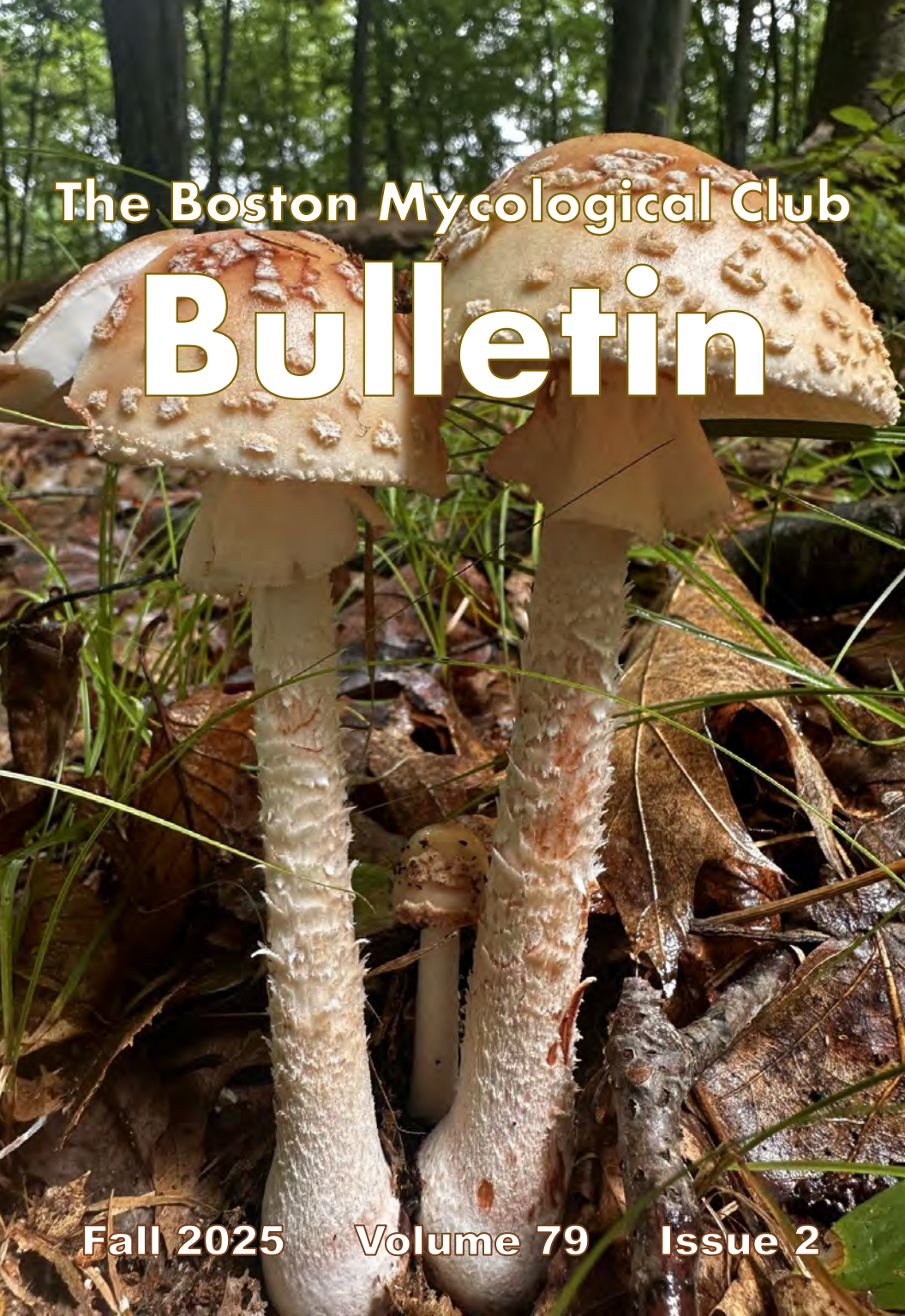
The Boston Mycological Club
Bulletin
Fall 2025 Volume 79 Issue 2

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In This Bulletin

The front cover photo was taken by Elsa Bourque. Back cover photo by Ari Stamatiou.

Contribute to The BMC Bulletin!

The Bulletin is a place for our members to share their creativity and experiences. Our editorial team encourages you to submit stories, articles, experiences, artwork, poetry, and photos of your finds. Please send all questions, concerns, comments, and contributions to editor@bostonmyco.org

We are looking for the following content:

Articles, book reviews, member photos and art, stories of myco-travel, reviews of current mycological literature, poetry, narratives of your favorite trails or mushroom finds, tales of mushroom mysteries, science, and anything else you want to share.

Fungal Kinship: An Artist's Notes from Tamworth

XALLI ZÚÑIGA

I am enamored with mushroom people. My recent adventures as an artist (and recovering academic) have led me to all kinds of people bound by a deep fascination with the fungal realm and its infinite particularities. It is as David Babik puts it, "There is an instant kinship among all those who appreciate fungi." Maybe that is why I'm so drawn to mushroom-obsessed folk; there are precious filaments connecting us from unforeseen places.

Post-pandemic, post-PhD life has turned me into a spore: what I do—a blend of artmaking, decolonial feminist research, and ecological activism—is not clear-cut as a profession. I draw the path as I walk it, responding to opportunities as they arise. This summer, those winds carried me back to the U.S., where I presented a fungi-inspired video work in New York, entitled *Fungible: Composter Syndrome*. In it, I show images of old copies of José Vasconcelos's *La Raza Cósmica* that I inoculated with Oyster mushroom spawn and then infected with Trichoderma. I let them rot for months, filming the result: text collapsing into mush, a slimy bog of organic nonsense. The idea was to ask: what if fungi could decompose toxic ideas—such as the racist discourse of Mexican mestizaje—while conserving their "nutrients" to build new ideological soils?

