

# NYMS

New York Mycological Society Newsletter

Autumn 2022



*Agaricus* sp., Green-Wood Cemetery, October 24, 2020; photo Tom Bigelow

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## FROM THE EDITOR

Green-Wood Cemetery is a jewel in the heart of Brooklyn. An arboretum as well as the last resting place of thousands of New Yorkers—some famous (Jean-Michel Basquiat), some infamous (Boss Tweed)—it occupies 478 acres mostly tucked between 20th and 37th Streets and between 5th Avenue and the oblique junction of Ft. Hamilton Parkway and MacDonald Avenue. The administrators of the cemetery are keenly aware of its value as habitat for fungi. They have supported initiatives to survey the fungi in the cemetery (an endeavor spear-headed by our own Potter Palmer) and occasionally conduct mushroom tours on the grounds to acquaint visitors with the fungi that grow there.

During the recent pandemic, the cemetery became a popular destination for Brooklynites who needed a refreshing escape amid what was an existentially terrifying period for everyone. Attendance at the cemetery ballooned (some might say mushroomed). I went there regularly, always with my magnifying loupe and bags. I was killing two birds with one stone—escaping the existential terror *and* looking for fungi.

And so in Green-Wood, on May 1st of 2021, I picked up a branch that had fallen on the ground from some nearby deciduous tree. It immediately looked interesting to me. There were numerous tiny black beaks of a pyrenomycete emerging from white lesions in the bark. I got it home and it languished for a few days before I subjected it to more detailed scrutiny. Under the microscope I discovered that it had brown inequilaterally-ellipsoid spores, meaning the spores looked like lopsided footballs. Spores of this type suggested that the pyreno was a member of family Xylariaceae, (a family which includes the dead man's fingers, *Xylaria polymorpha*). The spores were also equipped with a germ slit. A germ slit is an area of weakness on the surface of a spore where it can break open when it germinates. My Green-Wood pyrenomycete had a germ slit that was shorter than the overall length of the spore. The asci were amyloid—that is, the spore release mechanism at the tips of the asci stained blue in an iodine solution. And the spore release mechanism itself was a plug-like shape, taller than it is wide. Such an odd thing. What could it be? What it turned out to be is *Nemania ethancrensonii*.

How on earth did I get a pyrenomycete named for me?

First of all, I got lucky. Second of all, I sent my collection to a very generous mycologist.

I often post difficult ascomycetes to a web site called Ascofrance. On the site there are numerous world-class mycologists and dedicated amateurs who discuss and identify fungi, share papers and engage in shoptalk. When I posted the Green-Wood pyrenomycete it caught the eye of Hermann Voglmayr from the Department of Botany and Biodiversity Research at the University of Vienna. He asked that I send the branch to him and I did.



## NYMS Newsletter

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Submissions for the next issue of the NYMS newsletter must reach the editor by August 1, 2022. Various formats are acceptable for manuscripts. Address questions to Ethan Crenson, editor. See above for addresses.



*Nemaniam ethancrensonii* in Green-Wood Cemetery, May 1, 2021; photo Ethan Crenson

Fourteen months later, when I found the postal receipt amid the clutter on my desk I considered writing to Mr. Voglmayr to ask about the pyrenomycete. Coincidentally, just a few days later he sent a greeting by email and a link to a paper called [About spirals and pores: Xylariaceae with remarkable germ loci](#). In the paper, he and his co-authors revised the genus *Helicogermis* (which I must admit, I had not known existed), created the new genera *Oligostoma* and *Albicollum*. They also synonymized the genus *Euepixylon* with that of *Nemaniam* (lumpers rejoice). They lectotypified a number of species. And they sequenced, studied, named and described *Nemaniam ethancrensonii* Voglmayr, J. Fourn. & Jaklitsch, sp. nov.

Given how much work Mr. Voglmayr and his collaborators did, my contribution almost seems paltry by comparison. But the contributions of amateurs to the field of mycology are now and have always been important. Mycology, probably more than any other scientific field, relies on dedicated amateurs *finding things!* And not just finding them, but showing the interest and enthusiasm to pursue the most esoteric of fungal organisms—not to mutter *meh* and toss them aside. Reread the Spring 2019 newsletter, in which I wrote an article about another species, *Porodiplodia vitis*, discovered on a club walk in one of our city parks, which was also new to science.

It's not just the tiny things hiding in the leaves that require amateur attention. There are large fleshy fungi that need attention as well. As an example, look to *Boletus purpureorubellus*. Until 1998 it was known only from the type collection and named as a subspecies of *Boletus rubellus* by Snell and Dick in 1958. Then long-time NYMS members Aaron Norarevian and Gene Yetter found it in Okefenokee Swamp National Wildlife Refuge. They sent the bolete to Tim Baroni who described and published it. Mr. Baroni shared credit when he published the name, so that its official name with author citation is *Boletus purpureorubellus* T. J. Baroni, Yetter & Norarevian.

I have written other pep-talk letters from the editor encouraging our readers to get out there and study what is right in front of you—in our parks, in our tree-wells, all around! You might be surprised what you find. I myself have a particular aim in mind, a fungus I hope we can find. *Nemaniam ethancrensonii* is out there, and I am offering a \$100 reward to anyone who finds it. It will be my white whale until I do.

## Remember!

Stay responsibly in touch with us. If your telephone number, mailing or email address changes, please update them at [www.newyorkmyc.org/account/](http://www.newyorkmyc.org/account/). Please consider going paperless when it comes to receiving these newsletters. Newsletters sent via email (PDF file format), have live web links, help us contain costs, and use fewer natural resources!

