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Boston Mycological Club
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The Bulletin

RUNNING FOR MUSHROOMS • THE DEAD DONT DIE
STARVATION CUISINE • L. PECKII • BELL JAR MUSHROOM ART
KINSHIP • ORANGE CAPPED MILKYS • FUNGI AT HOME

A publication of the Boston Mycological Club prepared diligently, at times relentlessly, by your faithful Editorial Board

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CONTENT WANTED
Generously submit your contributions to:
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As the calendar year comes to a close we bring you the following compilation. If you're hard up for fungal edibles this winter or, indeed, if you don't have edibles at all, go to Lawrence Millman's *Starvation Cuisine* and read it right away.

The following issue contains articles, stories, and a diagnostic key to keep you and your friends amused. Remember to always keep *The Bulletin* out in the open for others to peruse. It ought not be stored away somewhere. If you must part with one, tuck it into a magazine stack at a nearby business. This will help us get many new members (and possibly more colorful letters to the editor.)

And you have continued to keep us impressed and, candidly, a little perplexed with the unique contributions in this issue. We have endeavored to fit this varied content in this *Bulletin* to the best of our abilities and hope you will enjoy the range of pictures, poetry, art pieces, and articles. Keep up your enthusiastic pursuit of fungi in all of their myriad forms. Every issue will be housed permanently in the Harvard Herbaria archives. Also in a variety of botanical garden and herbaria collections, here and in Europe.

We encourage submission from any and all mycophiles and we make a concerted effort to publish from first time contributers.

Our cover image shows *Peziza domiciliana* growing in a home. Read more in *Fungi at Home* on page twenty-two.

Observation 269597: *Peziza domiciliana* Cooke. by Stefan Mintoff (Stefan.m) used under a CC BY-SA 3.0 license via Mushroom Observer

Credits
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The Bulletin
DECEMBER 2019

Kinship

By Lawrence Millman

A mile or so from my tent near Ferguson Lake, Nunavut, I see a rotten mushroom. When I bend down to determine the species, I notice a few black flies hovering around my face. In the dying wind, these few begin to multiply, and soon these ravening lords of the tundra mob are mobbing me. Each bite — not painful, but worse — sends a sharp pinprick of torment straight to the kernel of my bodily being.

I sprint off over esker and glacial rubble, lateral moraine and terminal moraine, heading in the direction of my tent. Rock after hard rock my feet awaken from an early Pleistocene sleep. I plead with my Maker to deliver me from this plague of insects, but there's no response except a thrumming acceleration of interest from the plague itself. Either my Maker's bailiwick doesn't extend to these lovely abysmal parts, or He shies away from encounters with rival lords.

Now I leap rivulets and slop across bogs until, at last, long last, I reach my glorious tent. Which, ingloriously, is nowhere to be seen. So again I splatter, hop, tramp, and slosh until I locate my tent in its rightful place a few feet from a riverine embankment. Cheek by jowl with a dwarf willow patch. Not far from an ancient kayak stand. Surrounded by a bumper clock of Labrador tea. Except it isn't there again.

Where's the wind when you really need its vindictive keen? I pass one handsome tapestry of lichens after another stitched to rocks, but I'm too fly-besotted to stop and admire them. By now my morale is wholly unstrung, and I say to myself, Just give up, and let them drink their fill....

All at once I see the white aquamarine dome of my tent in the distance. I run to it, trip, fall, rise again, and crawl inside, my own girders still aloft (barely). Then I quickly anoint my flesh with the magic of citronella oil and carbolated vaseline, a dope guaranteed to distinguish my fate from the fate of my late fungal brother.

Simulium venustum(above)

Minnesota. State Entomologist; University of Minnesota. Agricultural Experiment Station. *Annual report of the State Entomologist of Minnesota to the Governor for the year 1903*. St. Anthony Park, Minn. : Agricultural Experiment Station: Minnesota, 1903. Page 75. Digitizing sponsor: Smithsonian Libraries, via Flickr Commons.

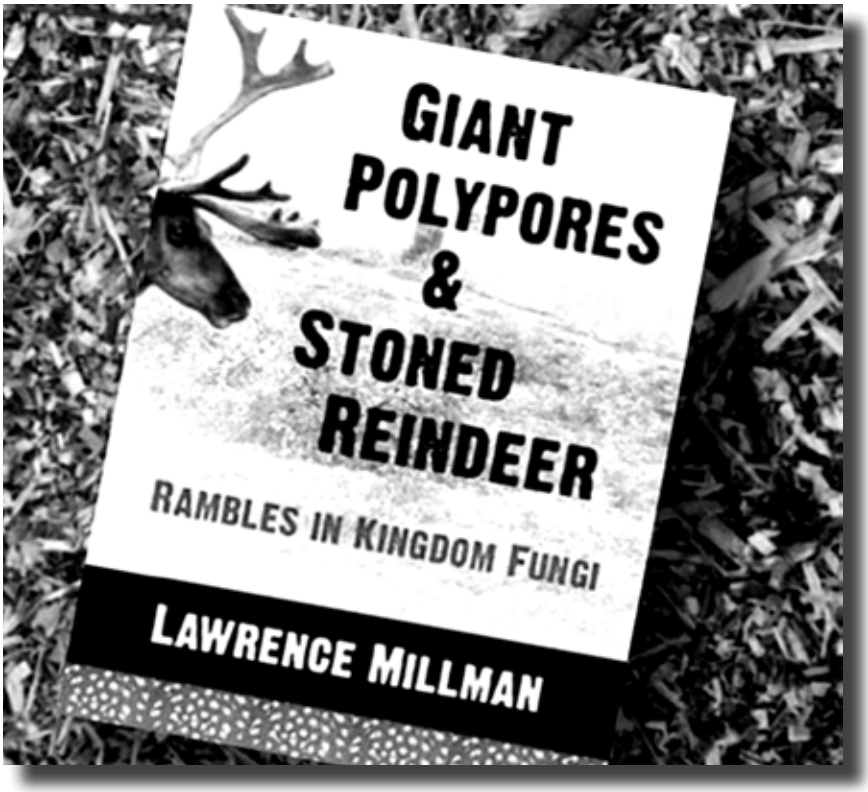
A Letter To the Editor

Tanisi Zaac,

What a cool little magazine you've created. I'm so happy that you included my poem about Labrador tea in its pages. I showed it to everyone here in Oujé-Bougoumou, and they really loved it. My very first publication except for one in Cree about eating beaver tails.

Skanak!

Jimmy Mianscum from Oujé-Bougoumou, Québec



Giant Polypores and Stoned Reindeer

Giant Polypores and Stoned Reindeer has gone into a second edition! To get your signed copy of this remarkable book of fungal musings, either get one at the Duff Sale or send a check for $22 (postpaid) to:

Lawrence Millman, P.O. Box 381582, Cambridge, MA 02238

Bell Jar Mushroom Art

By Imani Edwards

When I think back to when my interest in mushrooms started, it was during my early childhood. I've always been interested in nature. I was the kid flipping over every rock or log to see what was hidden underneath. Sometimes a spider which would make me scream and jump back; sometimes a snake which I would lunge for, proudly holding my vanquished foe aloft only to be quickly placed back in it's home. No matter what might be under there I always took the opportunity to find out. Fast forward a few decades and I'm still looking under logs and spending time at eye level with the things I find there.

You can't spend a lifetime in the fields and forests investigating every nook and cranny without coming across dozens of different types of mushrooms and varied fungi. They are everywhere. And after you notice them you start to notice their unique beauty. The fineness of their form, the artful curve of their caps. And the varieties! Anything an artist can think of there seems to be a mushroom perfectly formed to meet the needs of an artful eye. Which is why I fell in love with mushrooms as art.

My second love, tied with horribly kitchy seventies design, is Victoriana. I admire how much Victorians strove to bring nature into their homes and daily existence. Their scenes from nature often represented far off lands and were made of taxidermied animals and flowers and occasionally a dried, shellacked mushroom under a giant, dusty bell jar.

Through study, I realized I could do one better for the incredible variety of mushrooms I now know exist. So I started making Victorian inspired bell jars with a nod to the traditional but now with the vibrant colors and scenes that play out each day in fields and forests across the world.

I choose to showcase these moments in time through the fiber art of needle felting. I am able to capture both the color and beauty of mushrooms in their natural settings, by using found objects from the land around my home, and using artificial plants to create realistic yet balanced scenes. In some of my work I also recreate smaller insects such as spiders and butterflies out of clay to bring even more life into a scene. Through combining fiber art with my love of nature I am able to recreate and adapt a much older art form.

