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The Bulletin



NATURAL REMEDIES ARE NOT COCKTAILS • IN THE SOUP
GIANT MUSHROOMS • CYATHUS BULLERI • MYCO SHROOMS
AMATUR MUSHROOMING JOY • HEIST • DEER V PLATTERFULL

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

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Editorial advisor

CONTENT
WANTED
Generously
submit your
contributions to:
BulletinBMC
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I wish you best in these difficult times. Unlike a digital deluge, mycology is far more than a tenuous distraction which has ongoing need for amateur driven discoveries. And what is more these are discoveries that you can keep.

Almost ten years ago to the day the late Gary Lincoff wrote me and several others a note. It's short and to his style of teaching impressed upon us how important it is to be constantly be discovering. I want to share his words with you here:

The "tiny, yellow orange cup" found seems to be *Arachnopeziza aurelia*. Look it up on Google and see the "Images" offered.

We'll learn about our local flora one mushroom at a time.

The other discovery is the article that was published recently arguing that a mushroom we were confused about, first called *Daedalea quercina*, then *Trametes elegans*, seems to be a European import, *Trametes gibbosa*.

Happy Holidays.

There should be more morels out there now than Easter eggs. Gotta find them now.

So whether your next finds are morels or the many other extraordinary fungal partners we hope they will direct you towards many more. Please join your colleagues in writing should you feel so inclined.

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

Our cover image shows the iconic mural in Somerville created by David Fichter. Read more on page eighteen.

Photo by Joshua Winer

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Credits

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The Bulletin

April 2020

- 4 Letters and Editor Corrections
- 6 Natural Remedies Are Not Cocktails
(So Don't Mix Them!)
By Susan Goldhor
- 11 Song: Mycorrhizal 'Shrooms
By Jim McAuley
- 12 In the Soup
By Lawrence Millman
- 14 Early Spring Mushroom Walk w Lawrence Millman
By Joshua Winer
- 16 *Megacollybia rodmani* vs *Pluteus cervinus*
Platterful Mushroom vs The Deer Mushroom
By Gary Gilbert
- 18 Sighting of Giant Mushrooms in Somerville!
By Joshua Winer
- 20 Book Review by Lawrence Millman
*Mushrooms of the Northeastern United States
and Eastern Canada*
- 23 Book Review by Lawrence Millman
Synopsis Fungorum 40
- 24 *Cyathus bulleri*
Who's in a Name
By John Dawson
- 26 My Amateur Mushrooming Joy
By Sieglinde Aigner Crooks
- 31 Upcoming Events
- 32 Mystery Fungus
By Lawrence Millman
- 32 Photo Essay of Fungal Heist
By Theresa Urist



A Letter To the Editor

Hi Zaac,

I thought this issue of the Bulletin was particularly interesting and well done. As you said, the contributions are unique. They range from very informative to quirky and humorous. All are well written.

Congratulations.

Joel Kershner

Thanks for sharing your praises Joel. I am glad to share them with our past and future authors in this note.



Corrections to 74:2 Fall Winter 2019(Previous Issue)

Page 10. Starvation Cuisine. A confusing second paragraph is out of place and this should be omitted.

Page 20-1. The Centerfold of the last issue with the Lactarius graphic in color. *Orange Milk Caps and Their Look-alikes* was created by Gary Gilbert. The authorship was unfortunately omitted.

Page 28. Fungi at Home. *Racodium* is referred to as well as *Zasmidium*. Because of name changes all should be consistent.



Giant Polypores and Stoned Reindeer

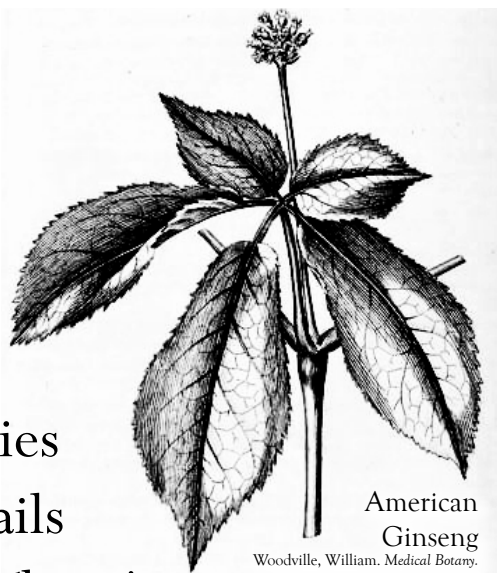
Giant Polypores and Stoned Reindeer has gone into a second edition! To get your signed copy of this remarkable book of fungal musings, either get one at the Duff Sale or send a check for \$22 (postpaid) to:

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



[HTTP://STINKHORNMEDICINALS.TUMBLR.COM/](http://stinkhornmedicinals.tumblr.com/)

Natural Remedies Are Not Cocktails (So Don't Mix Them!)



American
Ginseng

Woodville, William. *Medical Botany*.
1790-1794, Public Domain. via
Wikimedia Commons

By Susan Goldhor

It occurred to me that right now, when we're all sheltering in place, and reading terrifying statistics about illness and death, we're all also probably at an all time high point in the consumption of natural plants and herbs believed to improve immunity, reduce stress, and increase general health. Even I, seeker after double blind clinical trials that I am, have been taking a pill containing an extract of North American ginseng which the manufacturer claims will boost my immune system. There is no proof of that. And yet, I take it. We all want reassurance.