NYMS walks policy: We meet when public transportation arrives. Check the walks schedule or email notifications for transportation notes. Walks last 5-6 hours and are of moderate difficulty except where noted. Bring your lunch, water, knife, a whistle (in case you get lost or injured), and a container for mushrooms. Please let a walk leader know if you are going to leave early. Under the current conditions, member walks have resumed. Please be fully vaccinated, for your own safety and for that of you fellow club members.

Walks are usually announced or amended via email. The walk schedule is posted on our web site. Walk leaders have discretion to cancel walks in case of rain or very dry conditions. Be sure to check your email or contact the walk leader before a walk to see if it has been canceled for some reason. We are currently not inviting nonmember attendance on our walks. When nonmember attendance resumes it will cost \$5 for an individual and \$10 for a family.

**We ask that members refrain from visiting walk sites two weeks prior to the walk.**

**Warning: Many mushrooms are toxic. Neither the Society nor individual members are responsible for the identification or edibility of any fungus.**



## PROGRAMS, EVENTS & NOTES



### THE FIRST NYMS FUNGUS FESTIVAL, RANDALL'S ISLAND, OCTOBER 23RD

Like New Yorkers, fungi are fascinating, surprising, diverse and interconnected. That's why the New York Mycological Society is celebrating them at New York City's very first Fungus Festival at Ward's Meadow Loop, Randall's Island Park, on **Sunday, October 23rd, 2022**, from 11 AM - 3 PM. This free community event welcomes mushroom-curious amateurs and experts of all ages!

#### *What's planned?:*

Mushroom displays and identification tables  
Expert-led mushroom walks  
Art and cultivation workshops  
Food and mushroom tea samples  
Lectures by experts on a variety of topics  
Kids activities (face painting, costume making and art workshops)  
Mushroom books, merchandise and art  
Excursions en Español and much more!

**Be sure to register via Eventbrite** for reminders and event updates:

<https://www.eventbrite.com/e/nyc-fungus-festival-tickets-420914535707>

**Notes:** Mushroom tasting samples while supplies last. Food and drink will be available for purchase. Randall's Island Urban farm is wheelchair-accessible, but the surface is mulch and therefore uneven. Event is rain or shine except in the case of heavy rain.



### FINAL SMALLHOLD SPENT BLOCK GIVEAWAY OF THE YEAR

Smallhold, New York's preeminent urban mushroom farm, gives away to our members their spent mushroom blocks for cultivation, community garden, remediation and compost projects. The final giveaway of the year is on October 7th. Get more information and register to pick up the blocks at: <https://www.eventbrite.com/e/smallhold-block-pickup-in-partnership-with-nyms-tickets-397196353987>



### THE FUNDIS RARE 20 CHALLENGE FOR THE NORTH EAST

The Rare 20 Challenge is a multi-year project to document 20 rare and threatened fungi. Familiarize yourself with the 20 target fungi by downloading the handy pdf. If you think you've found one of the 20, take lots of good pictures and put it on [iNaturalist](https://www.naturalist.org). Someone from FunDiS will get in touch to verify your find and will tell you what to do next. More info and pdf: <https://fundis.org/protect/northeast>



### ONLINE LICHEN WORKSHOP AT EAGLE HILL

An online class *Introduction to Lichens* will be taught by Gary Perlmutter via The Eagle Hill Institute. The seminar will introduce participants to the identification, biology, ecology, and human uses of lichens with a focus on North America. Synchronous classes will take place via Zoom on October 17, 19, 21, 24 and 26 from 7 PM–9 PM ET. More information here:

<https://eaglehill.us/programs/sems-online/flyers-online-pdfs/2022-Perlmutter3.pdf>



### GARY LINCOFF ESTATE BOOK AUCTION AND SALE

Save the date! The long-awaited auction and sale of the library of Gary Lincoff is planned for **Sunday, December 4th**. Included in the auction are rare books, mushroom monographs, signed copies of works by well-known authors (including Paul Stamets), and well-loved (some might say abused) copies of books that Gary held in high esteem. The sale and auction will take place in TriBeCa. Please watch for further information in future issues of the newsletter, or in your email inbox.

## NEW AND NOTEWORTHY

### MASON GOES MUSHROOMING, BY NYMS MEMBER MELANY KAHN

Author (and Mason's mom) Melany Kahn quells common fears and puts the "us" in mushrooms, by weaving simple education through a playful, fungi-finding adventure. Four kid-friendly, forest-to-frying pan recipes highlight the flavor notes of the mushrooms featured. A short identification guide is provided for newbie foragers.

Illustrator Ellen Korbonski enchants with evocative watercolors capturing the beauty of the mushrooms, the thrill of the hunt, and Mason's fertile imagination, in a style that pings with the charm and timelessness of an enduring classic.

"Mason Goes Mushrooming captures the wonderful experience of mushroom hunting, a magic that touches both children and adults."