That piece is one example of my relation with the fungal world: drawing from the processes fungi enact in nature to craft aesthetic critiques of the colonial-capitalist system, which is presently jeopardizing our ecological basis of survival. My work seeks to honor and draw attention to the roles that beings like fungi, bacteria, and plants play in sustaining the world. In particular, my explorations consider how fungi can teach us about complex survival in coexistence with different kinds of "others," a question at the heart of feminist thinking.

I approach this work as an artist rather than a scientist, which is why I seek out conversations with those who study life, reproduction, and its many forms to avoid straying into hyperbole or losing sight of material realities.

This is why I was so deeply grateful for the opportunity to join the Boston Mycological Club outing to New Hampshire on July 25–27, 2025. I had long known of the Club for its international prestige, but my connection came through Madeline DeDe-Panken, whom I first met at the Mushroom Shop in Somerville a year prior. She had generously attended a lecture I gave at Boston College, *Becoming Fungi*, and later shared her fascinating research on the historical role of women mushroom foragers and their overlooked contributions to mycology in the late 19th and early 20th centuries. I look forward to reading her dissertation (no pressure, of course!)

When I learned I would be in Boston this summer to plan a public art piece that my collective *Bruxas Bruxas* was commissioned to produce in Roxbury, I wrote to Madeline. Through her, I reached out to BMC and was warmly welcomed by its president, David Babik, who shared my contact with the club. Soon, messages poured in—greetings, invitations, and generous offers from Jana Harris, Jonathan Kranz, and Gary Gilbert. I felt showered with kindness as plans shuffled so I could join. I had a lovely video chat session with Jana, and we learned we both shared an appreciation for Yasmine Ostendorf-Rodríguez, whom I'd met in Mexico a couple of times and whose arts-based fungal work is akin to my own.

When the day arrived, I boarded a train from Cambridge to Manchester-by-the-Sea, where Gary greeted me in Spanish—which I appreciated immensely. During the drive, he shared stories of his travels and engagements with fungi, and we realized we had acquaintances in common in Mexico, including Ireri Monter from *Symbiosis*, who had guided a NAMA group to Valle de Bravo the previous year. At his home, Gary introduced me to his wife, a musicologist, and his son, who showed me his collection of dried mushrooms along with samples of his black trumpet-infused vodka.

We then drove to Chapman Sanctuary/Visny Woods Trail, where we would have our first mushroom walk with BMC. Together, a mid-sized group of us wandered into the woods, hoping to chance on some mushy friends before the rain. The group was as diverse as the mushrooms themselves: Andrea wore netted trousers—an excellent hack against mosquitoes—and everyone had their own kit: pocket knives, water, snacks,

sun protection. That is what I love about fungi and their enthusiasts—difference is not smoothed out but amplified and enjoyed. As soon as we stepped into the forest, I felt a notable difference. I am used to the woods of Amealco in central Mexico, where the ground is reddish and clay-rich, pine–oak grows on old volcanic soils, and the air is thin. Here in New Hampshire, the smell was unmistakably moist, even moldy; the ground crunched smooshily beneath our feet.

Green Russula

Our very first sightings included some green Russulas, still slick with moisture. We also came across a few Suillus that Gary identified. Then Dave showed us something really special: the golden spindle. It looked as if color itself were reaching out from the ground. Blazing in intense yellow among the dead leaves were the emerging tentacles of a being that looked more like a neon sea creature

Yellow spindle coral

than a terrestrial fungus. I had never seen one in the wild. As Dave explained its edibility, I looked around more carefully, and began to notice spindles of different colors emerging nearby.

Walking further, we spotted other species—reishi, artist's conk, a black glutinous earthtongue, and a purple coral (another first for me). People whispered hopes of *Amanita jacksonii* or black trumpets, the day's prized finds. Being new to the area, I was as fascinated by their anticipation as by

the mushrooms themselves.

I still have much to learn about taxonomy. I can recognize a fair number of species in Amealco, where I work with Indigenous families of mushroom foragers. Still, I'm also learning their names in Otomí, which adds another layer of complexity. Yet because I come from a decolonial feminist tradition, my approach to foraging resists the impulse to dominate, "own," or "possess" knowledge of all fungal species (as if they were Pokémon or baseball cards). Under this paradigm framed by individualism and competition, it is hard to enjoy the process of learning without being made to feel inferior by it—or by others who "know more."

And this is precisely why mushroom walks can be as challenging as they are interesting, especially for those of us trained in academe: it takes real effort to quiet the mind (the social judgment/policing we learn to perform with others) and focus on the body and the way affective sensations move through us 'internally' as our bodies move 'externally' across the forest (processes that, of course, are never entirely separate).

In response, my work focuses on exploring people's capacities to capture the subtleties and nuances that open us up to more connective, empathetic forms of awareness, and ultimately, coexistence. I believe this is one path toward a more dignified paradigm, and fungi are a portal (one of many) into it.

That evening, Professor Chris Neefus kindly drove me to the home of Susan Goldhor, former president of BMC, who very graciously hosted me for the weekend. It makes me happy to reminisce about everything she shared—from the story of how she and her late husband came to live in Tamworth, to the curious fact that it is a fungus that makes chili peppers hot. Our conversations ranged widely: Robin Wall Kimmerer's "honorable harvest," Haraway's reflections on posthuman kinship, and Susan's own experiences in Turkey researching the relations between Anatolian dogs and the sheep they guarded, which she described as genuinely loving. "Life is only possible through connection," she said, as we enjoyed a bowl filled with granola, berries, and yogurt from the Tamworth farmers' market.

What stayed with me most was her advice to write from the heart—to ground the source of writing there, rather than defensively proving that one has 'rational' authority over what one is speaking. We also reflected on how difficult it has been for women simply to exist, let alone advance, in academia.