For each bell jar I create a unique scene representing a snapshot of life at ground level. The delicate balance between decay and growth that define the role of mushrooms in nature. I find it fascinating to imagine the scenes that play out on the forest floor each day. There is so much movement and life which is evident in both the microscopic and macro-

scopic world. I hope to bring a small, eye level window into that world with each of my bell jars and framed shadow boxes.

A bell jar enclosed display of several varieties of poisonous mushrooms. This display also includes a clay moulded spider's den on the backside as well as several local bee/wasp specimens. The mushrooms included are Fly Agaric (*Amanita muscaria*), Destroying Angel (*Amanita bisporigera)*, and Marginate Galera (*Galerina marginata*). See more on: *https://www.etsy.com/shop/TigerAtomicFelts*

The Dead Don't Die

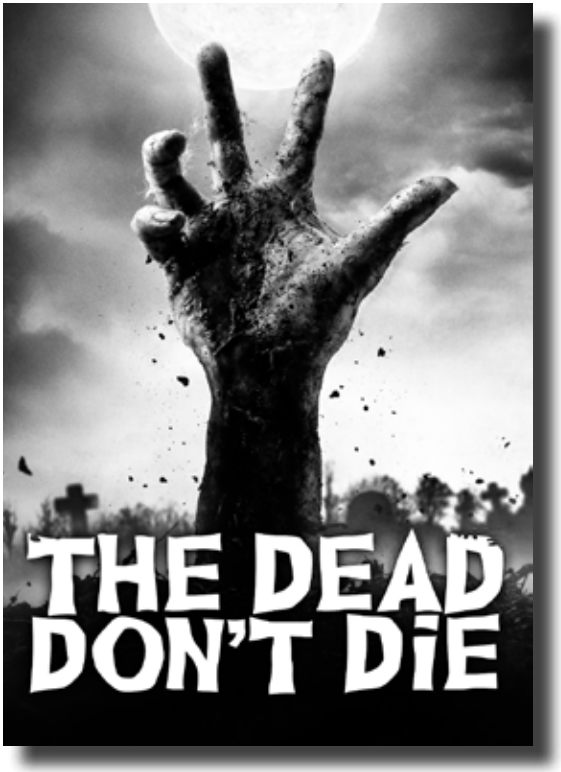
Movie Review By Peter Hoenig

Screenplay and Director: Jim Jarmusch
Release date: June 14, 2019

Jim Jarmusch is an American movie maker and his umbo of white hair and tall straight posture makes him look like a shaggy mane (coprinus comatus). With the revelation that he is a mushroom hunter, I drove forty minutes to West Bolyston to see his new zombie movie, *The Dead Don't Die*. It's gory, but funny, clever, amusing, serious, and has some mycology.

Jarmusch has been making movies since the early 1980s and they are set on the fringes of society, often bleak. In one of his first, Down By Law, he threw 3 men into a prison cell and watched them negotiate the small space and then escape into the too big world. In 2013, he moved into the supernatural, studying the world through vampires with the movie, *Only Lovers Left Alive*. Two very cool, hipster vampires, burdened with living too long, suffering from ennui, navigate the difficult 21st century, struggling with a degraded human population they call "zombies." At one point they come upon the fly agaric mushroom (*Amanita muscaria*) and ponder it's beauty and danger. It is a remembrance to the 1897 possibly fatal fly agaric poisoning of Count Achilles de Vecchj, a prominent Italian diplomat, living in Washington D.C., that led to the first involvement of the government in educating the public about mushrooms.

The Dead Don't Die is a movie about zombies, what they are and what they represent. We see them best through the eyes, and binoculars, of "Hermit Bob". He is a character inspired by Jarmusch's life long close-friend, now deceased, Louis Sarno. Sarno was a musicologist who heard yodeling polyphonic music on the radio and followed it to the rain forests of the Central African Republic. He spent the remaining thirty years of his life watching, listening and recording the music of the Bayaka Pygmies, but also became a hunter and gatherer, marrying a Bayakan woman, having a child, and becoming a part of their propertyless, landless, non-hierarchical world. Hermit Bob, played by Tom Waits, has a similar vantage point. The difference is that Hermit Bob is crotchety and hairy, and Sarno was personable and bald.



The Dead Don't Die pushes us to study and observe the world. The premise of the movie is that the earth has been jolted out of its normal rotation by polar fracking. The evil businessmen have cast the scientists aside, announcing that all is well, "there is plenty of natural gas available and the economy is booming." But all is not well, and there are ominous signs, and soon the zombies start emerging from the earth, hands first.

The only way to kill a zombie is by decapitation. This happens a lot. As the heads pop off black dust spills out, like a ripe puffball. We are left wondering if the change in the earth's constellation has caused an *Ophiocordyceps unilateralis* fungus (zombie ants) to enter and take control of the dead brain as a form of spore dispersal.

There are four heroes in the movie. Three are the delinquent kids that stare out of their jail window, closely watching the collapsing world, eventually escaping. And then there is Hermit Bob, who lives on the outskirts, an alter-ego to the town of 738 people, Centerville. He too sees it all coming, portended by the "murder of crows" and the aberrant arrival of red wax cap mushrooms (*Hygrocybe miniata*). He finds the tasty porcini, but more important, he watches the dead come back to want more and more.

Watching the movie is not for the timid, but a day later it is enjoyable to bask in Jarmusch's creativity. I am planning to prepare dinner listening to the theme song by Sturgill Simpson. And tomorrow I will go on a mushroom hunt, pretending to be Hermit Bob, knowing the importance of looking for crows and mushrooms.

Sir John Franklin
W. J. Gordon, *Round About the North Pole*. EP Dutton: New York. 1907. Appleton. Page 34. released July 2016, via Project Gutenberg.

Starvation Cuisine

By Lawrence Millman

With his sagging jowls, bald pate, and general portliness as well as his habit of constantly toting a Bible, Sir John Franklin (1796-1847) resembled a retired English vicar rather than an Arctic explorer. Truth to tell, his competence as an Arctic explorer was not much better than a typical English vicar's. During his lifetime, he was whimsically referred to as "the man who ate his boots." He could just as readily have been called "the man who ate lichens."

In each case the writers expressed alarm, I suspect in part because of the explosion of mushrooms which occurred here in the Hudson Valley last summer. Unlike the situation on the west coast as described by Kroeger and others, I think that for mycologists in the Catskills/Mid-Hudson area this fear is largely unwarranted.

In 1819, Franklin led an overland expedition from Hudson Bay to the north-western part of the Canadian Arctic. Called the Coppermine

Expedition, its purpose was multifold: to make meteorological observations, to determine the coordinates of Canada's northern coast, and to learn something about the lo-cal native people. Toward the end of the expedition, Franklin and his men ran out of food and, to allay their hunger, they were increasingly obliged to eat *tripe de roche*. Otherwise known as rock tripe, this phrase refers to several different *Umbilicaria* lichen species whose thalli look not unlike slices of a cow's stomach affixed to a granitic rock.

Here are some references to this lichen from the latter part of Franklin's tome *Narrative of a Journey to the Shores of the Polar Sea*: "There was no *tripe de roche*, and we...ate some of our shoes." "The wont of *tripe de roche* caused us to go supperless to bed." "In the evening, for there being no tripe de roche, we were compelled to satisfy the...cravings of hunger by eating a gun cover..." "The *tripe de roche* had hitherto afforded us our chief support, and we naturally felt a great uneasiness at being deprived of it, by its being so frozen as to render it impossible for us to gather it."

According to Sir John Richardson, the expedition's scientist-doctor, Franklin and his men ate four different *Umbilicaria* (then called Gyrophora) species: *U. muhlenbergii, U. pennsylvanica, U. vellea, and U. probosciidea*. Richardson wrote: "The Indians used *Gyrophora muhlenbergii*, rejecting the others, and when boiled with fish roe or other animal matter, it is agreeable and nutritious." He also wrote that Franklin's crew liked *U. vellea* the best, but when the expedition journeyed from the taiga into the tundra, that species became quite scarce.

In addition to the "*Indians*" Richardson mentions, other Canadian First Nations people commonly ate tripe de roche. The Northern Cree used it (and still use it) to thicken their fish broths, while the Labrador Innu ate it when there was no other food available, calling it *windigo wakaw* (cannibal's cabbage). It's also been suggested that George Washington and his soldiers survived their winter at Valley Forge by eating it. If this is in fact true, then the United States may owe its independence from the British Crown to a foliose lichen.

