

Spores Illustrated

Spring/Summer 2021 *Spores*

Illustrated is the Journal of COMA, the Connecticut-Westchester Mycological Association.

MESSAGE FROM THE PRESIDENT

Late Summer Greetings!

With the Clark Rogerson Foray fast approaching, now is probably a good time to remind COMA members that none of this happens by magic, although sometimes it may appear that way. All of this takes careful planning, and the logistics involved in some of the more complicated activities (such as the foray) can be daunting without support. ("Many hands make light work" is the operative phrase.) Right now, we have several positions that are being handled by only one person, and although this is adequate for some of them, we could definitely use a little extra help with our ongoing efforts. Here's a partial list: Planning for weekend walks. *Spores Illustrated* newsletter. Planning for the foray. Membership. Club insurance details. Educational programs. And if you would like to take an active part in the internal operations of your favorite mushroom club, please consider attending the next Board meeting, which have all been held via "Zoom" for the past year. You have only to let me know, and I will provide details & a Zoom link when the time comes. (We meet about four times a year.) If any of this may be of interest, please do not hesitate to contact me with any questions you may have.

Meanwhile (back at the ranch), "the beat goes on", and *Hen Of The Woods* season will be here before you know it. Right now, there are a tremendous amount of interesting mushroom species available to study, admire, and collect, and I hope that each of you has the chance to "get out there" on a regular basis. Our weekend walks have been very productive, and COVID notwithstanding, we have plenty of great adventures in store over the next few months, not the least of which is the "crown jewel" of our yearly activities, the (42nd) *Clark Rogerson Foray*. Although registration is closed, and all of the spots are now filled, "stuff happens", and there may be a few cancellations.... so if you would like to be waitlisted, please let me know. (COMA members will have waitlist priority.)

Joe Brandt

HOT OFF THE PRESSES

By unanimous vote of the Board members attending, COMA has ordered the filing of a separate Non-Profit corporation to run the Clark Rogerson Foray. Don't worry folks, same friendly faces but it will make the bookkeeping simpler. Welcome The Clark Rogerson Foray Association Inc. to the COMA family.

MEMBERSHIP/"Understudy"

The COMA board is recruiting an understudy for the Membership Chairperson position. Carol McLeod is the current COMA Membership Chair and plans to continue in that role. The understudy would be willing to step into the job in case Carol is suddenly unable to continue. Responsibilities for the position will involve learning the process and the membership files. A knowledge of MS Word and MS Excel is necessary to work with the files. The position interacts with the COMA News person, the COMA webmaster, and the club President. If you would like to learn more about what is involved, please contact Carol (mcleod6@optonline.net).

FUN AT THE FORAY

Well the overnights mostly sold out and day trippers need to pre-register asap but let me share the extracurriculars. Some of us with wanderlust took the time to explore the surroundings of our glorious event. We'll cover a bit of our discoveries.

HARRY'S Harry's is a 100 year old burger drive-in located in Colchester at 104 Broadway Street in the center of town, It is totally al fresco but the burgers are divine and the onion rings are awesome.



CATO CORNERS FARMS is a real dairy farm that makes gourmet cheeses at 178 Cato Corner Rd, Colchester, CT 06415 They have free tasting on the weekends and are maybe a mile from Hemlock. We love this cheese! It is insanely good. If you are strong at heart try the Hooligan (when they have it) which is beer brined, stinky as hell but delicious. For a more subtle taste try the Womanchego which is an award winning Manchego style mild and creamy cheese.



Directly next to Cato Corners Farm is **Hop Culture Farms & Brew Co.** a down to earth craft beer brewery with amazing tap beers and indoor or outdoor seating on picnic tables. They often have live music outside and/or food trucks offering gourmet fare. They offer flights of their beers. Since it is so close to the foray you can slip away from a walk, hit the brewery for a pint and be back at Hemlock before anyone guesses you are missing (I

mean not that I already know that plan works but it's a reasonable theory).



PERIL IN THE FOREST

On the lightly attended but very enjoyable walk led by Taro in the Hudson River town of Cold Spring we met up, traversed a cemetery and headed into the forest. Ksousha (as is her practice) ditched the crowd and headed deeper into the woods in her search for edibles. As is usually the case she scored a full basket.

We all met back up on the road and taking stock I saw we were missing the blond Russian. We figured she would show up eventually with five times more fungi than anybody else so we began snarfing my signature stuffed portobellos from a tray balanced on a handy boulder. Then the call came to my cell.

