward to getting to know more people, especially regulars who were not able to attend this summer.

**September and October 2022:** When I first heard about forays, I didn't see that as within reach for me this year, between being so new, and some life factors. As I learned more, though, and talked to some people who had attended the Clark Rogerson foray put on by COMA, I began to consider it. I attempted to register apparently hours after the event filled up, and was lucky enough to get in from the waitlist and attend the foray with a number of our PVMA members.

The COMA foray was phenomenal. I heard lectures about poisonous mushrooms, mushrooms as medicine, using iNaturalist with mushrooms, and DNA sequencing. I ate great food (with good gluten-free options), spent time with new friends, went on nice long mushroom walks, and watched club president Jessica Benson Evans single-handedly reunite three separate foragers with their backpacks and other items they had lost in the woods.

Saturday, September 3rd, people did find mushrooms.

The walk I attended at Devil's Hopyard covered mostly dry ground, but we did find things. We found more back at the campground, which must have had more rain in this season of rare and highly localized precipitation. Sunday, September 4th, was like a dream! We went to Gay City State Park and found SO MANY mushrooms. For foragers who had been through such a thoroughly dry and droughtful summer, it was amazing.

I recommend the COMA foray for any curious enthusiastic amateur mycologists. The experts seem to enjoy it, too! And consider volunteering to help out when you register. There are many tasks small and large that need doing. It's a great way to meet other mushroom enthusiasts and support this fun, educational and potentially scientifically beneficial event.

Throughout September and October, we have been getting more consistent rain and mushroom conditions have improved drastically. People are reporting fewer mushrooms than last year this time but there have been plenty of them to see!

See you next season!

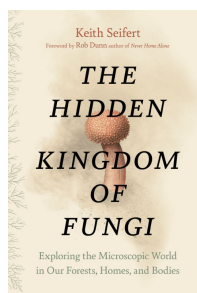


Clockwise, from upper left: one of Karen's collections at the COMA foray (*Hygrospora marginatus*), *Amanita rubescens*, *Mycena leiana*, *Mycena haematopus*, *Grifola frondosa*, *Ischnoderma resinosum*, *Laetiporus sulphureus*, *Xeromphalina campanella*, *Cortinarius iodes*, and *Pholiota* sp.

All photos © Karen Hidalgo







## Book Review

# ***The Hidden Kingdom of Fungi: Exploring the Microscopic World in our Forests, Homes, and Bodies***

**Keith Seifert**

2022, Hardbound, 280 pp.

Greystone Books, Vancouver, BC CAN

ISBN 978-1-77164-662-8 (cloth)

ISBN 978-1-77100-663-5 (epub)

\$27 US; \$34.95 CAD

**By Lawrence Millman**

Tired of reading about big fat agarics that seemingly have evolved to be chopped up and put in a frying pan? Then *The Hidden Kingdom of Fungi* might be just the book for you. Not only does it focus mainly on fungi too small for a frying pan, but it also focuses on the relationship between fungi and other forms of life on our beleaguered planet. What's more, it can often be very witty. This shouldn't be surprising, since its author, Keith Seifert, former president of I.M.A. (International Mycological Association), once named an ascomycete *Valsonectria simpsonii* after Homer Simpson.

Let's begin at the beginning, with biologist Rob Dunn's short but sweet introduction to the book. "Go ahead and say it out loud: 'I am a human in a fungal world,'" Dunn writes, then goes on to tell the reader that he or she is totally surrounded by fungi. Seifert continues this thread throughout the book, invariably seeing the forest for the proverbial trees. Admittedly, a lot of his seeing is done through a microscope, since that's the only way most fungi can be viewed by members of our species. He mentions that roughly ten million yeast cells live on the average human scalp. And when he examined the dust in his house, he discovered that it contained 600 different fungal species. He's not selfish — he has examined dust in other folks' houses, too.

The *Hidden Kingdom of Fungi* is divided into sections that include subjects such as human fungal diseases, fungal diseases of plants, fermentation, the fungi in the air we breathe, biofuels, and myco-remediation. Seifert's writing is science-based, but don't get the idea that it's boringly academic, for whenever possible, he's willing to share his wit with you. For example, he says that so far we know very little about what mycorrhizal networks are saying to each other through their signal molecules, but offers this speculation: "It's probably mostly gossip about the weather or aggressive insects who have moved into the area." And at one point, he writes: "Most other biologists discreetly leave the room

when (fungal) taxonomists get started."

You mustn't think that the author paints an idealized picture of fungi such as (prejudice alert) Merlin Sheldrake does in *Entangled Web*. For he sees not only the good, but also the bad and the ugly in his travels through Kingdom Fungi. He notes that seven out of the nine major crop diseases are caused by fungi. He discusses the fungi that use our lungs as a substrate, like certain *Aspergillus* species as well as the *Cryptococcus* species that affect people with AIDS. Yet he argues that if we tried to get rid of the fungi in our bodies, we'd be getting rid of ourselves — such is the importance of the fungi that hang out with us. Indeed, he agrees with Rob Dunn that we should change the name of the present era from Anthropocene to Mycocene due to the importance of fungi in every habitat.

Citizen science, Seifert says, provides many of us with a new and closer relationship with fungi. "It's an exciting time," he observes. "We are learning which species are truly rare and which just appeared that way because only a few specialists were looking for them." In fact, his book seems to have been written with citizen scientists in mind. Seifert was once a university professor, and he's still an educator, albeit one who's now teaching his students through this book. As a result, those students might end up appreciating the *Penicillium* species in roquefort cheese even more than they appreciate a *Boletus edulis*.

I should confess that I'm not capable of writing a book review without including quibbles. Concerning *The Hidden Kingdom of Fungi*, my quibbles are few and quite minor. First, I think the book should have discussed white nose syndrome of bats, a subject that seems to cry out for a page or two. Also, Seifert says dry rot (*Serpula lacrymans*) is found in the natural world only in the Himalayas. Not true! I've found it in the wild quite a few times on the West Coast, and I've frequently found its look-alike, *S. himantoides*, in the wild in my native New England. End of quibbles! Let me now say that I recommend *The Hidden Life of Fungi* not just to fungal enthusiasts, but also to readers who have only a passing interest in fungi, for the book might turn that passing interest into a passion.