Then there's *iwatake* (iwa, meaning rock, and take, meaning mushroom), which is considered such a delicacy in Japan that foragers are willing to rappel down cliff faces to collect it. "Never give lodging to an *iwatake* hunter," goes an old Japanese saying, "for he doesn't always survive to pay the rent." The species in question is *Umbilicaria esculenta*, and like a many Asian foods, it's esteemed more for its texture than for its flavor (or lack thereof). Here I should add that I've eaten *iwatake*, and I found it no more a delicacy than the North American species I've sampled.

All of the aforementioned diners (including myself) always boiled their *Umbilicarias* before eating them. This was not usually the case with members of the Franklin expedition. Either they were too weak and weary to boil the lichen, or — more likely — they were unaware that the lichen's complex carbohydrates and high acid content make it extremely difficult to digest. Boiling it for at least thirty minutes renders it edible. Not only boiling it, but soaking it in water beforehand in order to leach away the strong acids as well as remove the grit it tends to accumulate.

Thus it's not surprising that most members of the expedition suffered from what Franklin called "bowel complaints" (i.e., diarrhea) as a result of eating *tripe de roche*. Robert Hood, the expedition's artist and surveyor, suffered the worst complaints of all. A delicate soul, he became even more delicate owing to the stress and strain of Arctic travel, with the result that he couldn't eat the lichen without undergoing severe bouts of dysentery. Unfortunately, there wasn't a lot else he could eat — rotting skins, shoes, maybe the occasional partridge, but that's about it. Hood did not die from consuming what Franklin called "this noxious weed," however. He died as a result of being shot by one of the expedition's voyageurs (French Canadian boatmen), a man named Michel Terrahaute, who may or may not have wanted to eat him.

In the end, half of the expedition's twenty-two men had bought the proverbial farm. All of them probably would have done so if it hadn't been for Yellowknife First Nation chief Akaitcho, who, in Franklin's words, "fed us as if we were children." In a sense, they were children... at least with respect to their Arctic survival skills. Twenty-five years later, on his infamous Northwest Passage expedition, Franklin proved that his skills hadn't improved at all — he and his 128 crew members vanished off the face of the earth. While the remains of some of the crew members have been found, Franklin's own mortal part has yet to be located. If there's an Afterlife, one can imagine him wander-ing this way and that, unable to find its entry passage.

Now let's briefly segue to the present time. At a recent Franklin conference at the Mystic Seaport Museum in Mystic, Connecticut, I served boiled *tripe de roche* (specifically, *Umbilicaria mammulata*, probably the most common species in the Northeast) to the Franklinophiles in attendance. Most of them sampled it for scholarly reasons, but they were not particularly delighted by its texture or its flavor, even when they daubed it in the angostura bitters I brought. Of course, not a single one of them was close to starvation.

Fungipedia: A Brief Compendium of Mushroom Lore

Fungipedia presents a delightful A–Z treasury of mushroom lore. With more than 180 entries—on topics as varied as *Alice's Adventures in Wonderland*, chestnut blight, medicinal mushrooms, poisonings, Santa Claus, and waxy caps—this collection will transport both general readers and specialists into the remarkable universe of fungi.

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"Tar spots! Stinkhorns! Beech aphid poop fungus! What fun to read Lawrence Millman's witty, wry, and wonky compendium of all things fungal."—Eugenia Bone, author of Mycophilia

"Lawrence Millman is a consummate storyteller and the fungi that fill this book run the gamut from the overlooked to the incredible. A marvelous distillation of Millman's obsessions, Fungipedia is peopled with his mycological mentors and heroes, and brims with science, lore, literature, art, music, cinema, and religion—all inexorably bound to fungi. Fungipedia is the next best thing to being on a walk with its author."—Tom Bigelow, president of the New York Mycological Society

"Fungipedia is a most unusual, humorous, and enjoyable book. A true pleasure to read, it covers practically all aspects of fungi and elegantly explains mycology's mysteries. Even seasoned mycologists will find it enlightening."—Leif Ryvarden, University of Oslo

Lactarius peckii

By John Dawson

Lactarius peckii Burlingham is named for Charles Horton Peck (1833 – 1917), the first New York State Botanist, who held that title from its creation in 1883 until 1915. Variously reported as having described between 2000 and 3000 species of fungi new to science, primarily in the annual Reports of the *New York State Museum*, Peck is commemorated in the specific epithets of many other mushrooms as well, including *Albatrellus peckianus*, *Amanita peckiana*, *Hydnellum peckii*, and *Lycoperdon peckii*. In addition, the epithet *hortonii* (applied to species in the genera *Boletus*, *Leccinum*, and *Xerocomus*) is based on Peck's *middle* name.

Peck was born March 30, 1833 in Sand Lake, New York, where his father owned a sawmill. His education began in a log schoolhouse there and continued at the State Normal School in Albany, from which he graduated in 1852. He then returned to Sand Lake, where he taught courses at Schram's Collegiate Institute. At Albany Peck had taken a "voluntary" course in botany (a subject not then part of the curriculum), and upon his return to Sand Lake he reportedly "devot[ed] all of his spare time to the collecting and analyzing of plants."[1]

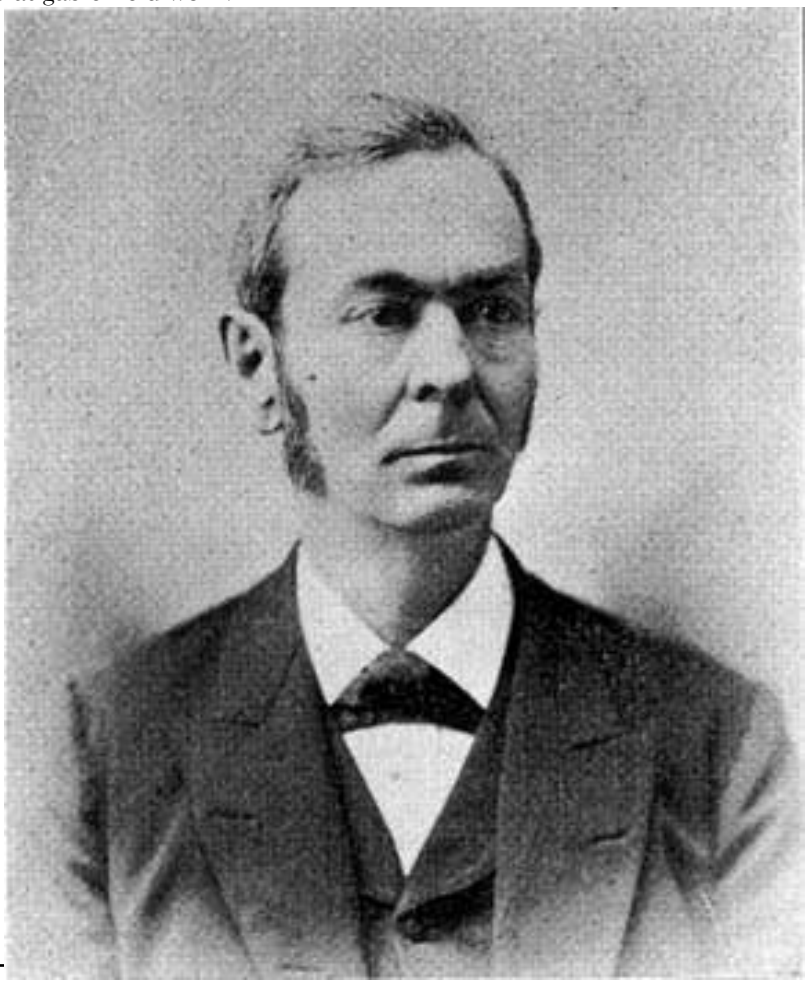
In later years Peck told G.F. Atkinson (profiled earlier in this series) that his interest in cryptogams had begun during his time at Schram's, where his duties including tending the fire: "While putting wood into the stove, he was constantly attracted to the lichens and mosses growing on the bark"[2], and that (literally!) kindled a desire to learn more about mosses. He subsequently made a collection of mosses, which he donated in 1864 to the New York State Cabinet of Natural History; and the following year he published a list of the mosses of New York in the *Report of the Regents of the State of New York* (the body in charge of the Cabinet of Natural History).

In 1855 Peck enrolled at Union College in Schenectady, from which he graduated *magna cum laude* in 1859 with a major in classics. After that he returned once again to Sand Lake and resumed teaching at Schram's Institute. Two years later he married and began teaching at the Albany Classical Institute, and a year after that he was awarded an A.M. by Union College. Peck's work on mosses attracted the attention of George W. Clinton (son of DeWitt Clinton), a distinguished botanist who was

1 The quotation is taken from the entry on Peck in the *Dictionary of American Biography*, the principal source for the information in this article.