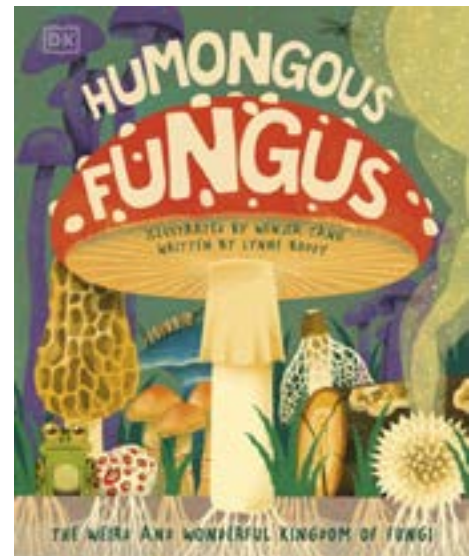
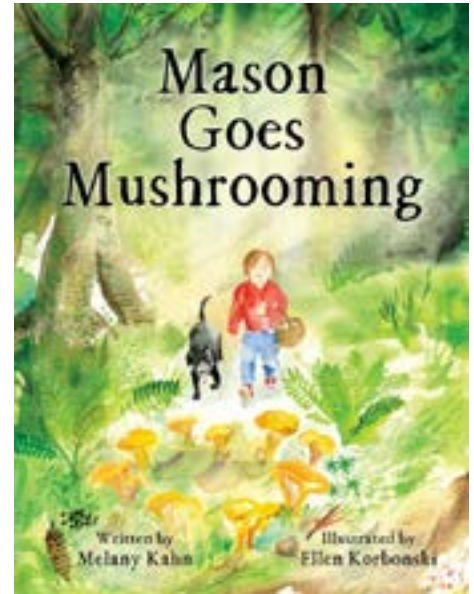
—Eugenia Bone, author of the *Fantastic Fungi Community Cookbook*

Join Mason Goes Mushrooming author Melany Kahn & illustrator Ellen Korbonski for interactive kid-friendly activities about mushrooms October 1, 2022 at 3:00 pm at the Brooklyn Book Festival. Identify real mushrooms, grab provided paints and materials to make your own wooden, paper or model fungi to take home, or watch an illustrator at work making mushrooms appear from the tip of her watercolor brush.

More information can be found here: <https://brooklynbookfestival.org/event/discover-the-world-of-fungi/>

### HUMONGOUS FUNGUS, BY LYNNE BODDY-ILLUSTRATED BY WENJIA TANG

A book for children about fungi in all of their splendor, by Professor Lynne Boddy, fungal ecologist at Cardiff University in Wales. Dr. Boddy's lecture to the NYMS (via our consortium of clubs) was a captivating look at the fungal role in decomposition. Her bona fides are too many to list here. So it is particularly exciting that she and illustrator Wenjia Tang have produced a children's book to captivate young minds with weird and true facts about fungi. Stopping along the way to discuss white rot vs. brown rot, the reason a stinkhorn stinks, the *Pilobolus* fungus aka "hat thrower", and even the *Massospora* fungus than makes zombies of cicadas in a section called "Mushroom Mind Control"! If you are looking for a book that engages children with the sensational weirdness of kingdom Fungi, but doesn't stint on the science behind it, *Humongous Fungus* has a place in your kid's library.



In April, Kay Spurlock received a gift of thanks from the New York Mycological Society for her years of service as the club's treasurer. The gift included the book *Alaska's Mushrooms*, which she will use on her yearly trips to Alaska, and a print depicting *Strobilomyces floccopus* and *Thelephora vialis* by NYMS member Jacqui Wong.

# John Cage and the Deep Notes of Catsup

by Tristan G. Sheridan

I WOULD LIKE TO EMPHASIZE THAT I AM NOT INTERESTED IN THE RELATIONSHIPS BETWEEN SOUNDS AND MUSHROOMS ANY MORE THAN I AM IN THOSE BETWEEN SOUNDS AND OTHER SOUNDS.

—John Cage

Search John Cage online and you will, of course, find detailed biographical descriptions of his life as a composer. Wikipedia, however, does not list his passion in mycology nor the fact that he co-founded the New York Mycological Society. Perhaps this omission is simply because he refused to link his passion with his hobby. But I find this quote full of humor a perfect fit for the man:

*“I would like to emphasize that I am not interested in the relationships between sounds and mushrooms any more than I am in those between sounds and other sounds.”<sup>1</sup>*

He muses that, unlike his notion of “chance” music, mycophilia must be bound by strict rules if one wants to venture from the woods to the plate. Perhaps this contradiction was a way to bring balance to his disharmonious world<sup>2</sup>... Thanks to the publication of *John Cage: A Mycological Foray*<sup>3</sup>, I discovered John Cage’s republished texts from his 1972 *Mushroom Book*, and in particular his recipe for *catsup*.

As a french-speaking native, I thought *catsup* was just another spelling for *ketchup* but it turns out there’s quite a journey leading from one word to the other, and a wonderful, umami-filled condiment at the end. What ended up on the table, by research

and by chance I must admit (how fitting!), was a restaurant-worthy dish consisting of very young panko-breaded chicken of the woods (*Laetioporus sulfureus*) dipped in catsup.