Here's the thing: widely consumed foods, food extracts, herbs, etc. don't require approval of the U.S. Food and Drug Administration (FDA). The FDA doesn't have to approve my ginseng, or your mushroom, just as it doesn't have to approve broccoli or milk. All of these are considered GRAS (generally regarded as safe) and get that blanket approval. How the FDA regards something like chaga or kombucha, which are not exactly longtime American foods, is — according to my interpretation — denial; simply deciding to ignore their existence. So they've kind of slipped under the wire. Kombucha may not stay that way for long, not for the perfectly valid reasons of its being different in each brewer's hands, and full of random stuff that folks have decided to add to it, but because its alcohol content is generally above the legal minimum for a non-alcoholic beverage. (I mean. . . sugar and yeast? Come on.)

Anyway, I don't see anything wrong with taking a fungal supplement. If you want to take a chaga or reishi (*Ganoderma*) tea or powdered *Hericium*, that's fine. Whether or not they'll do what you hope they will, is (like my ginseng) unproven. But, as we all know, the placebo effect is so powerful that even when patients are told that they're getting a placebo, they experience benefits. Even our own medical establishment is starting to accept mushrooms. Web MD (not exactly the mouthpiece of the FDA but still. . .) says, "Medicinal mushrooms have been approved adjuncts to standard cancer treatments in Japan and China for more than thirty years and have an extensive clinical history of safe use as *single agents* or *combined with* chemotherapy." There are two warnings embedded in this sentence. First, that such supplements are to be used for cancer combined with the standard treatment; not in place of it. And second, they are to be used as single agents. In other words, not combined with other ingredients. These ingredients can be other fungal or herbal supplements or they may be your prescription medications.

Almost twenty years ago, Laurie Leonard (a Maine-based mycophile with an MD) published an excellent article on the medicinal effects and side-effects of mushrooms and herbs. Laurie is clearly expert in this field, and notes

. . . that many people are eating mushrooms and herbs and that there is a potential danger of these interacting with some prescription medicines and anesthetics. Why? Because people, mushrooms and plants are chemical factories manufacturing hundreds if not thousands of chemicals. . . many good but some obviously bad. But aside from the known toxic mushrooms and plants, these things make chemicals which have an effect on us. If they had no effect, we probably wouldn't be taking them. . . A potential problem arises if someone is taking an herb and then is given another medicine. Unfortunately, many doctors do not ask their patients if they are taking herbs and so it is up to you to inform the doctor if you are.

Laurie points out that it may also be up to you to research the herb or mushroom-drug interaction, because your doctor or anesthesiologist may not be up on this.

There are two areas where the herbs that are often added to fungal remedies are known to have medically important side effects, and these are interference with anesthesia and blood clotting time. In fact, when a random sample of outpatients from sixteen hospitals in seven US regions was questioned, it turned out that a third were using herbal or other supplements that could interact with anesthesia and inhibit coagulation.

As to the herbs that many of us add to our fungal supplements, here's a great example. In one of those coincidences found only in such loosely edited publications as mycology newsletters, a Maine mushroom

enthusiast had a letter in the same issue of *Mainely Mushrooms* as Laurie Leonard's article. This letter extols the medicinal benefits of reishi mushrooms. According to him, these *Ganodermas* act as immunostimulants and general tonics, but can also "be used for many disorders including but not limited to, bronchitis, hepatitis, allergies and food sensitivities, high blood pressure, insomnia, enhancing central nervous system, coronary heart disease, duodenal ulcers . . . cancer, HIV, and other degenerative immune diseases. . . ." He recommends either making a soup from the mushrooms or a tea. Now here's the interesting part. He says that when he makes the tea, he adds "one tablespoon for every pint of water, often combining it with astragalus root and shiitake, and occasionally adding pau d'arco bark as an antifungal. He also adds "a bunch of fresh ginger root and licorice root, which add flavor, aid digestion and enhance potency". He claims that reishi is non-toxic and has few minor side effects (in his favor, he does suggest that you consult a health care professional prior to using this for medicinal purposes), but by adding these other (supposedly beneficial) herbs, he has in fact created a cocktail full of potentially toxic side effects. Astragalus root may offset the immunosuppressive effects of corticosteroids and cyclosporine, and may have toxic diuretic effect on kidneys and cause hypotension. Ginger prolongs bleeding time, and can alter heart rhythms and blood sugar levels. Licorice may cause hypertension, sodium and water retention; may have MAO inhibitor activity and can change anesthetic requirements. Pau D'arco bark may have toxic anticoagulant/antiplatelet effect.

Note that the additive currently most strongly associated with the harmful effects of vaping is Vitamin E acetate. If you were looking at a list of ingredients, wouldn't this look harmless? Or even beneficial?