2 George Francis Atkinson, "Charles Horton Peck", *Botanical Gazette* 65:1 (1918), p. 104.

one of the New York State Regents, and it was presumably through Clinton's influence that Peck was appointed to the Cabinet of Natural History in 1867 (renamed the New York State Museum three years later). For the next forty-six years he prepared the annual reports of that institution, helped to expand the holdings of the state herbarium, and issued taxonomic and distributional studies on a wide range of plants occurring within the state. Among the latter his mycological publications were preeminent, especially his monographs on various genera of agarics, in which species were "described, keyed, and freely illustrated, largely on the basis of specimens [he had] collected ... [in the course of his] own indefatigable field work."[3]



3

Charles Horton Peck

Author William Ashbrook Kellerman on en.wikipedia, Public Domain, *https://commons.wikimedia.org/wiki/File:Charles_Horton_Peck.jpg* via *Wikimedia Commons*

As a mycologist Peck was largely self-taught, though he had an extensive correspondence with other mycologists, including Mordecai Cubitt Cooke, Moses Ashley Curtis, and Charles Frost. Possessed of "a highly analytical mind and keen powers of [observation] and ... description," he produced "an enormous amount of discriminating work",[4] despite "a lamentable lack of ... apparatus, exsiccati, ...assistance" and laboratory space.[5] In his obituary memoir of Peck, Atkinson noted that, among other features, Peck "gave considerable attention to ... the edible properties of the fleshy fungi"[6] — perhaps sometimes too much so, as it has recently been reported that he ate a number of the type specimens of species that he discovered!

Peck's wife Mary died early in 1912, and later that year he himself suffered a light stroke. A serious stroke the following spring left him unable to continue his work, and he resigned his position as State Botanist immediately afterward. His resignation was not formally accepted by the Regents, however, until almost two years later.

Peck lived on until July 11, 1917, and in the interim a group of his friends and admirers commissioned a set of 57 wax models of mushrooms to be made as a testimonial to his work. The models were cast in the field by Henri Marchand, a student of Auguste Rodin, and were placed on exhibition at the State Museum shortly before Peck's death — too late, sadly, for him to see them. They remained on public view until 1976, and images of them may still be seen by clicking on the link at *http://www.nysm.nysed.gov/treasures/department.cfm?dept=Biology* .

(Another link on that same page displays images of three of the more than one thousand illustrations of fungi by Peck that are preserved in the State Museum's collection.)

A brief notice announcing the opening of the exhibition of models appeared in the journal *Mycologia*.[7] It declared that "The services rendered by Dr. Peck in the field of mycology are surpassed by no other American student of fungi. ... [Produced] without the advantages of European travel and study, and frequently ... without access to the older European literature upon fungi, his work stands out with conspicuous individuality."

Dictionary of American Biography, p. 373.

4 *Ibid.*

5 Atkinson, *op.cit.*, p. 107

6 *Ibid*., p. 106

7 Homer D. House, "The Peck Testimonial Exhibit of mushroom models", *Mycologia* 9:5 (Sept. 1917), pp. 313-314.

Russula mariae Peck. Named in honor of Peck's wife, Mary.
Observation 169243: *Russula Mariae* Peck. by walt sturgeon (Mycowalt)

Orange Capped Lactarius Matrix

A short-cut to field id for eastern species.

By Gary Gilbert

SPECIES	LATEX COLOR	SCROBICULATE* / PITTED	STAINING	ZONATE CAP	NOTES
Lactarius deliciosus	ORANGE, turns reddish	YES	GREEN	YES	Europe only. Odor of carrots.
Lactarius deterrimus	ORANGE, unchanging	NO, smooth	GREEN	NO	Spruces, hemlocks. Not pine.nTaste peppery.
Lactarius thyinos	ORANGE, unchanging	YES, stains reddish	RED or BROWN	YES	Only orange milky that does not stain green. Mild taste.
Lactarius peckii	WHITE, dries greenish	NO	NO	YES	Acrid. Hardwoods. Poisonous.
Lactarius psammicola	WHITE, unchanging	YES	NO	YES	Acrid. With oaks. Poisonous.

* Scrobiculations are pock-marks or pits that some Lactarius species develop on their stipes or stems.

Close attention should be paid about what color the latex has, and if it changes color, versus what color the flesh (context) stains upon contact with the latex.

Plate Of *deliciosus* by J. C. Schäffer (1762)

Fungorum qui in Bavaria et Palatinatu circa Ratisbonam nascuntur icones [...] Vol. I: Tab 11 *bibdigital*, Public Domain, *https://commons.wikimedia.org/wiki/File:Tab11-Agaricus_deliciosus.jpg* via *Wikimedia Commons*

Lactarius deterrimus
False Saffron Milk Cap
Milk: Orange, unchanging.
Cap: Not zonate, stains green.
Gills: Orange stain green.
Stem: Orange, smooth, cut stains red.
Taste: Peppery.
Habitat: Spruces, hemlocks, not pines.

Lactarius psammicola - poisonous
Milk: White, unchanging, not staining.
Cap: Orange or beige, inrolled, hairy.
Gills: White to buff, bruise brown.
Stem: White to brown, scrobiculate.
Taste: acrid.
Habitat: With oak.

(Scrobiculate refers to pits on the stem)

Lactarius deli
Saffron Milk Cap
Milk: Orange turn
Cap: Orange, zona
Gills: Crowded, st
Stem: Scrobiculat
Taste: Sweet, odo
Habitat: Europea

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Lactarius thyinos

Milk: Orange, unchanging, stains tissue red or brownish.
Cap: Orange, zonate, vase shape.
Gills: Orange, bruises brownish.
Stem: Hollow, some pits, cuts stain red.
Taste: Mild, not peppery.
Notes: Only one that does not stain green. Cedars, arbor vitae.

Lactarius peckii - poisonous

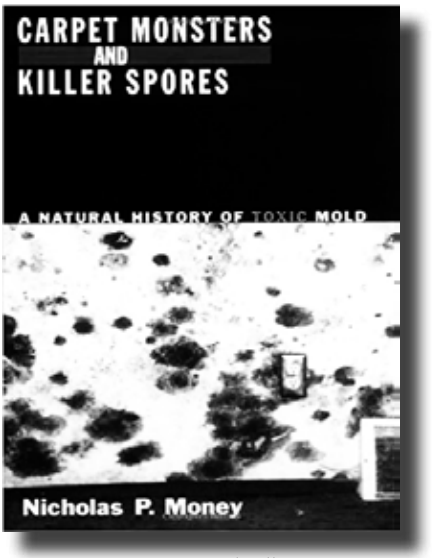
Milk: White, dries green or yellow then green.
Cap: Varies orange to brownish, zonate.
Gills: Whitish to orange. Brown with age. Not staining.
Stem: Smooth.
Taste: Very acrid.
Notes: Hardwoods.

MILKY CAPS
Look-alikes

Fungi at Home

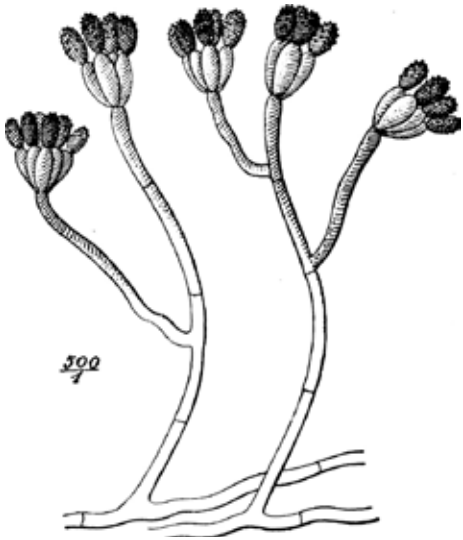
By Susan Goldhor

I've visited indoor mushroom farms which left me full of admiration for the farmers and all that they were building, growing, tracking and marketing. The tasks seem infinite and daunting. Despite my impressive competence at having once brought to fruition a shiitake patch (purchased from Fungi Perfecti) in my basement, I recognized that I was not a good candidate for starting a mushroom farm. I just didn't have the skill set. On the other hand, looking around that same basement, I noted that I was doing pretty well at growing some sort of black mold on the lower (damper) portions of the walls, and the parts of the floor nearest the walls. I had apparently also succeeded at the more difficult task of getting black mold to grow on some interior surfaces of an old refrigerator, that was turned off and left open most of the time. But I cannot boast. My crops are trivial compared to those in more humid climates (such as Cleveland or, most spectacularly, New Orleans), where entire homes have been rendered uninhabitable; reaching a kind of grisly pinnacle after Katrina. Furthermore, my guru on this subject, Nicholas P. Money, writes in his moldnum opus *Carpet Monsters and Killer Spores*, that he could probably find mold in any home in the nation, with a few geographic exclusions such as Death Valley. (Actually, the places devoid of mold are usually devoid of homes as well, being unfit for any living things.) Of course, for those fanatical housekeepers who stock antibacterial soaps by every sink, thus depriving their families of the chance to develop robust immune systems, it might take a q-tip rubbed into faucet crevices to obtain a sample, but wet rot in the form of black molds is as American as apple pie. And, like apple pie, they came here from other places, just like the rest of us. (The Romans had a god of mildew, named Robigus, but he really just held sway over crop diseases, not home infestations.) And now we reach the point where we must distinguish among types of mildews or black