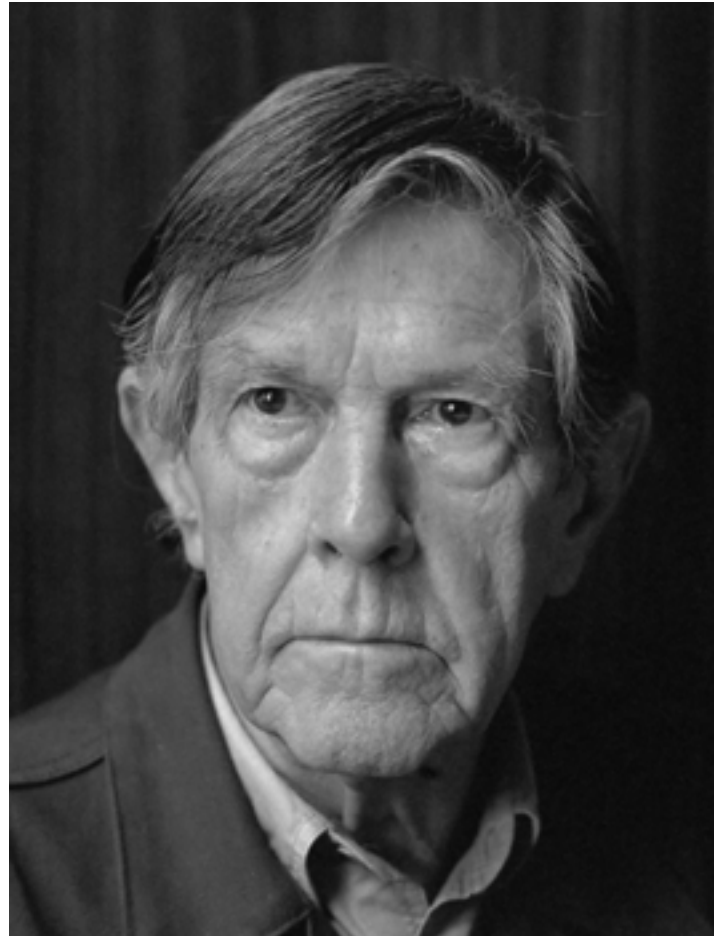
But first, about catsup.

I was surprised to see that the ancestor of our well-known ketchup contained absolutely no tomatoes. Although introduced in Europe from South America in the 1500s, the fruit was considered poisonous, due to the fact that the acid reacting with the pewter plates leached lead into the food.

We have to look way further back, 300 B.C. in China where, had french

fries been around then, you would have dunked them in *koe-cheup*, a pungent liquid of fermented fish entrails, meat scraps and soy beans.

By the 1700s, via trade routes, the English had developed a taste for it and took it home to make it their own. In the 1800s, “ketchups [were] made of oysters, mussels, mushrooms, walnuts, lemons, celery and even fruits like plums and peaches. Usually, components were either boiled down into a syrup-like consistency or left to sit with salt for extended periods of time. Both these processes led to a highly concentrated end product: a salty, spicy flavor bomb



John Cage in 1988  
photo by Rob  
Bogaerts / Anefo  
Fotocollectie Anefo.  
Nationaal Archief,  
Den Haag

that could last for a long time without going bad.”<sup>4</sup>

So ketchup was basically a lacto-ferment of kitchen sink ingredients, some more exotic than others.

It was only natural that fungi find its way into the mix of a concoction that, apparently, was Jane Austen’s favorite.

Ketchup’s history hit a landmark in 1812 when a scientist named James Mease developed the recipe that the Heinz company would adopt (although some credit the original recipe to Sandy Addison’s cookbook *The Sugar House Book*, 1801). *Tomato* ketchup became ubiquitous enough that Heinz ended up dropping the ingredient out of the name, sealing the fate of the word’s meaning.

But for our intent and purposes, we’ll leave the ketchup trail at Jane Austen and fungi.

According to Wikipedia, a manuscript cookbook from Charleston, South Carolina, by Harriott Pinckney Horry documents mushroom ketchup’s use as far back as 1770. This first original version uses cooking reduction, not fermenting, as a mean of cooking and preservation. This condiment, of an off-putting dark color, is mostly used to flavor soups (as does miso, in Asia, probably not coincidentally?). Some argue about mixing mushroom species but mostly the addition of certain spices, vinegar and wine is what makes each recipe unique.

You can still find commercial mushroom ketchup in the UK, but in their effort to be ketchup-y, they strayed from the original liquid form.

I start making catsup after a lucky foray left me with large amounts of one species. I haven’t tried it with a mixed bag of different mushrooms but I can’t see why it wouldn’t work. Because the fermentation process and the spices will ultimately hide subtle flavors, I wouldn’t waste a basket of *Cantharellus* on this. Instead, I reserve the tougher parts of a *Laetiporus sulfureus*, *Grifola frondosa* or even *Cerioporus squamosus* since the flesh will end up in the trash<sup>5</sup>. My next experiment will be a base of mixed and

Harriott Pinckney Horry’s grave in the St. Michaels Church Cemetery, Charleston, South Carolina. Pinkney’s 1770 manuscript cookbook—still in print today—contains a recipe for ‘Mushroom Catchup’ photo by Saratoga



**GATHER YOUR MUSHROOMS EARLY IN THE MORNING, WIPE THEM VERY CLEAN WITH A WOOLEN CLOTH, THEN MASH THEM WITH THE HAND...**

—Harriot Pinckney Horry  
*'Mushroom Catchup'*

dried Boletes, betting on the pungency of *Baorangia bicolor*, one of my favorite boletes. Even the overlooked *Pluteus cervinus* might be a contender for this when that is all you can summon out of the forest.

I am not sure where John Cage’s recipe comes from but I find it fitting as a starting point. I did learn that varying or adding ingredients is indeed part of the fun and I personally went back to the catsup roots with the addition of

fermented fish sauce (Red Boat brand) and/or coconut aminos (Coconut Secret brand) or soy sauce to replace some of the salt. I also add a couple table spoons of “backsplash”, the water left with sauerkraut. It is chock-full of lactobacillus and will jump-start the fermentation. If you enjoy spicy versions, the backsplash of kimchi is a wonderful alternative.

John Cage likes his catsup thicker than the original, so instead of straining the



John Cage: A Mycological Foray by Atelier Éditions Slipcase, Two Volume ) Set 8 inches x 10.75 inches, 224 pages including an unbound portfolio

final product, he mashes the solids into it. Personally I find the liquid version superior, which I use like a soy sauce.