Following through on mixtures of various natural remedies (although the mixtures are not natural), I went to a popular website offering fungally-based products for sale, including a range of medical products I've always felt uneasy about. The one I decided to poke into was one for women. (By the way, this product as well as every single other medical product on the website was sold out. I'm not sure if this is because of the movie *Fantastic Fungi* or because we're all looking for ways to boost our health during this pandemic. Probably a combination of the two.) These capsules contain several fungal as well as several plant ingredients. The plant ingredients that I didn't know were shatavari and chasteberry, so I logged onto WebMD to learn a little (a very little) about them. After being amused by the fact that shatavari is supposed to increase sexual desire and chasteberry to reduce it, I was sobered up by

realizing that both can affect pregnancy and breastfeeding, while chasteberry can interfere with both some antipsychotics and drugs used for Parkinson's Disease. But the scariest thing I read was that shatavari given to rats during the first trimester of pregnancy had caused both increased resorption of fetuses and teratogenic effects. Now to be fair, the dosage in these pills is way below the dosage given to the rats (which were given the equivalent of what is considered a "therapeutic human dose"). So someone taking these pills probably won't end up with a malformed baby, although the author of the statement on teratogenicity suggests that this ingredient be avoided, even in small amounts in herbal teas, during the first trimester of pregnancy. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6003012/>) In fact, teas containing shatavari are recommended (by the tea manufacturers) for use during pregnancy and breast feeding; exactly the time that the medical establishment recommends that you avoid this ingredient.

Maybe these ingredients in these quantities in these pills are helpful. Maybe they're harmless at these levels. All I can say is that I wouldn't take them.

It would seem that if you do find a mushroom or herb that works for you, you should take it straight and in measured doses, tell your doc-



Many Powerful Herbs Do Not Require FDA Approval

Brothers Grimm retold. *A Boys And Girls Bookshelf*. The University Society, New York. 1920. Page 158. via Project Gutenberg

tors about it, and be careful about what you use to mask it, preserve it, etc. I know that natural food people are suspicious of the chemicals that the food industry uses but, personally, if I were looking for an antifungal (anti-mold) preservative, I'd feel more comfortable with the standard 0.25% of propionic acid than with an unmeasured dose of pau d'arco bark. Or freeze it. Chacun a son gout, as the old lady said when she kissed the cow, but if you're wary of chemicals, remember Laurie's warning that any "natural" herb or mushroom is a factory of chemicals, few of which have been analyzed. No one ever said that *natural* equals *non-toxic*, and certainly no mycologist. And, don't forget that each person is different. We accept that as a given in relation to gluten sensitivity or food allergies; it's another reason to be very careful in what we dose ourselves with.

Both consumers of plant and fungus-based remedies and the folks who sell such remedies to them, have searched the globe to find new and different supplements, often those used by isolated ethnic groups who would probably trade all their local remedies for access to aspirin and antibiotics. All of these new additions to the natural pharmacopeia have made it a bit more difficult to research their effects. However, the internet is, as usual, an amazing source of information, along with it's equally amazing ability to feed us misinformation. If you're really interested in getting the good aspects of self-medication without the dangers, I suggest that you download (for free), *The Herbal Internet Companion: Herbs and Herbal Medicine Online* by David J. Owen.

It's out of date (published about the same time that Laurie's article appeared) but it offers more useful websites than I ever imagined existed and, while some have gone under, others are still alive and useful. And, if you find a better source to download, please let me know. And stay healthy!



The Herbal Internet Companion
By David J. Owen



Mycorrhizal 'Shrooms

By Jim McAuley

Sung to the tune of *California Girls* by The Beach Boys
with thanks to Brian Wilson

Can you hear Brian's organ playin'? Sure you can. Nice.

Well East coast 'Shantys are neat
I really like the way they smell
And the Southern Cep with the way they look
They look so tasty I can tell

oooh oooh

The Mid-West hunter's Morels
They really make you lust all night
And the Northern Sweet Tooth with the way they taste
They make the mycophiles feel all right

I wish they all could be Mycorrhizal 'Shrooms
I wish they all could be Mycorrhizal
I wish they all could be Mycorrhizal 'Shrooms

The West coast has Matsutakes
And the hunters all get so greedy
I dig a French recipe to eat this 'shroom
Beneath a big Ponderosa Pine

oooh oooh

I been huntin' 'shrooms 'round this great big world
And I tasted all kinds o' 'shrooms
Yeah, but I couldn't wait to get back to the kitchen
Back to the tastiest 'shrooms around

I wish they all could be Mycorrhizal 'Shrooms
I wish they all could be Mycorrhizal
I wish they all could be Mycorrhizal 'Shrooms



Lee, William H., *The standard domestic science cook book*; [electronic resource] *organized knowledge in story and picture*, Chicago, Laird & Lee. Published 1908, Page 344. Digitizing Sponsor: MSN, via Flickr Commons.

In The Soup

By Lawrence Millman

In 2008, on a Ryan Air flight from Budapest to Dublin, a somewhat unconventional example of fungal toxicity presented itself. All of a sudden a strange substance began leaking down from an overhead compartment and, landing on a passenger, caused the man's neck to swell up dramatically. Even worse, the man started to have difficulty breathing.

Was this a chemical attack by terrorists? The other passengers wondered. Would they be next? The plane made an emergency landing in Frankfurt, and medics arrived to examine the ailing passenger. They discovered that the man had been sitting under an overhead compartment where another passenger had stored a container of mushroom soup. During a period of turbulence, the soup had leaked out on the passenger directly below it. The man was allergic to mushrooms...powerfully allergic to mushrooms. Hence his swollen neck and extreme shortness of breath. Mystery solved. Cabin attendants removed all evidence of the leak.