Susan mentioned Beatrix Potter as one striking example. She was

remembered only as the author of *Peter Rabbit,* but Potter also conducted serious research on fungi and wrote a paper on spore germination; yet she was barred from presenting it because, at the time, the Linnaean Society allowed only men to speak in public. We also reflected on the parallels between patriarchal worldviews and the ongoing ecological crisis, both of which are deeply entangled with the system of gender, as Carolyn Merchant and Vandana Shiva have noted. I went to bed feeling understood.

The next day, guided by Professor Neefus, we set out on the Brook Trail, where we came upon ghost pipes. Dave and others explained that these flowers had lost their ability to photosynthesize, choosing instead to draw life from the mycorrhizal webs of Russula, which we often found nearby. Their presence fascinated me—pale and spectral, a kind of floral phantasmagoria. Someone mentioned they were once called "Indian pipes," but the name has since shifted as part of a conscious effort to decolonize language. This immediately raised questions for me about Indigenous relationships to fungi here—echoing the histories I study in Mexico, from the Nahua people and Mazatecs to contemporary Otomí knowledge. I thought, too, of the theft of María Sabina's knowledge by G. Wasson, who is still hailed as the "father" of

Ghost pipes

ethnomycology despite having published secrets that were not his but hers in *Life Magazine* after promising her secrecy.

Jonathan and others then introduced me to the so-called "Indian cucumber" (a name that, tellingly, remains unchanged). They showed

Native cucumber

me how to dig carefully until the small white root emerged, like a tiny *jícama* (Mexican turnip). Its taste was sweet and grounding, almost as if it sang softly to the body. I was taken aback by how easily such sustenance could be unearthed if one knew how to see and where to dig.

It reminded me of foraging for wild garlic in Ireland and southern France, or for verdolagas, huauzontle, and other quelites, around where my parents live in Querétaro. We also found oyster mushrooms that Fawn picked from a rotting stump, as well as yellow and red amanitas and both real and fake chanterelles in yellow.

After, we went to the farmer's market, played with goat kids, and had ice cream. I learned that they made and sold Black Trumpet liquor at the Tamworth distillery, which was neat. That evening, we all met up at White Gates Farm for a pizza party where we were greeted with live music and wonderful weather (despite the slight fogginess from distant forest fires).

I sat at a tree swing and poured some heartfelt energy into a drawing that I shared with the group.

Xalli's sketchbook

The artist's seat

Fungal kinship, illustrated

The next day—the last of the trip—I said goodbye to Susan, who gifted me a copy of Michael J. Hathaway's *What a Mushroom Lives For,* a book I had already begun reading in digital form but now could hold in my hands. I wished her luck, and then Dave picked me up and drove us to the Brook Path for our final walk.

There I met Spencer, a fascinating bee-lover with a mind full of stories and insights. We discussed politics, gender, video games, and disability—conversations that felt both grounding and quietly nourishing. Later that afternoon, as rain clouds began to gather, Spencer and his mother Fawn generously offered me a ride back to

Cambridge, which we managed after dodging a sudden downpour.

Before we parted ways, everyone laid out their finds on a moss-covered rock for a final table talk. Dave demonstrated how to distinguish different Boletes by the way they bruise or turn blue, and how texture—whether a mushroom is sturdy or brittle—can guide identification. He pointed out that milky caps (Lactarius) are especially delicate, while others can withstand a rougher touch; Spencer and I tested this by tossing a few specimens to the ground and filming their slow-motion explosions. Dave also showed us Russulas that should not be eaten, noting their sticky caps and their telltale scent of almond or marzipan.

Because of the rain, I wasn't able to say a proper goodbye (we need rain for mushrooms, though!) Still, I left thinking about what the club is cultivating through Dave's remarkable organizational care—both socially and ecologically. Being part of the gathering reminded me how rare and precious communities like this are, especially now, as so many of us continue to recover from pandemic wounds and relearn how to live in relation with the more-than-human world.

The generosity I received from everyone stays with me, and I carry it forward—just as Susan encouraged me to do. I'm also looking forward to continuing these connections through upcoming collaborations with Jana on arts-based workshops for youth.

Que las esporas les acompañen / May the spores be with you.

All photos in this article by Xalli Zúñiga

Left and above: Additional scenes from the Tamworth foray. Photos by Ari Stamatiou.

Three Mushrooms from Chile

JONATHAN APPLEFIELD

Last April, I left Boston for a five-week journey through Chile. After hiking fifty miles along the W Trek in Torres del Paine National Park, I flew to Puerto Montt — the gateway to the Carretera Austral, the Southern Highway. There, as if launched down a log flume, ferries and fractured highways carried me through dense stretches of the coastal Valdivian temperate rainforest.

View from the Duhatao-Chepu trail, Chiloé, Chile. Photo by author.

While a nascent love of mycology and hiking fueled my enthusiasm, the deeper impetus for my trip was biographical.

Years earlier, while researching my mother's history as a hidden child during World War II in Nazi-occupied Poland, I discovered a third cousin with a similar story who had emigrated to Chile. I wanted to meet Eva, now ninety, and learn about her family's diaspora — a path that, had immigration laws differed slightly, might have been my family's.

Equally intriguing was where Eva had settled: Chiloé — a vast, remote archipelago at the northern edge of Patagonia. In 1834 and 1835, Charles Darwin wandered its shores aboard the HMS Beagle, taking notes on landscapes and life forms that would later shape his ideas. When I reached Eva

she generously offered me her now-vacant house on the island. The stage was set for a journey that would be as much personal pilgrimage as mycological exploration.

On Chiloé, I hiked through dense forests hoping to glimpse the elusive pudú (*Pudu puda*), the world's smallest deer, and the rare Darwin's fox (*Lycalopex fulvipes*). I walked along enormously wide, wild beaches where the Pacific broke in sweeping arcs several kilometers offshore, and cows grazed casually on thick, ropey tubes of brown kelp (*Lessonia spicata*).