The wonderful Adam Berg ([www.foragerchef.com](http://www.foragerchef.com)) is also my go-to source for all foraging recipes. I find his mushroom catsup superior and his knowledge bridging culinary art, fungi

and edible plants a constant inspiration. The right proportions of salt to mass is paramount with fermentation to keep harmful bacteria away. I would recommend a scale to measure precisely the amount of salt and start at 4% of your total weight. So for 1kg of mushrooms, add 40g of salt.

A great way to enjoy your catsup is with a “Chicken of the Woods scaloppine”. I was lucky enough to find a very young specimen. The difference is a very moist mushroom that will exude a milky water when squeezed and has a very tender consistency. Almost nothing to do with its woody older sibling (which I reserve to make catsup...a win-win).

I simply cut the whole mass like you would a *Grifola frondosa* to barbecue it. Beat a few eggs in a plate and have at the ready another plate filled with gluten-free (or not, but I find those crunchier) panko crumbs. Dip your “scaloppines” into the egg, turning them over a few times to coat them evenly, drop into the panko and fry them in a generous amount of grape seed oil.

Serve on a plate with your amazing catsup. Even my children love it. With this dish you are now taking the *Laetiporus* genus to a new culinary level.

The catsup adventure doesn’t end here. I am now cooking stir-fry with it, adding it to soups, basting meats.... Like koji based ferments, it enlivens everything it touches and adds umami to savory dishes.

Had John Cage written about umami flavors, I am pretty certain he would have described it as the perfect dissonance.



*Laetiporus sulphureus*, photo Ethan Crenson



ONE CANNOT FIX ONE'S EYES ON THE COMMONEST  
NATURAL PRODUCTION WITHOUT FINDING FOOD  
FOR A RAMBLING FANCY.

—Jane Austen



Cassandra Austen, *Portrait of Jane Austen* in watercolor and pencil, circa 1810. Collection National Portrait Gallery

<sup>1</sup> *Music Lover's Field Companion*. 1961 by John Cage. Published by Wesleyan University Press.

<sup>2</sup> *Why John Cage Was Mad About Mushrooms*. November 2020 by Oliver Basciano. Published in Art Review magazine. <https://artreview.com/why-john-cage-was-mad-about-mushrooms/>

<sup>3</sup> *John Cage, A Mycological Foray*. 2020 Edited by Ananda Pellerin. Text by Kingston Trinder. Atelier Editions.

<sup>4</sup> *The Surprising History of Ketchup*. 2021 by Stephanie Butler for history.com

<sup>5</sup> If you hate waste and don't mind a tad extra work, Adam Berg suggests drying the leftover mass and grinding it to a powder to use as a fragrant salt alternative.



## John Cage's "Dogsup"

### Ingredients:

Mushrooms  
Salt  
Ginger root  
Mace  
Bay leaf  
Cayenne  
Black pepper  
Allspice  
Brandy

### Method:

Break the mushroom caps in small bits; slice the stem.

Place in an earthenware jar with 1 tablespoon of salt for each pound of mushrooms.

Let stand in a cool place for 3 days, stirring and mashing several times a day.

On the third day, put over a low fire, in an enamel or Pyrex pan, until the juices flow freely. This takes about 1/2 hour. At that moment, a "catsup" is strained through a sieve; the "dogsup" is just mashed.

Simmer for 20 more minutes. Measure the mash, add to each half pint: 1 ounce ginger root, chopped or grated; a blade of mace; a bay leaf, broken up; a pinch of cayenne; 1 ounce each of black pepper and allspice. Boil down to half the quantity. Add, for each half pint, a teaspoon of the best brandy.

Bottle, cork, and seal.

## Tristan's Catsup

### Ingredients:

2kg (4 1/2 lbs) mushrooms  
80g (5 2/3 Tbs) Sea salt  
2 Minced garlic cloves  
28g (2 Tbs) Minced ginger root  
10 Whole cloves - toasted  
2 Bay leaves  
Cayenne  
14g Coarsely ground black pepper  
14g (1 Tbs) Allspice berries –  
toasted  
25 cl (1 cup) Apple Cider Vinegar  
25 cl (1 cup) Brandy  
28g (2 Tbs) Coconut Amino  
28g (2 Tbs) Fermented fish sauce  
2 L (2 quarts) Filtered Water  
12 cl (1/4 cup) Sauerkraut or kimchi  
"backsplash"

### Method:

Break or chop the mushroom in small pieces. Pulsing them in a food processor is fine but do not puree them.

Toast the cloves and allspice and crush in a mortar.

Combine the mushrooms with all the other ingredients except the brandy.

Add water to cover. The mixture should feel slushy, not overly liquid.

Pour in a large mason jar or carboy. Cover with a lid or an airlock, making sure to "burp" and stir the slurry a couple times a day.

After three days or when you notice the fermentation has stopped off-gassing, put the content in a pan and bring to a boil, cover, and let cool overnight.

Strain the cooled mixture and put the obtained liquid back on the stove to reduce about a 1/3 its volume or until it has the thickness of soy sauce.

Bottle and keep in a cool dark cupboard or in the fridge.

# THE ALMOND MUSHROOMS

by Dennis Aita

Over the last several years I have been seeing a particular *Agaricus* being sold in the Chinatowns of Manhattan and Sunset Park in Brooklyn. They are sold dried in plastic bags, and sometimes loose in Chinese stores and supermarkets (as well as outside some of these stores). Sometimes they are simply labeled “dried mushrooms” which is not that uncommon when it comes to Chinese dried mushrooms. If there is a mushroom name on the package when it comes to this *Agaricus* then they are being named with an incorrect mycological name – *Agaricus blazei* Murrill (more on this later).