Carpet Monsters and Killer Spores
By Nicholas P. Money

molds, noting that both terms are roughly synonymous and indiscriminate umbrellas for innumerable species. There are mildews/black molds in our homes and then there is *Stachybotrys chartarum*, whose toxins are sufficiently virulent to have been a candidate for biological warfare. When you hear about a court case where mold infestation was blamed for infant deaths and debilitating illnesses, leading to the need to either destroy or totally rebuild a home, *Stachybotrys* was almost certainly the culprit blamed. *Stachybotrys* certainly exists in other countries and has even been incriminated in causing illnesses in other countries. But only in America has it reached its full fruiting of toxicity and infamy. It's anyone's guess as to whether this is because (as has been suggested) a particularly virulent strain originated either during or after its emigration here from Canada, or because, as Nic Money writes, we have seen the evolution of "a newly identified species, one that has formed a firm symbiosis with *Stachybotrys*. This impressive beast is called the black mold attorney."



Stachybotrys

Rabenhorst, Ludwig; Grunow, A. *Dr. L. Rabenhorst's Kryptogamen-Flora von Deutschland, Oesterreich und der Schweiz*. 1907. Page 642. Digitizing Sponsor: MBLWHOI Library via Flickr Commons: Internet Archive Book Images

There are a bunch of interesting questions here, and no one can offer clarity on all. Some are straightforward; e.g., why are these molds black? And then there is the big and unanswerable issue: just how toxic are black molds? Let's take the easy one first.

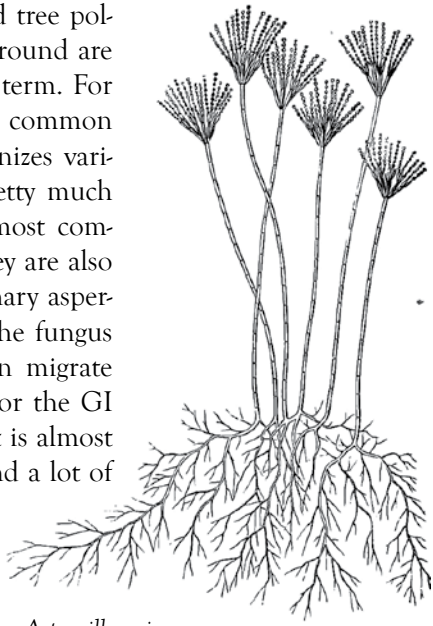
Why are these molds black? Melanization has an obvious benefit, which is that it protects against harmful uv rays. It is true that my basement is singularly lacking in uv rays, but basements evolved only recently. The molds that infest our homes evolved infesting plants, and they had to cope with sunlight. They also had to cope with alternations of very wet and very dry environments, and this has served them well in the domestic environment. I mention this because the ability to take advantage of and sequester moisture, in order to survive dessication, is also linked to melanization. In fact, when normally black fungi are deprived of their melanin, they grow more slowly; they penetrate tissues less effec-

tively; they become more susceptible to damage by radiation and toxins, and so forth and so on. In the case of *Stachybotrys*, it has been suggested that its melanin coating may even protect it against its poisoning itself, forming a sort of fire wall against the resorption of its own extruded toxins which coat its spores.

Another question of course is what do these fungi eat? Wallpaper is a favored snack, but a better meal is gypsum board, which is almost universally used in recent home construction in the U.S. (It's probably no coincidence that the typical American home is built out of the same ingredients that many mushroom farms use in their fungal growth medium.) One problem that these mildews face is, of course, a lack of nitrogen; the same problem that is faced by wood rot fungi in the wild. *Stachybotrys* seems better able than most to cope with a diet of almost pure carbs. It is actually a minor player in the array of molds that grace most of our homes, and it tends to arrive late in the game, when the more attractive edibles have gone. As to what my domestic black molds are eating in my basement, which is plain old cement, I'd guess that the passing decades have deposited some interesting biofilms on the damper parts of the walls, sufficient to nurture a thin coating of mildew. For those interested in the role that American building practises play in encouraging the growth of black molds, and why such molds have been far less of a problem in other countries, I suggest you read *Carpet Monsters and Killer Spores*. In fact, I suggest you read it in any event ~ Nic Money is not only an authoritative writer and one of our most ingenious mycologists; he is also very very funny. After all, this is a guy who describes himself as "the Professor of Botany famous for shutting his own head in a car door and, most recently, for allowing a flask filled with boiling horse feces to explode in the laboratory."

Which I guess brings us to the big question: How toxic are black molds in general, and *Stachybotrys* in particular? It's hard to generalize about a group containing probably over a thousand species but, leaving aside those such as the one that infests Ugandan hibiscus plants, and focusing on those inhabiting damp houses, the answer is that, in general, they are not very toxic at all. Of course, "in general" covers a multitude of exceptions. First and foremost, if you have an impaired immune system, you are a sitting duck for a number of otherwise benign or mildly annoying fungi, which may kill you. And our society contains an unprecedented number of such people, thanks to advances in modern medicine, e.g., long term AIDs survivors, those undergoing chemotherapy, and those who must take immunosuppressive drugs to hold onto transplanted organs.

All of us inhale mold spores – Nic Money does a blue sky calculation assuming a (highly theoretical) rate of about ten per minute, and living until 80, at which point we'll have taken in 420 million spores. Which sounds like a lot except that if they were all massed together (they won't be because healthy lungs get rid of them pretty quickly), they would be about the size of two grains of rice. Obviously, someone living in a poor neighborhood in New Orleans, would take in more. I tried to think of who would take in less but these molds are pretty ubiquitous. I finally decided that an Inuit living in an igloo was my best candidate. Most of us don't even have an allergic reaction to these spores, although they are powerful allergens, and – probably – asthmagens for those so inclined. (For those who do respond, you may have been sneezing and wheezing from black mold and other fungal spores during at least some of the time you were cursing ragweed and tree pollen.) Some of those spores flying around are toxic, but toxicity is a fairly elastic term. For example, *Aspergillus niger* is a very common black soil fungus, which also colonizes various indoor sites. Its spores are pretty much everywhere and are, in fact, the most common spores that we inhale. But they are also very toxic, causing invasive pulmonary aspergillosis; a horrible disease, where the fungus from the initial lung infection can migrate through the blood into the brain or the GI system. In any of these locations, it is almost invariably lethal, but we don't spend a lot of time worrying about it or filtering our air intakes, because it only very very rarely bothers those of us lucky enough to have intact immune systems.



Aspergillus niger

Kerner von Marilaun, Anton et. al. The natural history of plants, their forms, growth, reproduction, and distribution. H. Holt and Company: New York City 1895. Page 27. Digitizing Sponsor: MSN via Flickr Commons: Internet Archive Book Images

As the deservedly famous physicist and educator, Phil Morrison, used to say, speaking of nuclear weapons, magnitude counts. And magnitude counts in mold in homes as well. Most of us are living in relatively dry, clean homes, inhaling our ten or so spores per minute (noting that this is nothing more than a simple figure for calculations, and not a meaningful estimate). But some few of us are living in homes

where the walls are literally covered with black mold patches. Nick Money describes the horror and stench of visiting a home where mold had advanced to the point where the owners had been forced to abandon it. Describing the walls covered with mold colonies; the air loaded with spores (coming through his face mask), his shoes covered with spores from the infected carpets, he writes that "This seemed more fungus than house. . . This isn't a trivial problem. Children had slept in these spore-spattered bedrooms." Whether one believes that the molds in question are toxic or not, the sheer volume of them cannot be helpful to one's health, and particularly to the health of the very young or the very old. And this is leaving aside the fact that one's house is being literally consumed, with fungus replacing the original substances that the owners paid to enjoy.