The flight continued to Dublin without a glitch, fungal or otherwise.



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.

With charming drawings by artist and illustrator Amy Jean Porter, *Fungipedia* offers a treasure trove of scientific and cultural information. The world of mushrooms lies right at your door—be amazed!

At the time of publishing Princeton University Press priced this book for \$16.95. Order your copy today: <https://press.princeton.edu/books/hardcover/9780691194721/fungipedia>



“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 Ryvar den, University of Oslo

Early Spring Mushroom Walk with Larry Millman

By Joshua Winer

On Tuesday, March 24, I had the good fortune to explore the forests around Fresh Pond in Cambridge, Massachusetts with my friend, mycologist Larry Millman. As we headed out in the late afternoon sunshine and passed through the crisp long shadows of the trees, I expressed my doubts to Larry about the likelihood of finding many specimens of interest in this barren post-winter landscape. Larry promptly assured me that despite the season, we would certainly find several dozen species, and although they might not be the big showy mushrooms of the high season, they would still fascinate, titillate and surprise me. And I was not disappointed.

As we meandered through a forest of white pines on the eastern side of the pond, Larry's pace accelerated whenever he spotted a likely log, branch, or tree. He'd rush forward, his hands lens at the ready, and launch into an examination. I think his favorite habitat for exploration is the underside of logs. 'This is like getting a Christmas gift!' he'd exclaimed as we arrived at each new log. And I understood, feeling that anticipation of unwrapping a special gift and revealing the hidden treasure.



The secret world of the underside of logs is a special attraction with its own unique mixture of flora, fauna and fungi. I was particularly impressed at the variety of creatures we discovered, including wood lice ('an isopod of the Oniscus order') and a nest of young pale yellow thread-like wriggling centipedes. Larry shared the story of how these centipedes feed. Their miniscule forearms are tipped with needle-like lances they thrust into their prey, immobilizing them with neurotoxin, after which they suck out their juices in quick order.

For this walk, I was Larry's faithful amanuensis. I documented each fungal find with a photo on my phone, then used Siri dictation into the Notes app on my phone to record the species name and other descriptive characteristics. In recording my list, I felt respect for Larry's honest science in his frequent announcement 'Well, I don't know for sure what this is, I'll have to do some research', rather than hear him trying to guess or generalize.

Here's a short list of our daily fungal sightings: ceramic parchment crust (this was on a fallen oak log), various crust fungi, multiple finds of purple toothed polypore (so called because the pores on the underside are a lovely shade of lavender when wet, as they were on this day), yellow tree brain (which looks like a yellow jelly fungi), Dyer's polypore (charcoal black and numerous, at the base of the tree, this fungi is used to dye fabric a pretty shade of brown), the thick maze polypore (with its beguiling labyrinthine pattern on the underside), and the olive toothed polypore (*Hydnoporia olivacea*), which forms a beautifully olive colored moss-like linear swath running down the branch.

We also found many logs and rotten tree stumps covered with white resupinate polypores. There were many species of this, and Larry collected several for further examination. I chose to draw this portrait of Larry holding a log covered with resupinate polypores because I feel like the facial expression reveals Larry's fungal soul, passionate for discovery and knowledge of the world around us.

We easily reached our goal of finding several dozen species in the course of our 1-1/2 hour walk. But more significantly, we shared an excursion of discovery and adventure filled with beauty and fascination. As I await the 'busy season' of mushrooming, I now know there's lots to find in the woods at any time of year. My thanks go out to Larry for sharing his contagious enthusiasm and expanding my mycological knowledge.





Megacollybia rodmani

Cap: Gray-brown or olive-brown, radially streaked, thin cap
flesh it's all gills, 3-20 cm. wide

Gills: Attached, but that varies. Widely spaced often wavy,
many incomplete gills is distinctive.

Ring: None

Stem: Equal, narrow to medium thickness compared to cap.
Sometimes a stringy, even twisted, look.

Spores: White

Notes: The wide, coarse, attached gills & large size are
distinctive. Hardwoods. "The Platterful Mushroom" Edible.

Megacollybia rodmani v
Platterful Mushroom vs T



Steve W.



Gordon Snelling



Chris Gosselin



Pluteus cervinus

Cap: Brown. Often umbonate, darkened center. Skin (pellicule) often splits. 4-10 cm

Gills: Free. Closely spaced, short. White turning pinkish to brown.

Stem: Thin, equal.

Spores: Pink to brownish.

Notes: Radish or cucumber odor. Split cap skin is distinctive. *Pluteus petasatus* is similar but in wood chips. Edible.

vs *Pluteus cervinus*

The Deer Mushroom

Steve W.

Sighting of Giant Mushrooms in Somerville!

By Joshua Winer

Larry Millman and I recently had a close fungi encounter with mushrooms of gigantic stature. Walking along the I-93 retaining wall in Somerville on the first Friday afternoon after Christmas, we saw a five foot high chanterelle that would easily feed the whole court of Versailles with a singular delectable hors d'oeuvres. The ten foot high *Amanita rubescens* would provide ample shade for an entire family on a summer picnic. The triad of black trumpets would easily easily conceal a third grader playing hide and seek on a mushroom foray. An artist conk the size of a refrigerator helps explain the mystery with its underside engraving that reads 'Mystic Mural 2018' and depictions of mushroom headed artists painting on ladders.