When I first saw a bag of these “dried mushrooms” I immediately recognized them as *Agaricus* by their placomycetoid shapes: closed conic caps with long stems, unlike the shape of the common white button mushroom, *Agaricus bisporus* and its relatives – the cremini and the portobello – as well as our wild grass-loving *Agaricus* mushrooms (what many still call *Agaricus campestris*) which have campestroid shapes in which the caps are more broadly convex with stems often shorter than the width of their caps.

As it turns out these mushrooms were actually first described in 1893 by the noted NY State mycologist Charles Horton Peck and named *Agaricus subrufescens*. Two packages of them were sent to his Albany, NY residence in October 1892 by a self-described gardener who was “growing” them, the first ones coming from his outdoor “mushroom house” which arrived in poor condition (no overnight postal delivery then). The second batch delivered some time later had “escaped” the mushroom house and were found growing on a pile of old leaves (2-3 years old) at some distance from the mushroom house. They arrived in slightly better condition but not that good



Packaged mushrooms labelled *Agaricus blazei* in the window of a Chinatown market  
photo: Dennis Aita

such that Peck saw reddish tones (hence the species epithet *subrufescens*) instead of the yellowish or yellowish orange stains which are what one sees when the mushroom is bruised when fresher. The mushroom house was located in the New York metropolitan area in Glen Cove, Nassau County, not that far from the New York City line. Up to this time the main mushroom being cultivated was the common button mushroom. At the time these mushrooms, which came in various colors—white, brown, and grey—were then called *Agaricus campestris*. It was only in 1946 when they were correctly given a different name – *A. bisporus*.

But Peck’s gardener wasn’t the only one raising *subrufescens* as it is reported that the “Almond Mushroom” was soon at some point in the 1890’s being grown from the Boston area down to Washington D.C. and sold fresh in the local markets and to

restaurants! It was cultivated at the end of the 19th century into the beginning of the 20th century, apparently for at least 30 years. Unfortunately, in the 1920’s our common white button (then called *Agaricus campestris* var. *Alaska*) increasingly began to be cultivated as it could be more easily grown. In personal communication with Rick Kerrigan, the world renowned *Agaricus* expert, Rick says this about *subrufescens*: it has a “lousy shelf life, erratic crop production, and is loved by the flies”. Do note that back then climate control in cultivation settings was non-existent. In other words, there was no way of keeping indoor things cool, and *subrufescens* happens to be more of a warm weather mushroom when compared to *bisporus* which prefers cooler temperatures. These cultivated mushrooms were grown in greenhouses, cellars, and in caves. Horse dung was the fertilizer used.

*Agaricus subrufescens* does grow in the wild, here in the eastern US (and in other places like the West Coast as well as other places in the world such as Brazil and western Europe). I have only seen it a few times over the many years that I have been collecting mushrooms—a couple of times in old leaves—and I believe it to be rather uncommon at least here in the NYC area.

*Agaricus subrufescens* is part of Section Arvenses in which some of the best edible *Agaricus* can be found. Mushrooms in this section stain, bruise, or turn yellow with age **and** they have odors of almonds and/or anise. They can easily be distinguished from mushrooms such as *A. placomyces* and *A. pocillator* in Section Xanthodermatei. While the last two at least stain the lower portions of the stem yellow they also have that unpleasant smell of phenol, an old-time disinfectant and antiseptic. Sometimes that smell may not be apparent at first. Some years ago at a club id session we decided to have an experimental taste of a batch of *A. placomyces* that I had found. Note: while *placomyces* is a toxic mushroom, my experiment was intended to experience aroma and flavor of the mushroom without consuming it and risking ill effects. Immediately with a little heat in the pan the unpleasant smell overwhelmed everyone to such an extent that no one wanted to taste them!

About 50 years ago our *subrufescens* once again began to be cultivated, this time in the coastal Atlantic region of Brazil where it also grows in the wild. Remember, in the late 19th century in the Northeast US it had been named the Almond Mushroom. This time in Brazil it was called Cogumelo do Sol, the Mushroom of the Sun. Whereas back in the late 19th and early 20th century in the Northeast it was being sold as a culinary mushroom, in Brazil starting in the late 1970's it was being sold predominantly as a medicinal mushroom! First in Brazil, then in Japan, and later in China, it was sold not only under different local common names, but other mycologists gave it different species epithets! In Brazil, in 2002, it was given the name *Agaricus brasiliensis* by Wasser et al. Before that also in Brazil in 1993 the Belgian mycologist Heinemann had called it *A. blazei* Murrill. However, it was a completely different mushroom that

Murrill had found and named in Florida in 1945—one which was not closely related to the Brazilian *Agaricus*. Bad mycology! But the name *A. blazei* stuck and lots (yes, lots!) of “medicinal” products in Brazil and Asia continue to use the wrong name! Whether

2 diabetes, cancer support (reducing side effects of chemotherapy), general immune support, and liver support to reduce inflammation. As with many of the other mushrooms that are now considered to be medicinal it is believed that beta-glucans



*Agaricus nanaugustus* in Prospect Park, Brooklyn in November of 2021; photo: Sigrid Jakob

one buys a bag of Chinese dried *subrufescens* in Chinatown or capsules or tinctures to be used as supplements, almost all are improperly labeled!

There are some studies that have been done over the years, in vitro and in vivo. When it comes to human clinical studies there have been less than a dozen of them and they have been done with small sample sizes. Possible positive results include a decrease in insulin resistance for people with type

and other polysaccharides in the cell walls are responsible for positive results.