Along the way, mushrooms punctuated the landscape like enigmatic markers. In retrospect, three particular species became poetic stepping stones, anchoring the narrative of my trip.

Yellow

On the third day of my trek in Torres del Paine, I stopped mid-step. Overhead in the branches of southern beech (Nothofagus*)* hung clusters of yellow spheres — smooth, luminous, the size of ping-pong balls.

At first, they looked misplaced — banana gumballs tucked into the canopy. As I drew closer, I saw that they circled galls like satellite moons. Mile after mile, they pierced a backdrop of ochres and mossy greens as if works of Pop Art superimposed on Old

*Author with nalca plants (*Gunnera tinctoria*) on the Caraterra Austral. Photo by author.*

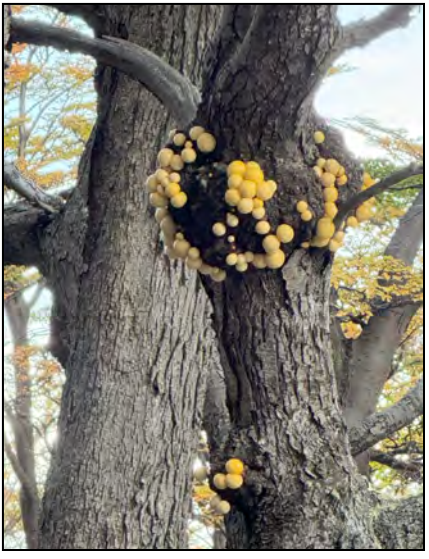


Fig. 1: Cyttaria darwinii, *known locally as "Pan de Indio." Photo by author.*

Master landscape paintings.

Later, I learned their name: *Cyttaria darwinii,* known locally as Indian Bread, an edible fungus. (Fig. 1.)

Purple

On Chiloé, another interruption — this time beneath the canopy: a sudden burst of periwinkle, so saturated it seemed lit from within. Its cap gleamed wetly, like adolescent lip gloss, impossible to ignore.

I would later learn it was a Cortinarius, possibly contulmensis. (Fig. 2.)

Fig. 2: *Cortinarius, possibly the species contulmensis. Photo by author*

Fig. 3: Plectania chilensis, *known locally as "milcao de monte." Photo by Alexander Fernando Rehbein Soto.*

Golden-Brown

I also learned about the third fungus, *Plectania chilensisI.* (Fig. 3.) This mushroom is known locally as *milcao de monte* since its dark, slightly convex cap resembles *milcao,* Chiloé's culinary specialty — an iconic dish of chicharrón-stuffed potato dough browned in hot oil. While the people of Chiloé consume *milcao de monte* to hydrate and nourish themselves while traveling through the forest, I did not find any specimens, so I settled for its namesake in the market — the savory, satisfying, and sleep-inducing potato delicacy. I loved the heft of its potato-y flavor — I do hail from the Polish highlands, after all!

Alexander generously shared information from his newly published mycology guide to the island. I learned that the archipelago, which is larger than Rhode Island and Delaware combined, is covered by over 1.5 million acres of native forest — 68% of the island area. Nearly 15 species of mushrooms have been collected as food by the indigenous Mapuche-Huilliche people. Particularly notable are those of the Cyttaria genus *(Digüeñe, Pena, Quireñes, Pinatra, or Curacucha).* They are considered the "fruits" of the host tree and are eaten fresh or fermented to obtain chicha (cider).

Alexander told me that Chiloé mushroom culture is unique because of "the 'Huilliches,' who, through their culture and vision, have used mushrooms since ancient times, such as: *Grifola gargal (Gargal), (*Fig. 4*), Cyttaria hariotii (Llao llao), (*Fig. 5*), Gyromitra antarctica (Chicharrón de monte),"* (Fig. 6), *as well as Plectania chilensis, (*Fig. 3). However, he explained, "the culture of using edible mushrooms among the Huilliches of Chiloé lacks the visibility it has in other areas of the country with other indigenous peoples, such as the Mapuche in Araucanía, who are nationally recognized for being mushroom-gatherers, and whose mushrooms are also sold at local fairs."

Fig. 4. Grifola gargal (Gargal). Photo by Alexander Fernando Rehbein Soto.

Fig. 5. Cyttaria hariotii (Llao llao). Photo by Alexander Fernando Rehbein Soto.

Reflections

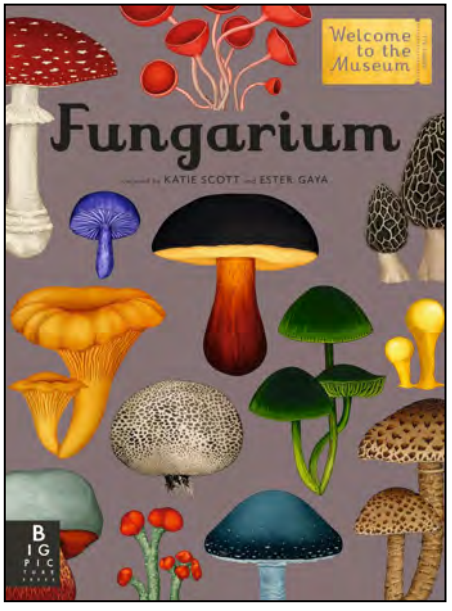
I am new to mycology — slow to learn taxonomy, non-systematic in my study, easily distracted by the forest canopy, and prone to follow my wandering inner dialogue — yet these three mushrooms remain fixed in memory, vivid anchors of a journey whose meaning I am still unpacking. Learning about Chiloé's forests and mushrooms deepened my sense of the island that Eva had called home for decades, connecting me to a family I had only just begun to know.

Fig. 6. Gyromitra antarctica, known locally as "Chicharrón de monte." Photo by Alexander Fernando Rehbein Soto.