Ksousha was in trouble, big trouble. While going after an off-trail patch of chanterelles she stepped down into a ground level bee hive. The angry residents swarmed her and began stinging her legs. She dropped her basket and ran. She is highly allergic and carries an epi-pen in her basket but that was somewhere behind her and the bees were still in hot pursuit. She had never walked there before, had no idea where she was and she was still running. We kept her on the phone and Roger Hurst and I trotted down to an ambulance facility on the road at the edge of the woods. After frantic banging they came out and I tried to explain the crisis and the sleepy EMT (they must have been coming off the night shift) called 911 and said “ we have a woman lost in the park having a bad mushroom reaction”. I hastily clarified that although we were a mushroom club the reaction was to bee stings (I guess he thought she was tripping).

They had a good suggestion, that Ksousha call 911 and the cops could GPS her. I relayed the message. She had stumbled out to the road a half mile away and they quickly found her and scooped her up.

A shot of epinephrine in the ambulance did the trick and she called from the ambulance complaining that she was fine but they still insisted on taking her to the hospital. The EMT got on the call (she must have said I was her lawyer) and apologized but said it was protocol to take her to the hospital to be checked out.

She is recovered now and looking forward to her next walk. My file clerk was a lady marine and Ms. K could give her a run for her money on toughness. The moral of the story is to be careful out there in the woods. We don't often see lions and tigers and bears on our walks but we do encounter bees and snakes and spiders.

Still after all that she did have the energy to send us the following recipe



Chicken of the Woods Trinidad Doubles

Doubles is what makes Trinidad start your day and end your night. Two fried pancakes topped with curried chickpeas (channa) and array of condiments and hot sauces. Not one is the same.

Bara (Pancake dough)

2 cups All Purpose Flower
 ½ teaspoon backing powder
 1 teaspoon salt

1 teaspoon instant yeast
 Pinch turmeric
 2 teaspoon sugar
 1 cup warm water

Channa Recipe

18 oz canned Chickpeas (I use liquid too)
 ½ teaspoon backing soda
 2 tablespoons Minced Culantro (you can substitute GOYA Recaito Culantro base)
 2 tablespoons minced garlic
 ¼ teaspoon turmeric
 Madras Curry Powder to taste (1tsp)
 2 tablespoons (to taste) Roasted Cumin
 1-2 tsps. salt
 Chopped cilantro
 Hot sauce of choosing (Matouk's West Indian)
 2 med yellow onions chopped

Chicken of the Woods

Take as much or as little of the chicken of the woods (they seem to work with curry the best in my experience) and cut them up about the size of the big chickpeas. I sauté them with a bit of olive oil, butter and oaked chardonnay, especially when mature.

Finishing Touches

Cucumber Chutney

1 grated cucumber
 1 tsp minced garlic
 Chopped cilantro
 Salt to taste

Hot sauce of your choice (I use my habanero pineapple mango or scotch bonnet cilantro sauces)

Culantro Sauce (Culantro and Cilantro are related herbs but Culantro is stronger in flavor so less is required. If substituting Cilantro add more accordingly)

Chopped Culantro (can use green seasoning sauce or culantro base)

2 tsp minced garlic

Hot pepper minced (habanero or Jamaican works), Salt, Chopped green onion optional

Channa Instructions

In a Dutch oven heat enough oil to cover the bottom. When oil is hot add chopped onions and saute until translucent, 5-8 min. Add minced garlic. Take Curry powder and mix it with warm water; add to onions and garlic.

Add your cans of chickpeas with liquid. Mix. Add backing soda, turmeric, cumin, cilantro, cilantro and hot sauce.

If you want you can add potato as well!

This is where you add your Chicken of the Woods!!! Let them merry.

Cook approximately 1 hour until soft and thickened. If needed you can always add water and stir periodically. Usually tastes better next day !!!

Bara Instructions

In a bowl mix flour, backing powder, salt, yeast, turmeric, and sugar.

Mix in warm water for a soft dough. No kneading here!

Rub dough with oil and cover for 1 minimum but 6 to 12 hours.

Divide the dough into 16 balls (I would look up YouTube for this one) and let rise for a bit.

Flatten the dough into about 6 inch pancakes (not perfect of course) and fry in hot oil.

Stack doubles in paper towels to let them steam.

To Assemble

Take two bara and top with chana and cucumber chutney and cilantro topping. Actually anything goes!

THERE IS NO WRONG WAY TO DOUBLE!!!

KISENIYA (KSOUSHA)) GOLUBEVA

A LITTLE CLUB HISTORY

I recently wanted to know more of the history of this club. Fortunately our David Rose had already created an excellent account of where we came from and I'm pleased to share it.