This is the creation of Cambridge artist David Fichter, who has been working with Somerville high school students over the course of the last 24 summers to research, design and paint murals on various subjects that explore the the wildlife, history and environmental issues of the nearby Mystic River Watershed. The mural, which spans more than 700 feet and is between 6 and 12 feet high, is painted in vibrant colors and detailed with images of nature as well as portraits of the students engaged in activities including canoeing, removing the invasive water chestnut from the waters, drawing and studying nature. David encourages the students to create drawings of their experience out on the river, and these drawings are integrated into the overall design, with a different theme each summer.

David, who is a member of the BMC, loves fungi for their multifaceted forms of beauty, their fascinating science, and for their important place in the ecosystem. His new ever deepening interest led him to choose fungi as the theme for the the last two summers work with the students.

David invited Larry Millman to lead mushroom walks with the students, which Larry did graciously, first leading a walk in the Middlesex Fells in summer 2018, then again at Fresh Pond summer 2019. Larry provided the students with a broad introduction to the world of fungi as many of them discovered wild mushrooms for their first time. The stunning results are the two new 'mushroom murals', which are located at the southbound end of the north-running lane of route 38 (otherwise known as Mystic Avenue, following the west facing side of the I-93 retaining wall, just past the entrance road to Assembly Square Mall).

Fellow mycophiles and art lovers alike, shake off the winter blues and treat yourself to a visit. Take a photo of yourself or your significant mycolphilic friend in this Brobdingnagian fungal fantasy. Or look at this issue's cover. Try to identify the dozens of mushrooms that David and his two summer crews painted in living color. You might just feel like you are traveling with Gulliver, or had one too many bottles of 'Drink Me' with Alice.

Please don't pick the chanterelles and don't lick the giant slug. Do be careful: the traffic is fast and furious. Drivers can't take the time to slow down and study this beautiful monumental work of art, let alone watch out for mushroom lovers on the prowl. The best way to enjoy the experience is to park at the Mystic Learning Center at 530 Mystic Avenue and the walk along the sidewalk across from the mural. Bring a good zoom lens to take photos, or binoculars to study the details of the painting. Give yourself enough time to take it all in and you'll be well rewarded!

To see more of David Fichter's work, visit his website at

www.davidfichter.com





Mushrooms of the Northeastern United States and Eastern Canada

Book Review By Lawrence Millman

Timothy J. Baroni

2017, Timber Press, US

Flexibound: 599 pages, 600+ color

\$27.95

This review first appeared in *Fungi*

I've long regarded Tim Baroni as a supreme expert with respect to *Gymnopus*, *Leptonias*, *Inocybes*, and their like — genera sometimes referred to by prejudicial individuals like me as LBMs. Thus whenever I've collected a *Conocybe*, for example, I've sent it to him, and he's invariably put a name on it.

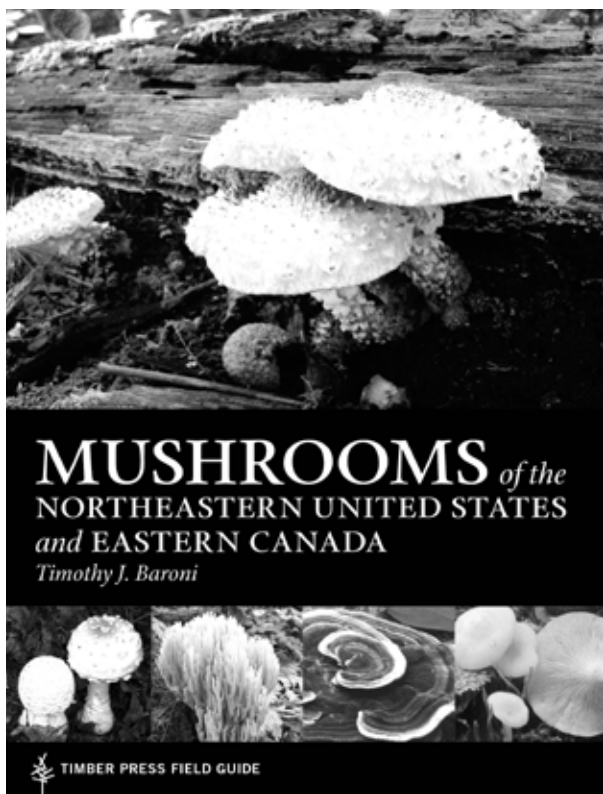
Not surprisingly, his guidebook *Mushrooms of the Northeastern United States and Eastern Canada* devotes 10 pages to *Leptonias*, 20 pages to *Lactarius*, and 20 pages to *Entolomas*, which is a boon to anyone who might be put off by these genera. More good news: it includes lists of synonyms for individual species that rival the lists in *Index Fungorum*. And the mostly excellent photographs (but why does the photo of *Steccherinum ochraceum* not show its teeth?) sit happily on the same page as the text, which means you don't have to rummage around in the index to find either of them. Dr. Baroni also obliges those of us who like to have spore descriptions go beyond simply their size. This is what he says about the spores of *Trichopolus jubatus*: “angular, colorless, 7-10 by 5.5-7.5 microns, 6 to 9 angled in side view; cheilocystidida mostly bowling-pin shaped, some also clavate or swollen at base with a long tapering neck (lageniform).”