BOOK REVIEW

Fungarium: Welcome to the Museum

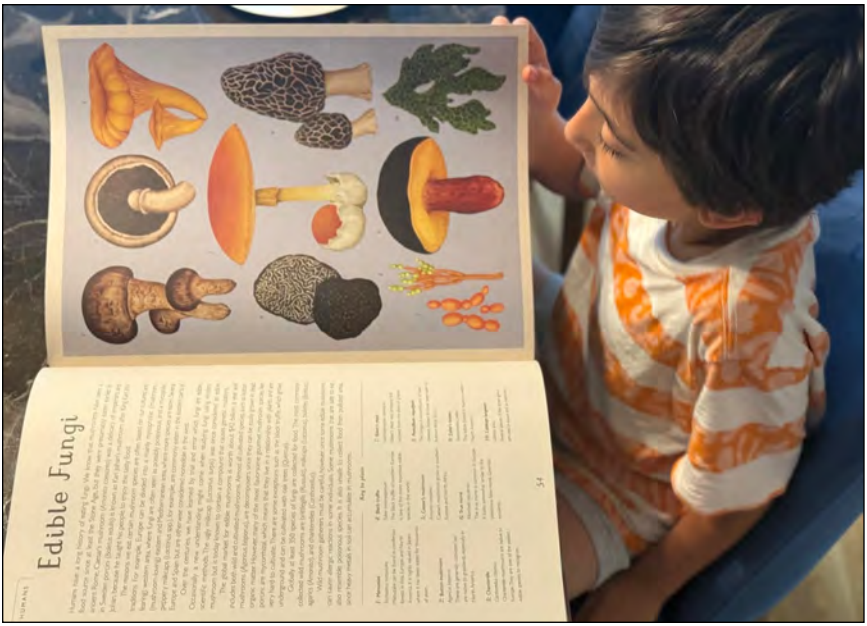
IDA SANAKTEKIN



There is nothing more exciting than a book that makes learning feel like an endless adventure. *Fungarium: Welcome to The Museum* captures that feeling perfectly. Oversized and beautifully designed, this book takes you on a magical field trip into the often-overlooked world of fungi. From mycorrhizal fungi that form symbiotic relationships with other plants to eerie zombie fungi that take over insects' bodies, the pages are packed with interesting facts that completely reframe the way you think about fungi.

Styled like a museum exhibit, *Fungarium* is divided into galleries, each one focusing on a different part of the fungi kingdom. The structure feels both informative and immersive, as if you are truly wandering through a museum. The book goes beyond simply explaining what fungi are, but offers a comprehensive look at their ecological roles and even medicinal potential. Most people tend to think of fungi's medical benefits solely in terms of penicillin, but *Fungarium* broadens this view by introducing Cyclosporin. This drug, also derived from fungi, made organ transplantation possible with its immunosuppressive properties. With each new piece of information, the book adds to the sense of just how powerful and transformative fungi can be.

And then there are the illustrations: Katie Scotte's artwork is simply stunning. The book doesn't tell you that the fungi are fascinating: it shows you. The visual components



The author's younger brother enjoying Fungarium: Welcome to the Museum. *Photo by Ida Sanaktekin.*

enrich the experience not just with their beauty, but also by bringing to light a wide array of microscopic fungi that are normally invisible to the naked eye.

What I didn't expect was how quickly this book would grab the attention of everyone in my house. Within hours of placing it on the shelf, my younger brother had retrieved it and was completely engrossed. I saw him flipping the pages with an expression of curiosity I had never witnessed on his face while he read before.

Fungarium might be marketed as a children's book, but it's definitely more than that. Yes, it is accessible to young readers, especially those who love science, but it doesn't simplify or talk down to its readers. The language, the structure, and the depth of information make it equally engaging for teens, adults, and even mycologists. No matter where you are on your journey with fungi, *Fungarium* has something for you. Go ahead, and get yourself a copy. It's a treasure you'll come back to again and again.

Details: Gaya, Ester. *Fungarium: Welcome to the Museum. S.L., Big Picture Pr, 2021.*

MEMBER PHOTOS

Clockwise from upper left: Corie, Ari, and Lena with a beautiful Laetiporus, Member Sina Karaca (age 7) son of Ozlem Karaca, from Brookline, MA both upper right and lower left with his finds, BMC President David Babik does a table talk at Fruitlands.

MEMBER PHOTOS

Despite the ongoing dry conditions, members have been finding a beautiful array of fungi.

Above: Basket contents, courtesy of Erica Lee.

Above: Hypomyces lactifluorum*, photo by David Babik*

What's in a Name?

ARI STAMATIOU

Among the different activities the BMC engages in, along with other mycology clubs, is the identification of mushrooms we collect in the pursuit of documentation, education and fun. However, when we gather back for the ID table presentation, we encounter a bewildering number of fungi with names which prove intimidating to pronounce. If they sound to you like "it's all Greek," to a great extent, you are correct.

In this article I attempt to clarify some of the seemingly unfamiliar names we use in mycology by focusing on historical context. Carl Linnaeus (1701-1778), the Father of Taxonomy, in his Species Plantarum (1753) is credited for establishing the Binomial Nomenclature System, which assigns a genus (capitalized) and species (lower case) to organisms.

Linnaeus lived during the Age of Enlightenment, 17th and 18th century. At the time, the language of scholarship and science was Latin. However, the origin of the convention goes back further, to the European Renaissance period, 15th -16th century. It is interesting to note that the use of the Latin language came to an end in 650-750 AD, about two hundred years after the collapse of the Roman Empire (476 AD), although its use continued in the Roman Catholic Church and among the monks of Ireland.

Nevertheless, during the Renaissance, Latin made a comeback and became the status quo in science. Fast forward to the Age of Romanticism, late 18th- mid 19th century, advancements in science and technology led to a new movement that advocated the use of Greek in addition to Latin in the sciences and higher education.