And now, back to *Stachybotrys*. Yes, *S. chartarum* can usually be found in these sad, contaminated homes. Yes, *S. chartarum* does produce virulent toxins. Yes, *S. chartarum* was found in the homes where infant deaths from pulmonary damage occurred. Yes, Erin Brockovich (she who campaigned against polluted water and was played by Julia Roberts in the movie) testified in court against *S. chartarum* after the home she built with her legal victory and movie royalties sustained mold damage that required $600,000 to repair. Yes, . . . so? So what? The cases again *Stachybotrys* have been made by lawyers, not scientists. The spotty nature of the occurrences and the relatively small numbers of the serious medical cases, together with the fact that *S. chartarum* is not occurring alone in these badly infested environments, have made careful medical studies almost impossible to carry out. It is possible to name reputable experts who believe that *S. chartarum* is the villain, and others who believe that it is (relatively) innocent. While one should probably not open a dish of sporulating *S. chartarum* and inhale deeply, there are a lot of things that are more worthy of your capacity for worrying, even taking into consideration the human propensity to worry about the more trivial threats (electric blankets, GMOs, trans-fats, etc.), rather than the real ones (nuclear arsenals, climate change, national fiscal policy, etc.). I'm sympathetic. You can maintain an electric blanket-free home but the real villains are impossible to control. However, there are a few things that we can do to control mold in our homes, and regardless of the threat level of *S. chartarum*, keeping the mold in your home to a minimum is a good thing. (Please note that no one, with the possible exception of fungicide salesmen, advocates trying to eliminate mold. It's impossible, and it wouldn't even be healthy. As the old saw says, it's like teaching a pig to dance. It never works, and it just irritates the pig.)

1) Keep things as dry as possible. (Dehumidifiers are useful gadgets.)
2) Repair roof or siding or plumbing leaks promptly, and check for seepage into floor or walls.
3) Don't try to close everything up in the hope of making the house water tight or keeping out spores; that seems to have the opposite effect, keeping all the bad stuff inside.
4) Don't finish your basement; the finished walls just hide and hold the water seepage. (You want a basement like mine, where the water seepage and the mold are exposed to view ~ and to the dehumidifier.)
5) Don't turn up the heat; put on an extra sweater instead.
6) Don't buy a house likely to be flooded. *Duh.* But getting harder all the time.

In other words, there is no magic bullet against black mold. Sorry.

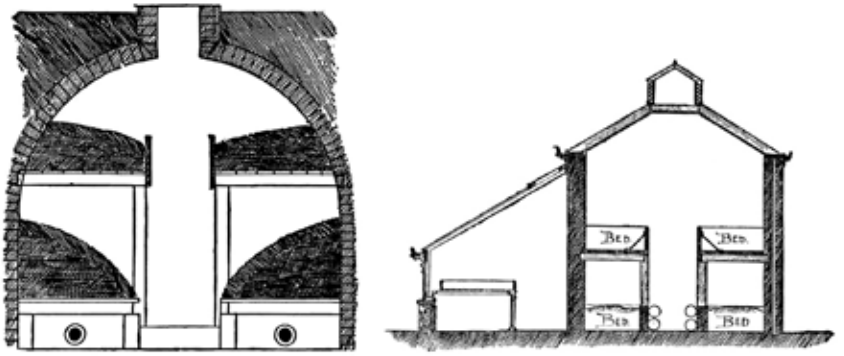
There is one kind of black mold that landlords want to see growing on their walls, but cannot be cultivated, appearing (and staying for centuries) at its own sweet will. I first encountered this while touring an aged Burgundian wine cave, where the beautiful and charming owner was pulling samples out of enormous casks for us to taste (and then spit out on the dirt floor). With terrifying reports from New Orleans fresh in my mind, I was surprised to note that the cave's walls were covered with a luxuriant growth of black mold. Perhaps, I thought, the constant imbibing of excellent wine strengthens the immune system and protects against the ravages of fungal depredations. It wasn't until I returned home that I discovered that what I had seen was not *Aspergillus* or *Stachybotrys* or any of the wet rot molds that we know, but *Zasmidium cellare* the wine cellar mold, which lives on "the angels' share"; the alcohol that evaporates from wooden kegs as wine or spirits age. (There are other, highly thermotolerant, outdoor molds living on that angels' share which evaporates from distilleries around the world; we shall ignore these.) *Zasmidium* is that black mold rarity: a desirable tenant, gobbling up not only alcohol, but also those volatile chemicals which make a cellar smell musty, thus justifying its names of "choice" or "noble" cellar mold. Alas, *Zasmidium* seems to be increasingly rare in Europe, and does not live at all in the U.S., where non-choice and definitely non-noble molds are a common bane of wine cellars, inching their way under lead collars and corks, destroying costly collections and infuriating their owners.

I shall give short shrift to real mushrooms that grow (unwanted and untended) inside houses, but these do exist, the best example being *Pezi-*

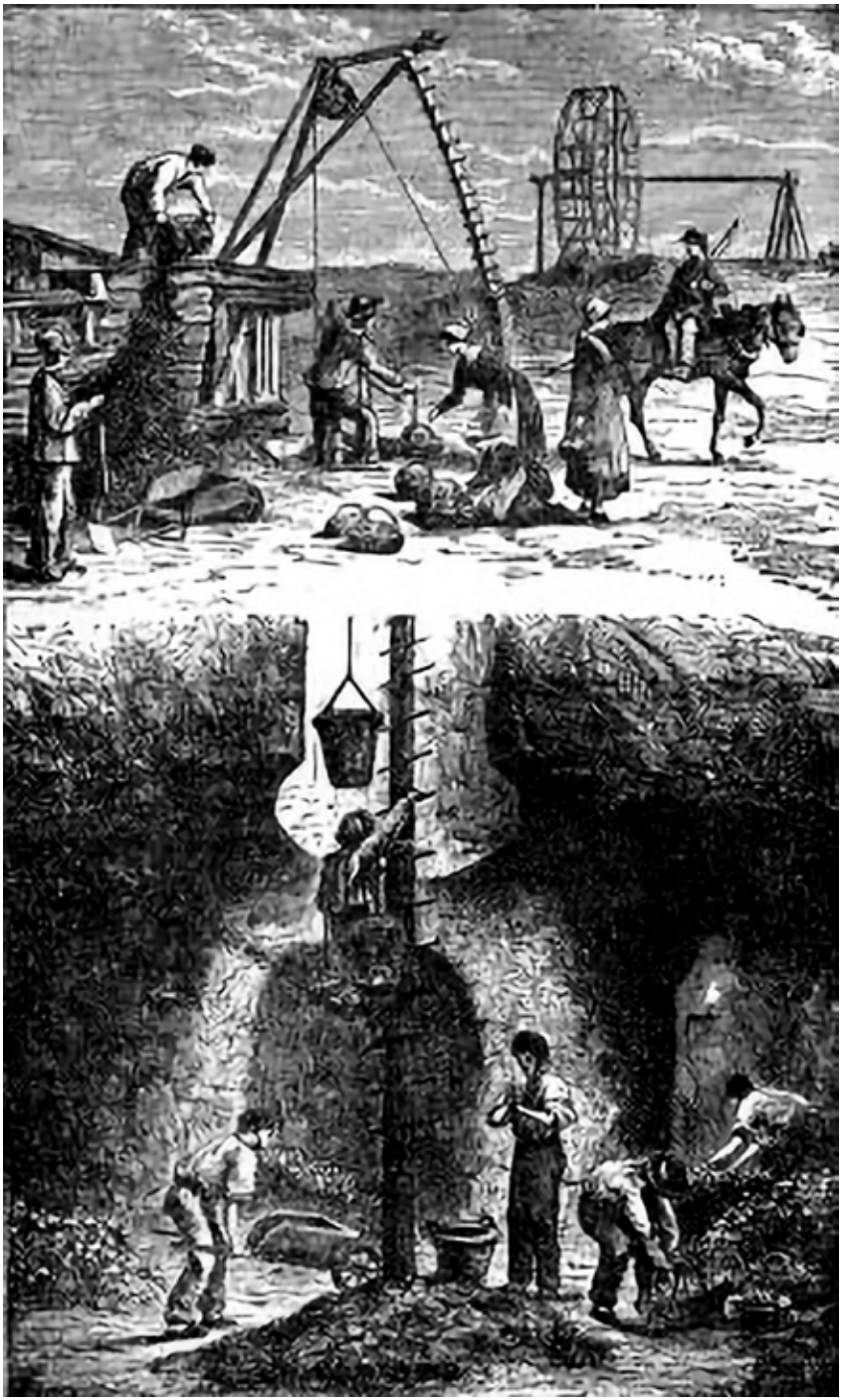
See back cover for an 1809 drawing of *Zasmidium cellare.*