Here I might add that the book doesn't include a single crust species, and that the sections on polypores and ascomycetes reflect, well, Dr. Baroni's preference for fleshy fungi. For one thing, they're rather

short in length. For another, they tend to be a bit haphazard. I suppose it's amusing to say about *Coltricia cinnamomea* that it "can be used in dry flower arrangements and toy train settings," but the reader should also be made aware of the fact that *Coltricias* are probably among the very few mycorrhizal polypores. With respect to the ascos, Dr. Baroni sometimes errs on seasonality, such

as when he writes that *Mitruulas* can be found from May to September in the Northeast (it's more like May and June), and *Vibressea truncorum* appears between July and September (it's April to perhaps early July). Yet I suspect that I would be just as prone to quasiamusing remarks and errors in seasonality if I were to write a book about *Leptonias*, etc.

I'm less forgiving about the absence of information on northeastern habitats in the book's front matter. Yes, there are the usual sections on gills versus pores and the necessity of carrying a basket when you venture into the field, but why does Dr. Baroni write that the area covered in his field guide is "roughly that of the eastern hardwood forests of North America?" After all, much of northern New England consists of, primarily, coniferous forests. Neither are such distinctive areas as pine barrens, alpine zones, old growth, spruce forests, and sand dunes mentioned in the front matter, although they're often alluded to in the species descriptions. Ultimately, I'd like to read about why the northeastern U.S. and eastern Canada have a somewhat different range of species from, for example, the Midwest.



Now let's consider the book's all important central section. Most of the species descriptions seem to me spot on, though I would contest the use of the word "widespread" to indicate the range of virtually every species. *Amanita phalloides* is distinctly not widespread in the Northeast, since at least 90% of the time it's found in a particular urban park in Rochester, New York. As for *Psathyrella candolleana*, the book says it's "widespread, but rare." Rare? In the spring and summer, I seldom walk past any garden mulch in Cambridge, Massachusetts, without seeing this ubiquitous mushroom. But enough negativity!

I especially like the fact that the book's descriptions commonly indicate smell and taste as diagnostic features, for not all guidebooks give these features enough credit. I also appreciate Dr. Baroni's not indicating whether or not a species is edible — after all, its edibility or inedibility is (prejudice alert!) probably the least interesting aspect of any fungus. Last but definitely not least, the book's 64 pages on the Boletaceae provides a better window on this taxonomically mobile family than almost any other guidebook I know.

And now let's investigate the back matter. I recommend the single page on basic microscopy to those mycophiles who flee at the mere sight of a microscope. The glossary is a model of its kind, defining words like "canescent," "indusium," and "mushroom"(!) — i.e., words seldom included in most guidebook glossaries. But the list of "Field Guides Useful for Northeastern Fungi" includes Bill Roody's *Mushrooms of West Virginia and the Central Appalachians*, yet it somehow manages to omit *Mushrooms of Cape Cod and the National Seashore* by Bill Neill and the Bessettes, *Mushrooms of the Northeast* by Teresa Marrone, and (another prejudice alert!) *Fascinating Fungi of New England* by yours truly. Perhaps Dr. Baroni doesn't think any of these books are as useful as Bill Roody's book, but unless I'm greatly mistaken, West Virginia is not a part of the northeastern U.S., much less eastern Canada.

Highly recommended if you need help in identifying a bolete or an LBM. Otherwise, a somewhat mixed bag, but like many a mixed bag, you can draw out gems if you happen to reach in at the right place.



Synopsis Fungorum 40

Review By Lawrence Millman

Leif Ryvarden
2020, Fungiflora As, Norway
<http://www.fungiflora.no>

As its title suggests, this is the 40th issue of the journal *Synopsis Fungorum*. All of the issues have been published by the Norwegian mycologist Leif Ryvarden, who was recently knighted by the King of Norway. Has any American mycologist been rewarded in a similar fashion by a U.S. government official?

Synopsis Fungorum 40 consists of papers either authored by or co-authored by Ryvarden. Interested in African Aphylloporales (non-fleshy fungi)? Then look no farther. I especially recommend Ryvarden's excellent 50 page essay on the worldwide distribution of *Stereum* species.

Here I might mention that Ryvarden believes in the importance of morphology and microscopy, so there's not a single cladogram squatting in the midst of any of the journal's papers. I might also mention the journal can be downloaded for free by going to: <http://www.fungiflora.no>.

Highly recommended for all serious mycological libraries.