History of the Connecticut-Westchester Mycological Association (COMA)

by David Rose

Amateur associations to promote the study and appreciation of mushrooms began to thrive in metropolitan centers of the east coast beginning in the 1890s. The first were established

in Boston, Washington, Philadelphia, and New York City and did much to focus interest in the fungi as an adjunct of botany. After the Great Depression and World War II a resurgence of this interest began to spread, consolidated by the North American Mycological Association (NAMA) in the 1960s. Amateur mycology as an organized part of nature study expanded further through NAMA-affiliated clubs and organizations. One of these was COMA, the Connecticut-Westchester Mycological Association.

First known as the Connecticut Mycological Association, the group was founded in 1975 by mushroom enthusiasts associated with the New York Botanical Garden (NYBG), New York Mycological Society, and Greenwich Audubon Center. The Nature Center for Environmental Activities of Westport, Connecticut was COMA's original sponsor. Ann and Bud Schwartz were founders and first directors, succeeded by Sandy Sheine in 1978 when the association's name was revised to include Westchester County. From its inception, COMA's primary goal has been to advance the science of mycology through public education, nature study, forays and field trips, publication, and lectures. As with many clubs, these activities encompass the fields of natural history, botany, taxonomy, culinary arts, photography, toxicology, and microscopy. The club promotes public education about mushrooms to prevent poisoning by toxic species and to foster understanding and appreciation of the world of fungi.

Thanks to a core group of dedicated mycophiles, COMA thrived and attracted talented people from all walks of life, from physicians and scientists to chefs who excelled in making cream of shaggy mane soup and a fellow who carved giant wooden mushroom replicas using a

chain saw. Dr. Samuel Ristich (1915-2008) and Marge Morris (1918-2011) gave the very first educational talks to the club. Sam Ristich provided his myco-confreres *the* major inspiration for forming the club, as he did likewise in New Jersey and in Maine. Dr. Ristich, with his vast erudition and intellectual sparkle, was the mainstay of COMA and of amateur mycology in general in the northeast for several decades. Marge Morris came to COMA from the New York Mycological Society where she had served as “Co-Secretary (Field Trips)” in association with John Cage. An expert mushroom identifier, Marge was an exuberant participant in both NYMS and COMA.

When Sandy Sheine assumed the presidency of COMA in 1978, she had little idea that her role in that position would last twenty-two years. Sandy became a trusted leader because her care and concern for people equals her passionate devotion to mycology. She taught mathematics at Woodlands High School in Greenburgh, NY and studied mycology under Samuel Ristich, Clark Rogerson, and Gary Lincoff at the NYBG, where she volunteered as a laboratory technician under Dr. Rogerson and Dr. Gary Samuels. Sandy has long been a vigorous advocate and practitioner of public education and has served on the NAMA Education Committee since 1994; her special focus is children’s education. In 1998, NAMA presented her its Award for Outstanding Contributions to Amateur Mycology. She and her husband Jerry Sheine have traveled the world in search of mushrooms, participating in volunteer projects such as the All-Taxa Biodiversity Inventory, in order to bring lessons learned back to COMA. In the second year of her COMA presidency (1979) she was pleased to announce a double honor to another key member of the club: Gary Lincoff had been elected President of NAMA and had just signed a

book contract with Knopf to produce the *The Audubon Society Field Guide to North American Mushrooms*.

- Gary Lincoff's association with COMA begins at Day One. His courses at the NYBG and countless presentations on mycology and botany potentiated the commitment and enthusiasm of COMA's mycophiles, and his 1986 lecture "The Wide World of Spores" inspired the title of COMA Subject: **NEMF On-Line Foray 2021 / NE Rare 20 Project**

NEMF UPDATE

Hi Everyone!

By now many of you may have heard that the NEMF Online Conference that was initially scheduled for August has been postponed until later in the fall. The new dates are December 3rd and 4th, with the same format of an opening plenary on Friday mid-day followed by two or three concurrent sessions, followed by some cooking demos and an evening keynote by Giulliana Furci of Fungi Fundacion (Chile). Saturday morning we will have additional online sessions led by many of our capable faculty, many of which are just as pleased to be waiting until after the mushroom season to do another zoom talk. The Event platform is Hubilo and you will be receiving notices from them in the not-too-distant future.

The second announcement is about the **Northeast 20 Rare Fungi Challenge!**

The Conservation Committee of FUNDiS has sponsored a pilot, West Coast

Rare 10 Challenge and is now moving on to an official start of the *Northeast Region* challenge. I have helped organize this with the Committee and solicited species suggestions from many of you. This has resulted in a list of some rare to uncommonly collected fungi, many of which have not even showed up on Mushroom Observer or iNaturalist and only show up as old records from fungarium specimens as noted in MycoPortal. Less than 100 records for all 20 species exist!