za domiciliana. Like certain other companion species, such as cockroaches or bedbugs, you really don't want this in your home, although it's far from the worst fungal housemate. Googling around, I found a spectacular photo of this orange-peel-like ascomycete at: *http://www.flickr.com/photos/adamshingleton/2420831935/*. It was entertaining to see the comments below the photo as folks joined in, saying, hey! I've got that too! in my dining room/living room/bathroom/basement/kitchen. My favorite was from Ashley, who wrote, "i have this very same problem in my kitchen right above my sink!!! the ceiling has cracked and the paint is bubbling, the used to be white ceiling now has a 5ft long and 2 ft wide brown stain where the *Peziza domiciliana* is growing, also the brown stains and bubbling has started going down the walls. very little online about this, does anyone know if their spores are dangerous? interesting: when blowing on them your moist breath releases the spores on the fungi and comes off them like a little puff of smoke." What fascinated me about the Peziza owners was that, unlike folks coping with black mold, they found this housemate sort of. . . charming. No one seemed desperate for removal options; indeed, they seemed proud of their pet fungus. As one guy in an online video put it, pointing to impressive fruitings in his truck cab, "How cool is that?"

If ordinary black mold is the common annoying but not really scary cockroach of indoor fruitings, and *Stachybotrys* the venomous spider, *Racodium* seems to be the equivalent of a barn cat; a useful tenant worth maintaining. And *Peziza domiciliana*? I guess that's the fungal equivalent of the adorable puppy you can't resist at the shelter. Will it grow up and bite you? Only time will tell.



Some Other Fungi at Home: Cross-section of the Dosoris Mushroom Cellar.(left) Section of Mrs. C. J. Osborne's Mushroom House.
Falconer, William., *MUSHROOMS: How to Grow Them.* Orange Judd Co: New York. 1892. Figure 3,8. Page 27,35. Released March 2008, via Project Gutenberg.



Gathering Mushrooms in the Paris Caves for Market.
Falconer, William., *MUSHROOMS: How to Grow Them.* Orange Judd Co: New York. 1892. Figure 49. Page 149. Released March 2008, via Project Gutenberg.

Natalie Bowers, a resident of the North Shore, ran her first 50k trail race, The Stonecat 50k at Willowdale State Park, in November. you can reach her at *mrs.natalie.bowers@gmail.com*

Running for Mushrooms

By Natalie Bowers

I slip my black, dusted sneakers on, open the door to feel the chilled morning air and step outside. From my house, there's two miles of road until Bradley Palmer State Park. I approach the road slowly and as my muscles warm to the rhythm of my movement, I feel hopeful, excited. There are mere minutes before I enter the sanctuary of nature and shed this external, defensive shell that has started to, again, feel heavy and false. My feet bring me towards the place where I connect my entire being with the forest, and like the trees, join other life forms wiser than us.

My only regret is that my feet are not calloused enough to go barefoot. Because if I could place my naked foot on the ground, I might intuit the traces of the mycorrhizal network and be led straight to the ethereal fruiting bodies that most never discover. For now, my eyes, ears and olfactory senses will have to do and I have only to be forever grateful that I was one of the lucky ones who have been called to this geomancing tribe.

In this connected state, the mushrooms present like mystics. Largely

shrouded from plain view yet visible enough to be detected, they play an important and essential part in the scene. They have a gravitas that pulls me towards them as I pass. But I didn't always notice them. My 'Mushroom Vision' has been honed through years of listening to the forest, hundreds of miles connecting with nature, and possibly one pivotal life moment that finally placed fungi in the foreground for me.

Two weeks after we moved to the North Shore in May 2017, my mother fell ill with small cell lung cancer. It is quite possible that all mother-daughter relationships are complex, as was the case for me. When she fell ill and then was placed on hospice later in the year, my runs became elongated moments of expressed grief and fear of impending loss. The forests heard and consoled my cries, and sometimes screams. I ran to forget and I ran to endure the utter devastation that was darkening my life. I was about to lose my matriarchal creator, I knew it and I was powerless. During this time, my need for the forest was more profound. On my usual trail runs, I would stop to let grief overtake and there beside me would be a lone *Lepiota* or a small group of *Chlorophyllum sp.* sticking out of decomposing leaves showing me its delicate and gilled underside. In these moments, the presence of these mushrooms made me feel as if I were not alone. They assuaged my fears and helped me to cope with my reality by presenting a gentle stillness.

After I resigned myself to the sadness of my mother's absence, the trail running kept bringing me to the mushrooms. The intersection of this faster paced movement compared to the slower process of foraging is an experiential crossroads as rich as the forest itself. The running provides the forager with more area covered and an opportunity to scout on a macro scale. General characteristics of the land can be assessed, triaged and catalogued for future, more specific hunting. Oftentimes, I will run five miles or so into the heart of the land, spot a promising place that might be diverse lowland or highland forest, note a vague scent of mushrooms in the air, then return for further inspection with nets, baskets and knife the next day.

I bring my phone to take photographs of unfamiliar species because it's not practical to carry the entire mushroom kit on a long run. What little space I can afford for carrying things is already reserved for energy gels and water, and besides that, the poor mushrooms wouldn't survive the journey; trust me, I've tried. Sometimes, if I see a particularly seductive display, I'll stop running for a little while to hang out with them and take in their features. I'll spend the next mile or so savouring my time with them and reviewing the moment in my mind, committing the details of the experience to memory for further research.

Trail running is different than road running. Asphalt is more predictable and the body can turn on a physical auto-pilot that is not possible on trails. The average number of footsteps per mile on asphalt is about a third of the number of footsteps required to navigate a non linear trail. You burn more calories because more muscle groups are being fired up as different grades and elevations are navigated. The difference in physique between trail runners and road runners is visible; road runners are thinner while trail runners have more muscle mass. With trail running you must remain hyper-present to protect from rockheads or protruding roots that can easily catch your feet. This is an ultimate connection to the environment. The level of information that the body has to respond to feels like a holy state of existence. For me, I feel alone and detached on the road, but connected on the trails somehow to something bigger, perhaps connected to everything.

Trail running in itself is exciting and a little feral, but when you marry it with mushroom hunting, the hybrid activity is supremely stimulating. You have to keep your senses alive and open to possibilities, and you have to be prepared to go 'off track' and explore what are lesser travelled, disquieting options. In this unknown territory, you have to stay alert and try to recall the paths you've taken otherwise get lost for three hours.

However, getting lost in the woods has its own unique magic, and I speak with much experience in this arena. Some of my most magnificent encounters with nature have been while lost with no knowledge of how to get back to the point of origin. It has been during these times that I became most acquainted with the trails, sometimes forced out of desperation to learn new pathways back to the parking lot or loop extensions and short cuts. It is also when the forest seems to find me and speaks openly, presenting the most rewarding fungal sightings.

As it is with hiking, the deeper the trails take me away from civilization, the louder the cacophony of forest sounds become. I can hear the wind blowing through the canopy, the harmonious chirpings and twitterings of birds. I can also hear the sound of crickets and smaller winged creatures crossing my path. I hear the creaks of the trees and the trickle of flowing water nearby. The sounds of my feet and breath fall to the background while this wondrous symphony fills my ears. As my ears adjust, my eyes again become new and I see the forest differently as it passes all around me. Now, the colors of every leaf and bark become poems, and my focus is led to the ground. The abundant life of decay is thickly spread with a glorious texture that my eyes devour, and soon, the mushrooms become visible.

The first couple of times I remember having no problem just run-

ning past them, but as my sightings increased, so did the strength of my desire to stop. What were these fantastic dirt docents trying to say to me? I began noticing what I now know to be buxom *Russula*s and Boletes, and then thinking about them later in the day, searching the internet for information on each unfamiliar species. When the internet failed to provide enough detail, that is when I purchased books. Then came the microscope and the membership to our esteemed Club.

My favorite mushroom/running season is the Fall. During this time, there are such an abundance of species that it is almost hard to keep up. While in the forest, I savor my gaze upon them and employ all of my senses in the process, like one might consume art.