Cyathus bulleri

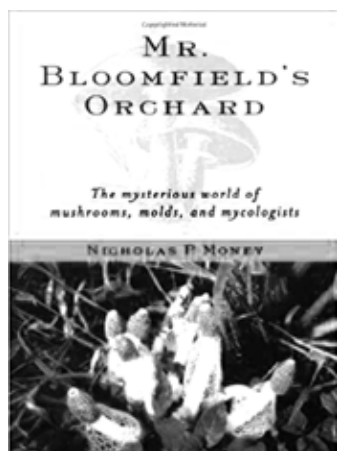
Who's in a Name

By John Dawson

In his book *Mr. Bloomfield's Orchard* Nicholas Money calls Arthur Henry Reginald Buller “the greatest experimental mycologist in history”. Yet oddly, according to *Index Fungorum*, the only currently valid specific epithet commemorating Buller is that of *Cyathus bulleri* Brodie¹, a bird's nest fungus found in Hawaii, Mexico and the West Indies. His name is more prominently memorialized in the mycological terms “Buller phenomenon” and “Buller's drop”, the former referring to the process in Hymenomycetes whereby a haploid mycelium may be diploidized by a dikaryotic diploid mycelium, and the latter to the tiny drop of liquid formed on the hylar appendage of ballistospores, which, through its surface tension, causes them to be shot forcibly into the air.

Buller was born August 19, 1874 in Birmingham, England, and graduated from the University of London with a Bachelor of Science degree in 1896. He went on to pursue graduate studies at Leipzig with the plant physiologist Wilhelm Pfeffer and at Munich with the forest pathologist H.J.A.R. Hartig (after whom the Hartig net of ectomycorrhizal fungi is named).

After receiving his Ph.D. at Leipzig in 1899, Buller spent the years 1900–1901 at the International Marine Biological Research Station in Naples, before returning to the University of Birmingham as demonstrator and lecturer in botany. In 1904 he left Britain to become the first professor of botany at the University of Manitoba, where he remained until his retirement in 1936. His duties at Winnipeg nevertheless allowed him to return to Birmingham each summer, in order to pursue his research there in the laboratories, libraries and surrounding countryside. In the course of his career Buller thus crossed the Atlantic by ship 65 times(!) – until the outbreak of World War II left him stranded in New York following his attendance at the 1939 International Congress of Microbiology. That circumstance caused him to return to Winnipeg, where he continued his research until his death from a brain tumor on July 3, 1944.



Mr. Bloomfield's

Orchard

By Nicholas P. Money

1 There are, however, two genera of jelly fungi named in his honor: *Bulleromyces*, and its anamorphic counterpart, *Bullera*.


Buller was a lifelong bachelor who was wholeheartedly devoted to his research. Though eccentric in many respects, he was beloved by his students and played an important role in the development and rise to prominence of the department of botany at the University of Manitoba, as well as the founding there of the Rust Research Laboratory of the Dominion of Canada Department of Agriculture.

In 1909 Buller published the first of seven volumes entitled *Researches on Fungi*, which were to comprise his *magnum opus*. Because of the large amount of text and the number of illustrations those tomes contained, commercial publishers were unwilling to publish them unabridged, so Buller had the first six volumes published privately at his own expense. The result was “an eminently readable, profusely and beautifully illustrated series of volumes” that “will long remain a primary reference for [those] ... concerned with ... spore production and liberation in the fungi, [with] social organization within that group,” and especially with sexuality in the rust fungi, to the study of which volume VII of the *Researches* (published posthumously in 1950 by the Royal Society of Canada) made a “monumental” contribution².

Unfortunately, the small size and short duration of the private press runs greatly limited the distribution of the first six volumes, which were difficult to obtain, even in libraries, prior to their reprinting in 1959.

In addition to the *Researches on Fungi*, Buller published many scientific papers in major journals, and also a few poems. Indeed, his best known work among the general public is the limerick *Relativity*, which appeared anonymously in the British humor magazine *Punch* in 1923:

There was a young lady named Bright,
Whose speed was much faster than light;
She set out one day
In a relative way
And returned on the previous night.

Buller was also an accomplished billiards player and a lover of the works of Milton and Shakespeare. He has been described as “epitomizing the popular concept of an English gentleman”,³ and was a very popular and dynamic lecturer. 

2 Quotations here are taken from the entry on Buller by D.L. Bailey in volume 2 of the *Dictionary of Scientific Biography*. That, together with Money's book and the tribute to Buller by R.H. Estey (“A.H.R. Buller: Pioneer leader in plant pathology”) published in the *Annual Review of Phytopathology* (vol. 24 [1986], pp. 17–21), are the principal sources upon which the present sketch is based. See also W.F. Hanna, C.W. Lowe and E.C. Stakman, “Arthur Henry Reginald Buller 1874–1944”, *Phytopathology*, vol. 35 (1945), pp. 577–584.


3 Estey, *op.cit.*, p. 20.

My Amateur Mushrooming Joy

By Sieglinde Aigner Crooks

I was supposed to go kayaking with a group out of Crane Estate today. Strong winds cautioned our guide and the trip was cancelled. A whole group of us decided to hike a dune trail instead. 2.5 hours we climbed and descended the dunes. My eyes popped out at the many marvelous mushrooms popping right out of the sand. They were undoubtedly boletes. I fashioned my wind breaker into a bag for carrying the most beautiful specimen. In all, I returned home with 8 or so big, beautiful mushrooms. I sat with two mushroom books carefully studying all the descriptions for scaber-stalked mushrooms growing in sand. I arrived at the conclusion that I had orange scaber-stalk mushrooms and one chestnut bolete with a nice chambered stalk and pale spores.