Latin names are primarily used in binomial nomenclature, while Greek is used in naming specific features in species. There are exceptions. Taxonomy does allow for noncompliance with the norms; for example, anyone credited with discovering a new genus or species is entitled to name it. Very often, Latin and Greek can appear, side-by-side in the genus and species names; for example, *Laccaria amethystina*.

In Latin, the genus translates to "lacquer," denoting shiny appearance. The species name in Greek means the color of the gemstone amethyst; purple, blue-violet.

Originally, améthystos, came from a= not, methýsko = intoxicate. And, in classical times, amethyst was worn as talisman to protect the wearer against intoxication.

Another example of a hybrid word, Greek and Latin respectively, genus Cordyceps; Cordy (cordíli) = club and ceps (from caput) = head. When we combine them, we get "club-head." And that is a good description of morphology of Cordyceps.

A few examples of names which describe features in Greek: Stroma, in ascomycetes, is the mass of tissue that houses flask-like fruit bodies called perithecia, through which spores are released. Stróma means "bed" or "bedcover." We can interpret this to mean that the stroma is a supporting structure likened to a bed. Perithecia house the little spore sacks, called asci; from áskos, meaning bladder. The prefix péri in perithecia means "surrounding" and thecia, from thēkē, means "small case." We interpret this to mean the surrounding structure which houses the asci.

In Taxonomy, Latin and Greek may appear cryptic. The genus and species nomenclature are challenging to understand. They sound like incantations from Harry Potter's Book of Spells. I cannot resist but imagine uttering, "*Sutorius eximius*" (lilac brown bolete) and changing someone or something into a different form.

However, whether or not we care to delve into the nitty gritty meaning behind the names, we can at least acknowledge that taxonomists go to extraordinary lengths through the pages of Latin and Greek lexicons to come up with words that accurately describe the underlying characteristics of genus, species and features. From a different perspective, the scientific names that we are exposed to at every foray and the effort we make to learn them, is in and of itself a study of Latin and Greek. And that is very cool.

Rain, Rain by David Babik

Rain, Rain, don't go away
The Weather channel said today!
The radar was really green
Now it's nowhere to be seen

Maybe we need a new rain dance
Or anything that has a chance…
No trumpets are out this year
Or those Boletes we hold so dear

The thing that really makes me cry
When every trail is dusty dry
Are all the folks who have to say
"It's such a nice sunny day!"

Black Trumpet Jam

Gary Gilbert

Black Trumpets, Craterellus fallax, are ubiquitous in our woods. I long ignored these small dark fungi that look like dead fallen leaves until I realized how flavorful and plentiful they are and how easy they are to clean, dry and reconstitute later.

Black Trumpets can be found all over the country if you search water runoff areas such as the sides of roads in parklands or trails or near vernal pools. Vernal pools are seasonal wetlands which cover our local woods. In short, if you're being bitten by mosquitos, you are likely near some Black Trumpets.

They also make a great Black Trumpet flavored vodka. I prefer to use dried ones. Just rehydrate around 7 to 9 of them in the vodka and pour it all back in. Let it sit at least a week, or ideally a month or more and you'll have a very nicely flavored vodka which makes an excellent martini!

Black Trumpets are from the greater Cantharellus family which includes the famous Chanterelle and its Lilliputian cousins, the mini-chanterelles: *Craterellus lutescens; ignicolor; and tubaeformis.*

Incidentally, its Latin name refers to its funnel-shaped cap and deceptive general appearance, looking like a dead leaf.

Interestingly enough, its Latin name is shared with a species of crayfish, a stick insect and a genus of brachiopods. Go figure?

Black Trumpets are easy to clean, best dusted off with a brush rather than rinsed and saturated with water. They dry fast in the hot sun or in a food dehydrator and reconstitute easily in hot water, which does not dilute their flavor at all.

This recipe is perfect for summer, and it's most flavorful if served at room temperature. Ideally you should spread some soft goat cheese on crackers and top that with a generous spoonful of the jam. It goes very well with any cheese or simply alone on a cracker as a dip. You can keep this jam in the fridge for several weeks, and it can be easily frozen it in portions for future events. I have never seen this jam spoil, largely because it all gets eaten up quickly!

Black Trumpet Jam

(30 mins, serves oodles)

Ingredients

2 large shallots or 1 medium onion, minced
1 T butter
1 fennel bulb, halved then thinly sliced crosswise
1 T olive oil
2 oz. dried black trumpets, reconstituted in hot water
½ C + 1 T brown sugar, loosely packed
¼ C champagne vinegar, use a good vinegar
1-½ tsp salt
1 tsp vanilla extract
¼ C dry sherry
1 T lemon zest

Black Trumpet Jam with goat cheese on crackers. Photo by Gary Gilbert.