My first Fall season yielded some magnificent finds. There was the beauteous discovery of my first polypore, the *Bondarzewia berkeleyi*. As I turned a bend and my eyes followed a strong beam of sunlight coming down from an opening in the canopy and falling on a patch between a pine tree and an old oak tree, there was the grand floret. It was such a superb display that the vision alone forced my body to immediately stop, gasp a *whoah!* and behold the sight of its body. This same season, I discovered an amazing display of bright orange fruiting by *Laetiporus sulphureus*, so fresh and warm orange; although the sun was not directly on it, it felt to me as if the body was producing its own sunlight and emitting it! I was also introduced, again and again, to the *Calvatea gigantea* species of puffballs and its cute little cousin the *Scleroderma citrinum* (pigskin poison puffball). The delight in beholding the comedic, almost ridiculous presentation of humongous white balls popping out of so many meadows among green lush grass makes me smile just thinking about it. Then came the abundance of yellow *Amanita cf. muscaria var. formosa*'s underneath coniferous trees. They seemed to be everywhere I looked. Their yellow-orange caps and large size are striking, the stuff of fairytales.

In a short period of time, my happenstance mushroom spotting transformed into an active searching for them. I started to design my runs based on my initial assessment of where I thought the mushrooms would be; my runs morphed into a means to an end, and that end was finding mushrooms.

Over these last three years, my 'Mushroom Vision' has improved a little bit each year. Last year, I started to study tree identification so that on sight, I might identify the type of trees which would lead to possible mushroom sightings. Evidence of my advancement in learning has gradually resulted in recognizing species of fungus that I had either not noticed before or just did not come across. The more camouflaged species, like *Craterellus fallax*, have begun to introduce themselves to me. With

Natalie Bowers Runs By A Mushroom(above)

Bioluminescent Mushroom Stamps Available

2018 *Mycena lucentipes* Stamp
Lockwood, Taylor. *Mycena lucentipes*. Bioluminescent Life Stamps. US Postal Service. 2018

every new species I discover, my interest and passion for mushrooms grows.

I am left with a notion that, when it comes to mushrooms, in order to hear something, one has to first listen. Whether you are running, walking or riding, if you are not listening to the forest, these seemingly silent sirens may just go undetected. Why should they care if you see them or not? I also think that, despite my years of running, I had not been able to see the mushrooms because I was not listening.

I continue to construct my runs to include the lesser travelled trails and up steep slopes and down rocky faces, my inner ear always on alert. However, I somehow know that no matter how hard I seek, I am not in total control of the journey. They lead, you follow.

MushroomLog

By Christopher Neefus

$4.99(on iTunes)
Version: 1.7
Size: 20.5 MB
Rated 4+

Description

MushroomLog is a feature-rich iPhone App designed to keep track of when and where you find wild mushrooms. You can log single observations, like when you spot a chicken-of-the-woods during a drive along a back road, or you can use it to track where you go and what you find on a mushroom walk with your local mycological club. In addition to mapping the location of each observation, it lets you record the common name and scientific name of the mushroom, what the mushroom was growing on, the habitat where you found it, how plentiful they were, and how confident you are in your identification. You can save pictures of each mushroom. The App builds a database of your foray locations, where you walked on each foray, each mushroom observation you made, and the pictures you took. Later, you can retrieve and map the track and observations from your walks or search your observation database by species, location, a range of dates. Getting Started tutorials and a complete User Manual are available on the MushroomLog support site.

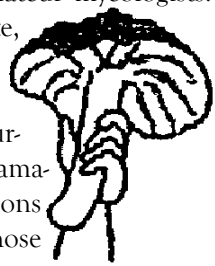
Hibbett Lab Exclusive BMC Offer

If you have a cool but mysterious fungus that you would like to ID, but can't make it to the Monday night ID sessions in Cambridge, please consider bringing it to the Hibbett lab at Clark University. We can't promise to put names on everything you bring in, but we are always happy to look at interesting finds from current BMCers. If you would like to consult, please get in touch by e-mail (David Hibbett: dhibbett@clarku.edu) and we can try to find a time to meet.

BMC - Eagle Hill Scholarships Available

Eagle Hill Classes will be posted soon. Check their website or join their mailing list to see a complete and current list. If any look appealing to you and you are willing to take good notes and bring information back to the BMC, in the shape of an article, lecture or foray, we encourage you to apply for the BMC/Eagle Hill's Scholarship.

CALL FOR SUBMISSIONS



Calling for submissions regarding the pursuits of amateur mycologists: we can receive these in any form from those who write, draw, and capture digital images. We need the utmost generosity of all your expressions to accurately reflect our passion. Remember, *The Bulletin*'s most explicit purpose is to broadcast the grandest expressions of the amateur: those vital mycological pursuits whose motivations are far more various, and often profound, than those who pursue for money.

Generously submit all contributions to BulletinBMC@gmail.com

Help Friends of the BMC

When we plan our weekly forays throughout the year, we need to get permission from the owners of the areas we are visiting. Some of the local conservation groups have been very welcoming to our group and deserve our support. Two in particular have helped us substantially, even suggesting places to explore (Like the old growth forest in Cummington that was the site of this year's bus trip). The Trustees of Reservations and Sudbury Valley Trustees are both excellent organizations that you should support if at all possible.

If you are able, we encourage you to join these groups or at least make a donation. It's a lot of work to keep trails clean and free of fallen trees and invasive plants. They make our trips to the woods much more enjoyable.

Sudbury Valley Trustees: www.svtweb.org The Trustees of Reservations: www.thetrustees.org.

Membership for 2019

We invite any interested person to apply for membership. One of the ten best holiday gifts (refer to minutes from the BMC Hygiene Committee, May 11, 1896). Join the BMC online using PayPal or by mailing a completed Membership Application to

Joel Kershner
4 Auburn Ct, #3
Brookline MA 02446-6331

Annual Dues
$20.00 - Individual member
$25.00 - Family membership (all at one address)
$10.00 - Junior member (individual under age 21)

Applications received after November 1st will include membership into the coming year.

FUNGI OF TEMPERATE EUROPE

Mycokey has just finished the new *Fungi of Temperate Europe*. The work is published in two volumes in Danish (Gyldendal) and English (Princeton University Press) and amounts to 1,717 pages. It includes more than 2,800 species distributed on more than 1,000 genera and illustrated with more than 10,000 pictures.

An innovative element of the work is the newly designed identification wheels to fungal genera. To promote these, we have prepared a digital version of the wheels that can be freely downloaded.

http://www.mycokey.com/Downloads/FungiOfTemperateEurope_Wheels.pdf

Lawrence Millman's review of *Fungi of Temperate Europe* will appear in the forthcoming issue of Fungi.

Our Website

http://www.bostonmycologicalclub.org/

This is an incredible resource created with the generous patience and extraordinary talents of Scott Shaffer. Among past lectures and other resources you can use your account to readily view digital back issues of *The Bulletin*.

Since 1897

The front of every issue of *The Bulletin* reads "since 1897" and there has been some confusion over what this refers to. It's not the club. The first Bulletin was published on a single-page type-written document in 1897. To achieve this marvel of technology and organization took the 1895-founded BMC two years.

The Next BMC Bulletin Wants Your Work

Please submit any and all contributions before **March 1.**

Of Interest to Mushroom Foragers in Connecticut

AN ACT AUTHORIZING THE TAKING OF MUSHROOMS AT STATE PARKS AND ON OTHER STATE PROPERTY

Substitute Senate Bill No. 129

...the commissioner shall authorize any person to take mushrooms from any lands under the control of the commissioner provided such taking is for personal use only. The state shall have no liability to any person or the heirs or assigns of any such person who engages in the taking of mushrooms from any lands under the control of the commissioner.

UPCOMING EVENTS

Monday December 9 7pm	**Rotten Fruits in Art and Science** A talk and special after-hours viewing.
Sunday, December 15 6pm	**BMC Duff Sale** Don't miss it!
Late December	**The Christmas Mushroom Count** Location to be announced at Duff Sale. with Lawrence Millman
July-October Most Weekends	**The BMC's Weekend Walks** This list will be available via the BMC website.
Tuesday October 15	**National Mushroom Day**

See our next issue for updated forays and national events.

Join our efforts in sharing all regional mycology related events with BulletinBMC@gmail.com

Mystery Fungus

Dear Mycophiles, Here's the latest mystery fungus from Lawrence Millman. Hint: It's not a fleshy fungus. Anyone who can guess what it is (or even come close!) will get a free copy of one of his fungal books Lawrence Millman.

To enter this contest please email your answer to the editor at: *bulletinbmc@gmail.com*

Zasmidium cellare in Your Home? You Wish! See *Fungi at Home* On Page Twenty-Two

Sowerby, James. *Coloured Figures of English Fungi or Mushrooms.* Plate 432. 1809. Public Domain via *Internet Archive* via *Wikimedia Commons*