I encourage you all to see if you can contribute some great information about the list of 20. We will be adding whatever information we get to the IUCN Red List of rare fungi in order to improve the conservation of these species. Those folks that wish to collect and voucher any specimens that are collected, FUNDiS has some guidance on this here. Please keep in mind that all fungaria now require written permissions from landowners, whether public or private in order to enter any records into their database.

Please let me know if you have any questions, comments, or wish to help organize either or both of these events!

Rick Van de Poll, PhD

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Researcher Presents Ideological Framework to Approach

Mycology Through Queer Lens

By Stephanie Scavelli

On Friday, February 26th nearly 150 members from mushroom clubs across the Northeast logged into the virtual presentation [Mycology as a Queer Discipline](#). Speaker Patricia Kaishian, a post-doctorate taxonomist at Purdue University, led us through her May 2020 publication of the same title with the expressed motivation to counter anti-science and unconscious bias to conduct better and more ethical science.

Scientific thought advances through the application of the scientific method. The earliest scientists explored natural phenomena with a reductionist lens in pursuit of individuation. Modernity inherited a strong foundation in understanding the physical world which enables us to explore more complex, interrelated biological systems. However, the major take away from this talk was the idea that early reductionist thinking has been to the detriment of the science of mycology. As any reputable scientist would do, the speaker denounced “bad science” then laid out other ways of acquiring knowledge to ground the talk in the philosophy of science. It was explained that, “mycology challenges paradigms and deconstructs norms [being that] fungal interrelationships demonstrate non-extractive, non-capitalistic possibilities humans can learn from.” Thus, the presentation put forth the ideological framework that mycology is a queer study by virtue of the methodologies needed to properly study fungi.

The framework endeavored to challenge heteronormative assumptions and the reshaping of systems of power by juxtaposing the positive highlights of a queer paradigm against Western hegemony in its application to mycology. Diverging from natural science the presentation led to queer study in a method called intersectionality. Queer study is an “exploration of the dichotomy of normative and deviant categories [and] rejection of essentialist categories of

sexuality,” the speaker explained, which is an expansion of feminist, gay and lesbian studies. Intersectionality attempts to place oppressed groups under a grand narrative of systemic oppression which critics have claimed can be overly reductive in handling the oppressed group and the oppressive force.

The presentation explained that science has been disproportionately shaped by men from Western Europe, problematic hierarchical dominance structures, the mistranslation of the Bible and a legacy of colonization. For example, “women were excluded from formal participation of science for a very long time,” the speaker explained. It may be plausible that the lack of women within institutions may have something to do with the biological reality that women bear, nurse and raise children or that such scientific institutions arose prior to technological advances that liberated women from these biological restraints, such as birth control. However, the presentation explicitly lacked any such explanations that would challenge the ideological framework of Western civilization as marginalizing and oppressive.

A central tenet of the talk was that science is vulnerable to cultural and religious dogma. The grievance is that the dominant culture is fraught with heteronormativity, binaries, sexism, and racism which has “poured into scientific understanding.” The point is summarized that “complex social history has rendered mycology a marginalized science.” Use of language is a driving point. “When language is limited to binary conception of gender [then other possibilities are] ignored or shunned,” the speaker expressed. This being the case for fungi is unclear. Mycology did not require scientists receive diversity training prior to discovering non-binary sexual compatibility in fungi.

Is it possible that fungi might not be as “marginalized” as the speaker posits? The presentation cited the pervasive “demonization” of fungi in popular literature demonstrated by a reference to the nineteenth century author Emily Dickinson, but with no mention of authors of this century who publish works that admire mushrooms and revel in their mystery. Such titles include:

- Microbia: A Journey into the Unseen World Around You by Eugenia Bone
- Mycelium Running: How Mushrooms Can Help Save the World by Paul Stamets
- Entangled Life: How Fungi Make Our Worlds, Change Our Minds & Shape Our Future by Merlin Sheldrake

The talk emphasized how societal constructs influence how we gain knowledge. “We all are influenced by the world around us,” the speaker stated and reminded us that, “science is not a religion.” In a bit of a stretch, the speaker likened the persecution of heliocentrism during the 16th and 17th century to the adoption of queer analysis within the natural sciences.

It is within, not despite, Western society that science was disentangled from religious dogma. But are we moving towards replacing religious dogma with an ideological one? The claim that intersectional critical gender analysis has solved a negative bias towards fungi is an interesting proposition but dubious one. There are certainly problems in society and, in line with the principles of conservation, there is no need to destroy the forest to save the ecosystem. The speaker did get one thing right for certain. There is much to admire and learn from fungi.

Read the full publication by Patricia Kaishian and Hasmik Djoulakian entitled *The Science Underground: Mycology as a Queer Discipline*.