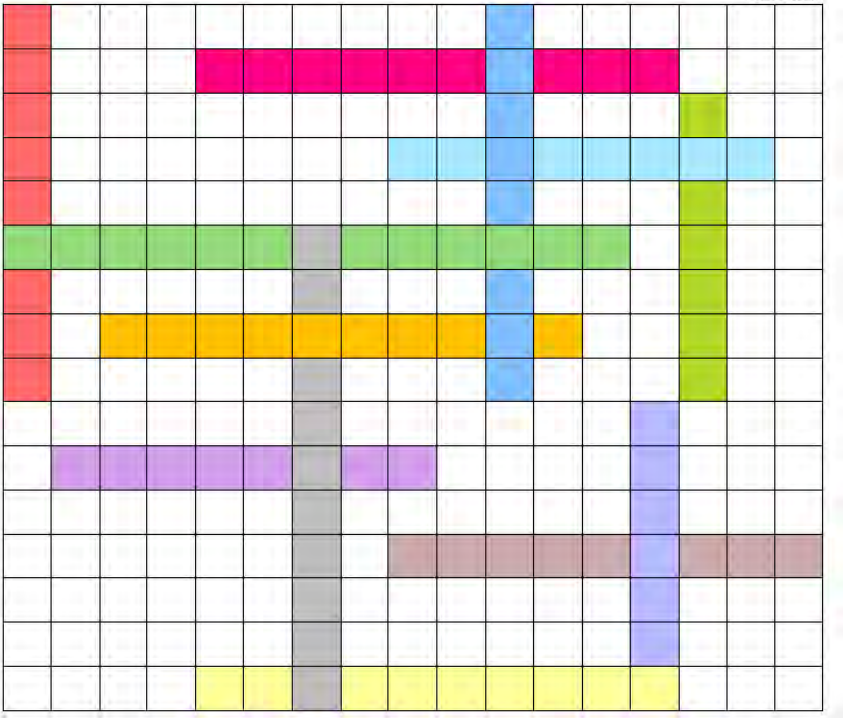
Directions

Sauté the shallots in butter on low heat until they are a bit translucent, about 5 mins. Add the fennel and oil and raise the heat to medium.
Continue to cook about 10 to 15 mins, stirring frequently.
Add enough hot water to cover them only about halfway.
As they rehydrate, they will soften and sink into the water. Stir occasionally and they will all be soft and reconstituted in less than 10 minutes.
On med-high heat add the Trumpets and their water.
Cook down until most of the water has evaporated.
Add the sugar, salt and vinegar and cook until the pot gets closer to being dry. Add the vanilla and sherry and cook only 2 mins. to cook off the alcohol. Remove from heat and purée in a food processor.
Allow it to cool, then before serving, stir in the lemon zest and, if you wish, an extra 2 tablespoons of vinegar to brighten the flavor and activate the lemon zest.

Fungi in Colors of the SPECTRUM

The clues are the species (below). What genus do they belong to?

Lena Sanentz



- *T. felleus* (brown)
- *S. rugosannulata (wine-red)*
- *H. punicea* (red)
- *O. illudens* (orange)
- *B. citrina* (yellow)
- *C. aeruginascens* (green)
- *A. phalloides (olive-green)*
- *E. virescens* (blue)
- *L. indigo* (indigo)
- *L. nuda* (violet)
- *C. amethystina* (purple)
- *C. fallax* (black)

This fantastic puzzle was created and sent in by member Lena Sanentz. The solution will be printed in our next edition of The Bulletin.

SPECIES HIGHLIGHT

A Tale of Three Milkies

DAVE BABIK

Everyone gets obsessed with Black Trumpets and Chanterelles during the summer months, but there are lots of other edible species out there worth looking for. I want to tell you about three species that are similar in many ways. They are easy for beginners to identify in the field and often show up in large numbers from June through September. I am going to talk about them as three species, but I can hear Noah Seigel's voice in my mind saying, "they are actually three groups of species."

Many fungi we think of as a single species are actually a group of related species that may some day be broken into several species. Remember when grapes were just red grapes and green grapes, and occasionally black or Concord? Now when you go to the grocery store, there are seedless grapes, specialty grapes like Cotton Candy, and many are still called just red seedless or green seedless. However, if you pay attention, you will notice that a particular green grape may be oblong one week and perfectly round the next. They all get lumped together because they are all very similar and taste pretty much the same. It's obvious that with the green and red groups there are a number of different species of grapes. Mushrooms are the same, and many species are being divided up based on genetic sequencing into several species. That's all I'm going to say about "groups."

The three fungi that I am discussing are in the genus Lactarius, recently split into Lactarius and Lactifluus. Commonly referred to as "milk caps" or "milkies" because when cut, they exude a milk -like latex. This milk is often white or clear but occasionally, orange, yellow or even blue. The milk can

also change color upon exposure (often very slowly). It can be spicy or bitter to the tongue. They are in the family Russulaceae and are closely related to the Russula mushrooms. Both have the characteristic brittle texture due to their unique cell structure.

The three species are *Lactifluus volemus, Lactifluus hygrophoroides,* and *Lactifluus corrugis*. These three species tend to fruit most heavily in the summer months and are usually found with leafy hardwood trees or in mixed woods. They are very similar but once you learn how they differ, it becomes fairly easy to tell them apart.

Lactifluus volemus is named for the large volume of latex that it produces. Fresh specimens can leak heavily when cut. The latex is pure white but stains the gills brown as it dries. The caps are bright orange and smooth to slightly velvety to the touch. The gills are off-white, closely spaced and attached (sometimes slightly decurrently) to the stipe which is similar in color to the cap. As the latex dries it takes on a very fishy odor. Luckily this dissipates when cooked. However, you will smell it on your hands for quite some time.

Lactifluus hygrophoroides has a brighter orange cap than the other two and is often slightly sunken in the center. The milk is also pure white but lacks the aroma of *L. volemus* and does not stain the gills. The stipe is usually paler in color than the cap, which has the brightest orange color of the three. The most distinctive feature of *L. hygrophoroides* is its gills. They are pure white along with the milk. They have clean sharp edges and are much more widely spaced than the other two species.

Lactifluus corrugis is the meatiest of the three. It tends to be less fragile and more substantial in size. The cap is more of a maroon-brown color and is fairly velvety to the touch. The cap texture is also somewhat wrinkled in appearance, which earns it the moniker “wrinkled milky.” The stipe is similar in color to the cap and the gills are a darker color, almost an orange-gold hue, often with a wavy look. They occasionally exhibit some forking too. The milk is white and stains the gills brown, but not as strongly as *L.*

volemus. It also can have a fishy aroma.

The good news is that all three are excellent edibles. They have a crunchy texture and an assertive, somewhat nutty flavor. They are fine just sauteed with some shallots and butter. They go well with meat and fish or as a side dish. They also can be stored dried, since you may find more than you can use in a good summer. So, if you get them mixed up, no harm is done. However, these are easy edibles to identify for those new to mushrooming and I think they are a really great variety for the table.