I have gone out mushrooming since I was a little girl, mostly with aunt Katie back in Austria. My parents are out in the woods and meadows near Salzburg, Austria, coming home with lots of mushrooms frequently which my dad then carefully cleans (almost the only “cooking” he ever does) and pan fries them with great joy. I organized a number of amateur walks while living in Austria again from 2009 - 2013. Renowned local mycologist Mr. Schwarz from a neighboring village did the identifying after. So many Austrians and their fellow neighbors all over Europe and Russia are avid mushroom hunters as many of you know. We envy people a great deal who come home with big baskets full of chanterelles and king boletes.

Since my return to the US in 2013, I slowly ventured into looking for and identifying mushrooms locally. I find most of them when I am not looking but while walking my little pooch in or around Rowley, MA. I have two spots where I go to harvest shaggy manes, my daughter's favorite. A bunch of people know I love making Schnitzls out of big slices of giant puffballs. This spring I was startled finding a bunch of morels in my backyard while pulling maple tree seedlings out of the ground. Just last weekend I came home from a mushroom walk with guide Gary Gilbert. Eight different mushrooms landed on my lunch plate the day after. Last night, while running at Dow Brook Reservation in Ipswich, I came upon honey mushrooms and promptly cooked and pickled them. Tomorrow I will have to eat the orange scaber-stalk mushrooms waiting in my fridge from today's walk. My eyes will roll over in my head delighted with the wonderful texture and meaty taste of all these fungi. I am in heaven. Once I survive and my liver is fine, a bunch of friends will want to taste them too:). Let it rain, let it rain, let it rain. 



A map of Canada indicating the various species named after provinces/territories from Lawrence Millman

MushroomLog Description

By Christopher Neefus



\$4.99(on iTunes)

Version: 1.10

Size: 20.5 MB

Rated 4+

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.

Eagle Hill Courses

The most relevant to our interest are reproduced below. 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.

COVID-19 Alert. Please check frequently for updates.

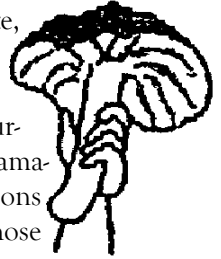
May 24 to May 30	Lichens and Lichens Ecology Troy McMullin
May 31 to June 6	The Lichen Genus <i>Lepraria</i> James Lendemer
May 31 to June 6	Introduction to Bryophytes and Lichens Fred Olday
June 21 to June 27	Interesting and Challenging Crustose Lichens Alan Fryday
July 26 to Aug 1	Mushroom Identification for the Novice Greg Marley and Michaeline Mulvey
Sept 25 to Sept 27	Fall Maine Mushrooms Greg Marley and Michaeline Mulvey
October 23 to October 25	Crustose and Foliose Lichens Fred Olday

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.

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 2020

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.mycology.com/Downloads/FungiOfTemperateEurope_Wheels.pdf

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 July 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

COVID-19 Alert. This is a reference. Please double check each event for updates.

Wed April 22	Earth Day
July-October Most Weekends	The BMC's Weekend Walks This list will be available via the BMC website.
Thur-Sun August 13-16	Telluride Mushroom Festival Telluride, CO
Fri-Mon Sept 11-14	NEMF Annual Samuel Ristich Foray Joliette, Québec
Mon-Sun Sept 21-4	Whats Cookin in Croatia with Britt Bunyard Sardinia, Italy, whatscookin.it/
Fri-Sun Oct 2-4	Newfoundland and Labrador Foray Max Simms Camp, Bishop's Falls, NL nlmushrooms.ca/
Thur-Sun Oct 8-11	NAMA Annual Foray Potosi, Missouri
Thursday October 15	National Mushroom Day
Sun-Wed Oct 25-4	Whats Cookin in Sardinia Sardinia, Italy, whatscookin.it/

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

Mystery Fungus

Dear Mycophiles, Here's a photo of the next issue's Mystery Fungus. All you need to say about it is: Cloth is not, definitely not, its substrate. Dr. Millman found it growing in moss in Vermont last fall. The first individual who guesses its identity will get a free copy of one of his books.



The Mystery Fungus in the previous issue of *The Bulletin* was the polypore *Picipes* (formerly *Polyporus*) *submelanopus*, and a very uncommon species. Britt Bunyard had guessed this correctly. Astute BMCers might be familiar with *Polyporus melanopus*, a species dynamited by phylogenists to create *P. submelanopus*. Photograph by Lawrence Millman

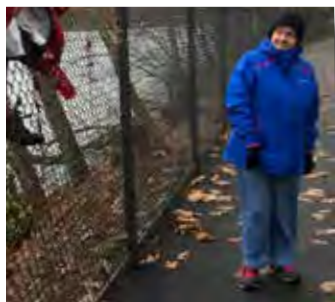
Also Congratulations to Theresa Urist who successfully captured a *Pleurotus* and shared complete instructions below.



Before the Heist. From left: BMC Member Andrea Seek, Liselotte Urist, BMC Member Theresa Urist



Who says "No Trespassing"?



The accomplice to the crime, Liselotte Urist, 85 years young.



The grab.



Oh the Bounty!



The sweet taste of success.