Me I agree with Freud that sometimes a cigar is just a cigar but make your own conclusions.

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(Note from the Editor I have no idea what the hell “heteronormative” means, but Stephanie submitted this article and we love Stephanie so we’ll just have to figure it out)

SCIENTIFIC AMERICAN [Extraterrestrial Life](#)

Future Space Travel Might Require Mushrooms

Mycologist Paul Stamets discusses the potential extraterrestrial uses of fungi, including terraforming planets, building human habitats—and providing psilocybin therapy to astronauts

- By [Nick Hilden](#) on August 3, 2021



Paul Stamets. Credit: Trav Williams *Broken Banjo Photography*

The list of mycologists whose names are known beyond their fungal field is short, and at its apex is Paul Stamets. Educated in, and a longtime resident of, the mossy, moldy, mushy Pacific Northwest region, Stamets has made numerous contributions over the past several decades— perhaps the best summation of which can be found in his 2005 book *Mycelium Running: How Mushrooms Can Help Save the World*. But now he is looking beyond Earth to discover new ways that mushrooms can help with the exploration of space.

In a new “astromycological” venture launched in conjunction with NASA, Stamets and various research teams are studying how fungi can be leveraged to build extraterrestrial habitats and perhaps someday even terraform planets. This is not the first time Stamets’s career has intersected with speculative space science. He also recently received an honor that many researchers would consider only slightly less hallowed than a Nobel Prize: the distinction of having a *Star Trek* character named after him.

Scientific American spoke with Stamets about the out-of-this-world implications for the emerging field of astromycology.

[An edited transcript of the interview follows.]

First, a chicken-or-egg question: Did *Star Trek: Discovery* name a character after you because you had started exploring astromycology, or was the idea for astromycology inspired by *Star Trek*?

CBS got ahold of me and said the writers of *Star Trek* wanted to talk to me: “We’re in the dungeon, there’s about a dozen of us, we’ve been tasked with *Star Trek: Discovery*, we’re hitting a brick wall, and we saw your TED Talk.” I had mentioned terraforming other planets with fungi.

What separates *Star Trek* from other science fiction, you know, is it really pioneered the importance of inclusivity, recognizing that the diversity of the members of our society gives us strength. And, indeed, that’s what I’ve learned as a mycologist: the biodiversity of our ecosystem gives our ecosystem resilience. Ultimately, diversity wins.

So I told them terraforming with fungi on other planets is very plausible. Fungi were the first organisms that came to land, munching rocks, and fungi gave birth to animals about 650 million years ago. We’re descendants of the descendants of these fungal networks.

I said, “You can have all these concepts for free. I’m a *Star Trek* fan; I don’t want anything for this.” I said, “But, you know, I always wanted to be the first astromycologist.” And at the very end, they go, “Astromycologist, we love that! What a great phrase; we can use that.”

How do you define the term astromycology here in our nonfictional universe?

Astromycology is obviously a subset of astrobiology, so astrobiology would be the study of biological organisms extraterrestrially.

Really, you're talking about the biology of the universe—and within the biology of the universe is our fungi. So astromycology would be the study of fungal biology throughout the universe. And I think it's inevitable we're going to someday find fungi on other planets.

How can Earth's fungi help with the development of human habitats or even entire ecosystems on other planets?

[Plants that support terraforming] need minerals, and pairing fungi up with the plants and debris from humans [causes them to] decompose into a form that then creates rich soils that could help generate the foods that astronauts need. It's much easier to take one seed and grow your food than it is to take a ton of food to space, right? Nature is incredibly efficient in terms of a payload. It's much better for nature to generate a payload of food than for your rocket to carry a payload of food.

Your current research proposal with NASA has two stages. The first involves identifying the best fungal species for breaking down asteroid regolith. Do you currently have any possible candidates?

Basically, regolith is asteroid dust. [Research teams] have constructed [synthetic] regolith that is supposed to mimic the components that are found on the surface of asteroids and also on Mars. So we're working with them now. I have a suite of about 700 strains of fungi in my cultural library. I made some recommendations, and I'm happy to say oyster mushrooms are one of the best ones that we've experimented with on the regolith so far.

And just recently we have found something synergistically that was unexpected when we took one species, gave it a nutritional source, and we wanted to know how far it would grow into the regolith [with its mycelial roots]. When we took one species of fungi, and we looked at the reach that it had in the regolith, then we combined it with other species of fungi—each of which did not have that great of a reach. When we had a plurality of fungal species together, the outreach was far greater than anticipated. In some ways, it just proves this whole concept about biodiversity.