Lactifluus hygrophoroides

All photos by Dave Babik

Lactifluus volemus

Lactifluus corrugis

Northeast Rare Fungi Challenge

JANA HARRIS

The Northeast Rare Fungi Challenge was created by the Fungal Diversity Survey (FUNDIS) to bring attention to 20 distinguished fungal species that appear rare across the northeast region. Fungal observers in the region are encouraged to participate by searching for these species in the field. Whether you find one or fail to, your data helps build a clearer picture of each species' status.

If you think you've found one of the target fungi:

- Post your observation to iNaturalist or Mushroom Observer, identifying it as the suspected species.
- Collect and dry the specimen using a food dehydrator—this step is vital for DNA analysis.
- During the field season, FUNDIS volunteers monitor these platforms, vetting observations and requesting samples for lab analysis.

Your efforts support long-term fungal conservation by helping to determine which species are truly at risk—and which have simply been hiding in plain sight.

You can view current and past records of the 20 target species by visiting the project map.

You can also join our organizing team! Email us at northeast_rare@fundis.org to get involved, or with any questions.

Download the Northeast Rare Fungi Challenge poster

Editor's note: The Northeast Rare Fungi Challenge began in 2022 and serves the region that includes Connecticut, Massachusetts, New Hampshire, Maine, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.

Research and Community Grants

DAVID HIBBETT

This year the BMC awarded two Research grants to Julius Tabim (PhD student, Department of Organismic and Evolutionary Biology at Harvard University) and Nick Milam (undergraduate, Department of Biology, Appalachian State University), and one Community Mycology and Outreach grant to Clancy Larmour (PhD student, North Carolina State University). Below, the grantees describe the projects in their own words.

Research grant: Julius Tabim, Understanding the Molecular Basis of *Entomophthora muscae* Behavioral Manipulation. "This project aims to investigate how fungal parasites manipulate animal behavior at a molecular level, using the 'zombie' infection of fruit flies (Drosophila melanogaster) by the fungus *Entomophthora muscae* as a model system. *Entomophthora* muscae causes infected flies to perform dramatic 'summiting' behavior (climbing to a high point before dying), which facilitates fungal spore dispersal. By analyzing and comparing the fungal proteins present in fly heads at various stages of infection, I have identified nine fungal proteins that are potential candidates for inducing this behavior.

To test which are relevant for summiting, I will genetically express each protein in the neurons of flies without fungal infection and assess whether this induces summiting-like behavior. In parallel, I will also perform this experiment by directly injecting the proteins into uninfected flies. If no single protein is sufficient, combinations will be tested to determine the minimal set required. This work will provide new mechanistic insight into how animal behaviors are genetically, neurally, and molecularly elicited by fungal infections."

Julius Tabim

Research grant: Nick Milam, Investigating the Effects of Electric Currents and Low-Frequency Vibrations on Pleurotus ostreatus Cultivation Utilizing Spent Grain Substrate.

"This project investigates whether electrical stimulation and low-frequency vibrations, designed to mimic natural storm conditions, can enhance the yield and growth rate of *Pleurotus ostreatus* (oyster mushrooms) cultivated on spent grain, a byproduct of beer brewing. Spent grain is nutrient-rich and readily available, making it a promising substrate for sustainable mushroom cultivation. Recent studies suggest that environmental cues such as electric discharge, humidity changes, and vibrational signals may indicate favorable fruiting conditions to fungi, potentially encouraging earlier or more prolific growth.

This experiment will simulate a 'thunderstorm' sequence involving humidity shifts, electrical bursts, and low-frequency vibrations applied to spent grain cultivation bags. Results will be compared to untreated spent grain and a high-nutrient commercial control substrate. Key measurements will include yield, cap and stem development, and time to fruiting. If successful, this work could validate a low-cost, sustainable method to increase mushroom production while repurposing an agricultural byproduct."

Nick Milam

Community Mycology and Outreach grant: Clancy Larmour, Video Reports from the Mycological Society of America. "The project will produce a series of videos covering the Mycological Society of America's Annual Meeting. These videos aim to bridge the gap between academia and broader interest in mycology with the goal of making the field more accessible. Topics will cover mycology education, mentoring initiatives such as the SPORES* program, interviews with veteran mycologists, and community building efforts in mycology at all levels. Short and long form content will be available fully captioned and freely accessible on the CraterAlias YouTube and Instagram platforms." [Ed's. note: *SPORES (Society Prioritizes Our Recruitment of Every Scholar) is a mentor-mentee-based program of the Mycological Society of America with a

mission to diversify, advance, and promote future mycologists via recruitment of undergraduate students from demographics that are underrepresented at MSA.]

Clancy Larmour

The BMC also provided scholarships that will enable two members to participate in regional forays. The recipients are active contributors to the New England mycological community and we are glad to support their continued efforts.

Maria Pinto

Maria Pinto is an author, educator, and mycophile. Her forthcoming book, *Fearless, Sleepless, Deathless: What Fungi Taught Me about Nourishment, Poison, Ecology, Hidden Histories, Zombies, and Black Survival* will be published in October 2025 by the University of North Carolina Press. Maria attended the **NEMF** Foray in Ithaca, NY in September 2025 where she lead a workshop on science communication.

Deana Thomas is the founder and President of the Rhode Island Mycological Society. Deana has created over 1,000 research-grade observations on iNaturalist, documenting 400 species. She has volunteered for the FUNDIS Northeast Rare Fungi Challenge since 2022 and serves as a member of the NAMA Conservation and Stewardship Committee. Deana received the "2024 Friend of the Forest" award from the Rhode Island Forest Conservators Organization. She participated in the **NAMA** Foray in Marlboro, VT September 2025.

Deana Thomas