By now, all of us have probably heard about medicinal mushrooms and most of us can name one or two. Before I started doing some research for this article in the last year I had never heard that the Almond Mushroom was considered one of them. So, I was quite surprised to read in a 2005 Japanese survey that 31% of urologic cancer patients were taking *subrufescens*. And in



*Agaricus nanaugustus* the size of a dinner plate in Green-Wood Cemetery, Brooklyn in September of 2021; photo: Christian Schwarz

another recent Japanese survey of cancer patients it was reported that many of them also took “alternative medicines”. (They didn’t always tell their doctors!). Number one on the list – *Agaricus subrufescens* (sold almost certainly as *A. blazei*). Number two: shiitake.

Leaving medicinal and alternative supplements aside, let me say that *subrufescens* is an excellent edible, whether one finds it in the wild (and of course one should eat it while it is still fresh) or buys it dried. When I bought my first bag of dried *subrufescens* I was skeptical. To me only a handful of species of dried mushrooms really turn out well when rehydrated and cooked – porcini, morels, black trumpets, and shiitake (aka the Chinese black mushroom). While the caps of *subrufescens* are not as substantial as these other mushrooms (and the stems are on the tough side) it is the

strong and delightful odor and flavor of the rehydrating liquid that makes these Almond Mushrooms worth seeking out. And the price is right – about \$20 a pound.

There are at least 4 different chemical compounds that contribute to the fairly strong yet very pleasant almondy odor, the main one being benzaldehyde. (The other three are benzyl alcohol, benzonitrile, and methyl benzoate). If you are familiar with marzipan and the summertime mushroom *Russula laurocerasi* (or *Russula grata* if you prefer the new name) then you know the very strong almondy odor of benzaldehyde—and I mean very strong. Our Almond Mushroom has it under control, in balance with the other almondy scents as well as other mushroom chemicals such as octenol—a major molecule in other choice edible mushrooms such as porcini. So, instead of one strong note we get a

symphony of various pleasant aromas.

But we actually have another mushroom in our region that could also be called an almond mushroom. In the past it was confused with the West Coast *Agaricus augustus*. But in 2016 Rick Kerrigan named and described the mushroom as *Agaricus nanaugustus*. In our area *nanaugustus* has also been confused with *subrufescens*. Whereas *subrufescens* has a smooth stem *nanaugustus* has a fibrillose to shaggy stem. It is thought that the same 4 chemical compounds that contribute to the almondy odor of *subrufescens* are also found in *nanaugustus*. *Nanaugustus* is probably more common than *subrufescens* in our area and is found in rich compost, often mixed with wood chips. I have seen it several times in suburban settings and in cemeteries.



# Polypores and Similar Fungi of Eastern and Central North America

Alan E. Bessette, Dianna G. Smith  
and Arleen R. Bessette

University of Texas Press, 2021

444 pages

309 color photos

ISBN: 978-1477322727

Price: \$65

Reviewed by Tom Bigelow

North America tends to lag behind Europe in output of specialized monographs and manuals geared toward identification of different groups of fungi. (The same, perhaps, cannot be said of the production of field guides, which are seen by publishers to have a broader appeal). Consider that since the publication 35 years ago of *North American Polypores*, by Gilbertson & Ryvardeen, (1986-7) only one (regional!) treatment of polypores in north America appeared (*Polypores of British Columbia*, by James H. Ginns, 2017). In Europe, the situation is radically different. Since the appearance, 28 years ago, of *European Polypores* by Ryvardeen and Gilbertson (1993-4), five major works on European polypores have been published! And bear in mind, Gilbertson & Ryvardeen's, *North American Polypores* was put out by a European publisher!

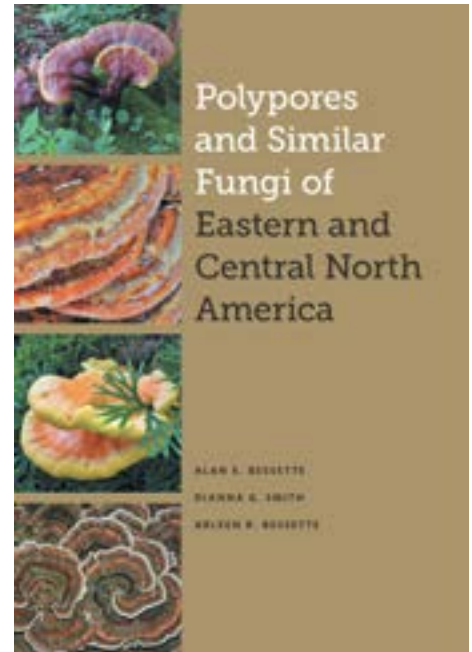
With this sorry state of affairs, and a dearth of up-to-date manuals treating our polypores, the publication of *Polypores and Similar Fungi of Eastern and Central North America* is a cause to celebrate.

The book, by co-authors Alan E. Bessette, Dianna G. Smith, and Arleen R. Bessette, covers the eastern seaboard from Florida to Newfoundland/Labrador west to Texas, and north to Manitoba. The format will be familiar to users of the Bessette's many other books. The first 23 pages of prefatory matter, written in a clear, jargon-free style, provides an excellent overview of polypores, the history

of their nomenclature and taxonomy, their uses, evolution, discussion of forest types, overviews of rot types, and tips for collecting and identification. This is followed by 32 pages of dichotomous keys based on macroscopic features – here, again, the construction of the keys will be familiar to users of the Bessette's treatments of the boletes, *Lactarius*, and *Tricholoma*, etc. Since the keys are based on macro features only, they are more accessible and less intimidating than keys requiring microscopic and macro characters; however, the more detail (e.g., microscopic features) included in a key, the more likely the key is to work. The authors address this problem by keying out many of the fungi covered in the book in more than one place, for example, *Fomes excavatus* keys out in Key E at 10a (based on staining of pore surface) and 15a (based on non-staining of pore surface). For an in depth critique of the keys, see Michael Beug's review here: [https://namyco.org/polypores\\_and\\_similar\\_fungi\\_of.php](https://namyco.org/polypores_and_similar_fungi_of.php)