The second stage of your proposal involves determining the most effective way to use a fungus once the best type is selected. What might that look like?

The universe is rich with hydrocarbons. What oyster mushrooms do really well is break down hydrocarbons and dismantle them and restructure them into fungal carbohydrates, into sugars. Sugars are an absolutely essential nutrient, of course, for practically all life forms that I know of on this planet. So the idea of using hydrocarbons as a feedstock for oyster mushrooms makes a lot of sense.

In addition to generating healthy soil, there are teams investigating how fungi might be used to grow structures on other worlds. Could you tell me more about how this sort of so-called mycotecture might work?

We grow lots of reishi mycelium, for instance. We grow reishi blocks. We wanted to crush these blocks in order to turn them into soil or get other value-added products. So we dried out these reishi blocks and we tried to crush them. But we *couldn't* crush them. You could saw them with a saw blade, but if you

tried to hit them with a hammer or something, they just wouldn't break. So this great engineer built us a hydraulic stainless steel press, and I had like 2,000 psi [pounds per square inch] in this press, and we gave it my reishi blocks, and it bent the stainless steel. Trying to compress it, it actually broke the machine. This thing will crush rocks all day long and could not crush mycelium.

What kind of timelines do you have in mind for all of this? Is this the sort of thing we might see applied a decade from now or in a century?

Tomorrow. It's happening now. I'm guessing it will be implemented in space within 10 to 20 years.

Before we wrap up, let's get a little more speculative. What are some of the more fantastic ways mushrooms might be applied in space?

Well, what I can tell you? I'm sure some of your editors may go, "No way, we're not going to publish this." But I think using psilocybin mushrooms in spaceflight makes a lot of sense. There are more than 65 articles right now ... at [ClinicalTrials.gov](https://clinicaltrials.gov) that say psilocybin mushrooms help people overcome [post-traumatic stress disorder], loneliness and depression. Do you think the astronauts are going to have loneliness and depression and PTSD? I think yes. How are you going to help them?

Psilocybin mushrooms build creativity; people who are more creative come up with more solutions. I think that, in a sense, is a fertile ecosystem that can lead to the sustainability of humans in space.

Henny Penny a salute to Grifola Frondosa



So— who among you does not remember some version of the "Henny Penny" fable, which is sometimes referred to as "Chicken Little"? Show of hands, please. "Hmmm..... not many— *not many*." The famous alarmist quote of "The sky is falling! The sky is falling!" (largely attributed to the English language version) is from that very same fable, which, although in existence in one form or another for *thousands* of years (yes, really) did not come to prominence in the English language until the mid-17th century, when there were several slightly different versions, all with similar characters, almost identical occurrences, and exactly the same moral to the story.

We would venture say that here in the Northeast, if we didn't have Hen-of-the-woods (*Grifola fronsosa*) as a Fall feature, plenty of mycophiles would indeed be of the opinion that the sky may as well be falling. Why, it would be unthinkable— like odorless stinkhorns, or morels cooked without butter. (Perish the thought!) Surely one of the most highly prized of the wild edible mushroom varieties, these fantastic fungi have been successfully cultivated, and are now widely available in mainstream markets all over the United States— and elsewhere, we would imagine. However, since this is "The Journal of Wild Mushrooming" and not "The Journal of *Cultivated* Mushrooming", we will concentrate on the wild version. (Mind you that from an epicurean standpoint, the cultivated version really isn't bad, but it pales in comparison to it's wild counterpart.) Of course, there's a huge difference between the time and effort needed to effectively prepare a "wild" *Grifola* for cooking, as opposed to the *lack* of time and effort involved in preparing a cultivated *Grifola* for cooking— but more about that later.

How do we love thee? Let us count the ways! (Apologies to Elizabeth Barrett Browning) Ah, we *loves* us some Hens, yassuh! If you're fortunate enough to find just one of these beauties, you can be confident of a plentiful amount of fine fungi for your culinary contentment— assuming that your specimen is in reasonably good condition, and that you have at least *some* clue as to what the heck you're doing! Now, before we go further, we must apologize to our West Coast and Southern State readers, because although they can certainly access the cultivated version easily enough, *Grifola frondosa* is generally not found much further west than Idaho, or further south than Louisiana.

This mushroom is a master of disguise among macrofungi, sometimes blending in with its environment so seamlessly that you might walk right by one without noticing; the color as well as the leaf-like appearance of this magnificent mushroom will often mock its surroundings. Naturally, once one of these grows past a certain size, the camouflage aspect becomes largely irrelevant, since these have been known to grow to the *hundred* (yes, that's 100) *pound* vicinity. (This, most certainly is as rare as a hen's tooth— no pun intended.) Another wonderful thing about these is that they are sometimes found in clusters ringing a large (generally Oak) tree, and if you happen to be so lucky as to come across a multiple fruiting, you can rest assured that you'll have more edible mushroom than most people are prepared to deal with.

A word of warning— wild Hens (also called *Maitake*, whether they be wild or cultivated) are not the easiest mushrooms to clean, and care must be taken not to include debris (much less critters that will sometimes find suitable lodging among the fronds) when cooking, because grit will unquestionably ruin everything, regardless of how good your dish tastes. Hens usually grow in a form that resembles a pile of leaves (or feathers), and in order to assure adequate cleaning, each "leaf" (or frond) must be separated from the others. It may be that your specimen is reasonably clean, which would be terrific— but sometimes there is dirt (or something else that you don't want on your plate) at every twist and turn,

and cleaning a large one of these can try the patience (and back, if you're at a sink) of even the most experienced mycophile or aspiring mycophagist.

One good thing about cleaning is that is very rare that you will find any insect infestation inside of the fronds, as opposed to the inside of the stalk. In almost every instance, if there is any (internal) insect presence at all, it will be in the lower part of the rudimentary stalk or central "base" and can easily be dealt with. While on the subject of the stalk, we should point out that in most specimens, this thick, dense part of the mushroom is usually imminently suitable for culinary purposes, although (for the most part) it will need to be sliced into sections no thicker than 1/2 inch, or you will risk cooking it unevenly. (Note: The stalk will sometimes pick up grit that becomes embedded as it grows. When this happens, the grit cannot be cleaned effectively, rendering that section of the stalk unsuitable for use.) If you're dealing with a fairly large hen, these big slices are definitely suitable for cooking in more-or-less the same way as you would a steak, and will have a similar consistency.

Did someone say barbecue? Absolutely— but you'll need a surface that does not have large gaps. Just be sure to brush with olive oil and sprinkle on salt before grilling. If you're going to be cooking the base along with the rest of the mushroom, you should try to slice it into pieces that are similar in size to the fronds, which will help promote more even cooking, and will look better in your finished dish. If you have the BBQ equipment to handle it larger quantities of Hens are wonderful cooked this way. You will need a stainless-steel "basket" made for the purpose; an ordinary grill surface won't do the trick. Your hens will need to be cleaned and cut (or separated) into manageable pieces— nothing very large. Toss with olive oil until coated. Salt while tossing (approx. 1 heaping tsp. per 8 cups), and add in a handful of chopped onion. (Have a couple cloves of minced garlic set aside.) Heat the basket to around 400°, then throw in the mushrooms. Stir every 10 minutes or so. Stir in the garlic after about 30 minutes, cook for another 15 minutes. Smaller quantities (especially fan-shaped slices) may be cooked directly on a narrow-grate surface or grill mat. (Cooking time is much shorter this way; cook only until nicely browned on each side.)

Especially if you're dealing with a hen that is somewhat less than pristine in cleanliness, the use of water when cleaning is often unavoidable, but sometimes you will be able to get away with only the use of a knife and soft brush. (As with all mushrooms, the less water you use in cleaning, the better.) In most cases, once you have cleaned and separated the fronds and cut the stalk into suitable sizes, you're ready to start cooking. The basic method involves the simplest of ingredients: olive oil (we prefer extra-virgin), onions, garlic, salt and pepper. Chop up some onion and mince a little garlic (roughly one onion and 2 cloves of garlic per 8 cleaned cups of mushrooms), heat 3-4 tablespoons of olive oil (medium-low) and add the onions. Sauté until they become translucent, add the garlic, stir, then add the mushrooms. (When you first add mushrooms to the pan, you will need to keep this stirred to distribute the onion & garlic and avoid burning the garlic and scorching the mushrooms on the bottom of the pan.) As they cook, the mushrooms will release their liquid, after which you will have the luxury of not having to pay full-time attention to the pan, although you do want to be sure to keep an eye on things and stir every couple of minutes. As it cooks, you can add salt (start with about 1/2 teaspoon per pan) and pepper to taste. Depending on several different variable factors (the age of the mushrooms, the amount of mushrooms in the pan, the amount of liquid in the pan) you will have between 8 and 15 minutes of cooking time— possible a bit longer for larger amounts. as the cooking nears completion, taste and adjust seasonings. What you don't scarf down immediately can be stored in the 'fridge (tightly

covered) for up to a week, but we recommend using as soon as possible. After cooking, hens may be successfully frozen (we like quart size "Ziplock" freezer bags) in meal-size quantities of perhaps 1½ cups. Cooked in this manner, Hens are suitable for use in most recipes, although for some dishes, you will want to start with fresh, uncooked mushrooms. (There are many Hen-of-the-woods recipes that are fine for freezing after cooking and need only to be thawed and reheated before use.)