The main body of the book is dedicated to descriptions and photographs of 247 species (a whopping 13 species of *Ganoderma*). The descriptions are concise, informative and to the point. Occasionally, I wish that the notes section for certain fungi provided more information, e.g., *Buglossoporus quercinus*, a polypore not known to occur in North America, and consequently not treated in Gilbertson & Ryvardeen's *North American Polypores* (1986-7), and now common within its limited range from northern Virginia to Westchester County in New York – why is it here? Is it the same as the European species? Or, why has the name *Fomes excavatus* superseded *Fomes fomentarius*?

The photographs are generally excellent, and illustrative of key characters, and in many cases two photographs are provided for a species. Some of the fungi, e.g., *Abortiporus biennis*, *Loweomyces fractipes*, *Niveoporofomes spraguei*, and *Postia livens* would have been better served by two photographs or a single photograph showing a more characteristic fruiting body. A photograph of the secotioid form of *Lentinus tigrinus* would have been welcome (in my experience more common in the tri-state area than the “gilled” form),



and a photograph of the fruiting body of *Inonotus obliquus* would have been nice rather than of two of the familiar sterile canker.

In the preface, the authors state that resupinate polypores are not treated in the book (with 4 exceptions), presumably because most resupinate polypores will not key out in keys based solely on macroscopic features. Instead, they include 32 species of non-poroid fungi (steroid, hydroid, corticioid species and several species of *Thelephora*). Many of the non-poroid species included can be found in numerous field guides, while many distinctive resupinate polypores, found throughout the region, are rarely if ever treated in field guides, e.g., *Ceriporia spissa*, *Ceriporia tarda*, *Fibroporia radiculosa*, *Lindtneria trachyspora*, *Physisporinus crocatus*, *Physisporinus sanguinolentus*, *Porothelium fimbriatum*, *Steccherinum nitidum*, to mention a few. To not include such distinctive, common, and under-represented poroid species seems a lost opportunity.

The informative and helpful appendices cover microscopy, useful reagents, tips on making spore prints, an overview of the research on medicinal polypores, a listing of polypores by Order, Family, Genus, and Species. Finally, there is an excellent glossary of terms and a comprehensive bibliography. If you are at all interested in polypores, do yourself a favor and get this book.

## FROM THE ARCHIVES

We are pleased to introduce a new section of your newsletter: *From the Archives*. As you may know, the New York Mycological Society has a long and fascinating history—from its first iteration in the 19th century, a second one in the 1930s, and its current incarnation organized by and around John Cage, Lois Long and Guy Nearing in 1962.

Throughout the years members of the club have kept an archive of our activities, our members, and our impact on the world. Our late club archivist, Ralph Cox, diligently collected and stored the Society's physical artifacts for three decades. At Ralph's passing at the age of 97, the role of archivist falls upon Tom Bigelow. Tom's enthusiasm for and interest in the post is evident. He and other members are exploring the prospect of developing a digital version of the archive that could be more broadly available to the world. That project may take a long time to complete. So in the meantime, we plan to present to you here, in the pages of your newsletter, some gems from the archives.

If you are a longtime member and have personal materials connected to memories of the Society that you would like to share, get in touch with me at [editor@newyorkmyc.org](mailto:editor@newyorkmyc.org). I'd love to hear from you and share your memories.

Please enjoy this amusing clipping (*far-out!*) from the archive. If you were one of the "bearded six-footers", or "tiny females in tight pants and dainty shoes" on this outing in 1964, we'd love to hear your recollections. We collect "toadstools", but we also collect friends.

—Ethan Crenson, editor



# Searching for Fungi Mushrooms Upstate



By LAWRENCE FARRANT  
*Of the World-Telegram Staff*

The New York Mycological Society will travel upstate by train and car to hunt for mushrooms at Southfields, in Orange County, Sunday morning, June 28.

Bearded men, some six-footers, and tiny females in tight pants and dainty shoes, most from Manhattan, will form a party at the Southfields railroad station to tramp through the woods north of Tuxedo to pick such delectable toadstools as *agaricus campestris* and the inky cap.

Guy Nearing, an elderly expert on lichens, will lead the mushroom walkers. Although he knows just about every species of fungi that grows in New York State, he'll carry a couple of field guide books with him. There are many poisonous mushrooms that look tasty but that kill quickly.

Nearing and Lois Long and John Cage, a far-out composer, founded the New York Mycological Society

about five years ago. Nucleus was a class in mushroom identification, run by Cage at the New School. Cage, as an avant gardist, has found he has to lead in two directions at once—in his case, in both music and mushrooms.

One of his better known compositions, entitled '4' 33"', provided four minutes and 33 seconds of dead silence.

Cage led the last mushroom walk of the society, on May 17, in the Katonah Woods in Westchester. The experts were looking for morels, which has the general appearance of a sponge on a thick stalk.

Good eating, the morels are found on menus of some of the fancier restaurants during the month of May. They are not grown commercially and must be picked in the woods, near dead elms or injured ash trees or old orchards—only in May.

"They grow in surprising places," Cage said.

W.T. + SUN - June 1st 1964

Searching for Fungi Mushrooms (sic) Upstate, from The New York World-Telegram & Sun Newspaper, June 1, 1964

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