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Peanut Butter Hens

3 Tbsp. olive oil
8 cups hen-of-the-woods mushrooms, cleaned, "leaves" separated (sliced as needed)
1 tsp. dried marjoram, crumbled
1 tsp. dried oregano, crumbled
1 tsp. dried mint, crumbled
1/2 tsp. ground cumin
1 tsp. fresh ground white pepper (or 1/2 tsp. of your favorite hot sauce)
4 cloves garlic, very finely minced (or 3 cloves, crushed)
1/4 cup fresh lemon juice
2 Tbsp. tamari or reduced sodium soy sauce
1/2 cup peanut butter, almond butter or a 50/50 mix

- Heat the oil in a large skillet over medium heat.
- Add the mushrooms, marjoram, oregano, mint, cumin and pepper (or hot sauce).
- Cook, stirring, for 10 minutes. Add the garlic, and cook, stirring, for another 5 minutes.
- Meanwhile, mix the lemon juice, tamari/soy sauce and the peanut butter, and stir the mixture into the mushrooms.
- Reduce heat, and cook, covered, for another 10 minutes, stirring every few minutes.
- Taste and adjust seasonings as needed, add extra cooking time if needed.

Great served on broad noodles. Can also be served in small pita pockets.

Potted Hen

1 Tbsp. butter (or butter substitute)
1 small onion, chopped
2 cups cooked Hens*
2 Tbsp. parsley, chopped
1 tsp. rosemary
2 tsp. tamari soy sauce
1 pinch sugar
1/2 tsp. salt
2/3 cup chopped roasted salted pecans
1 Tbsp. olive oil, or as needed

*This recipe assumes you have cooked, frozen mushrooms on hand. If not, they must be cooked first, without the use of very strong spices. (Onion & garlic are OK)

- Sauté the onion in butter until tender, add mushrooms, parsley, rosemary, soy sauce, and sugar.
 - Cook until all liquid is absorbed. Allow to cool 10 min.
 - Place cooked ingredients into a food processor.
 - Add the nuts, pulse until fairly smooth. Add more oil as needed.
- (Serve on crackers, toast, etc.)

Hen Bisque

1-2 cups "Herb Roasted Hens" (see below) OR 3 cups fresh Hens (see note below)
 3 TBS butter or natural margarine, divided
 3/4 cup raw cashews
 2 cups vegetable broth
 1 cup hen broth, from roasted hens or as sauteed, below
 1 cup water
 2 cups chopped cauliflower
 3 bay leaves
 1/2 tsp. dried thyme
 1/4 tsp. fresh ground white pepper
 1 tsp. sea salt
 4 Tbsp. good quality Italian tomato sauce
 4 Tbsp. merlot or other dry red wine
 Fresh parsley for garnish

Soup:

- Grind cashews to a fine powder, then add 1 cup vegetable broth and puree till smooth.
 - Sauté cauliflower in 2 TBS butter (or substitute) for 5 minutes
 - Add Hen broth, bay leaves, thyme, pepper, salt, remaining vegetable broth, water, and cashew mixture.
 - Cook for 15 minutes.
 - Remove bay leaves, and puree remainder in blender till smooth.
 - Return to pot. Add tomato sauce & red wine, stir, taste for seasoning, adding more sauce or wine if desired.
 - Add "Herb Roasted Hens" OR fresh Hens, as cooked below. Warm for about 5 minutes, till evenly heated.
- Serve garnished with chopped parsley.

*Hens:

Cook per "Herb Roasted Hens" recipe (below), draining and reserving juice,
OR: 3 cups fresh Hens, cut into 1-2 inch pieces and cooked as follows:
 Heat 1.5 TBS butter (or butter substitute), and 1.5 TBS olive oil
 Add 1 chopped shallot to oil, cook till shallot begins to clarify, then add garlic,
 Add 1/2 tsp. thyme, 1 tsp. sea salt, stir
 Add Hens. Cook until hens begin to release their juice, then carefully drain off most of the juice,
 reserving 1 cup for above recipe.

(If hens are particularly dry and you don't have a full cup, just use what you have and add water.)
Cook about 15 minutes until hens are lightly browned.

Herb Roasted Hens

20 cups hens, cleaned and separated into leaves - should be no more than 2-3 inches long.

5 large cloves garlic, minced

1 cup finely chopped shallots

2 tsp. crushed dried rosemary

1 Tbsp. Vege-Sal (or 1/2 Tbsp. salt)

1 tsp. dried crushed thyme

1 tsp. ground cumin

1 tsp. dried crushed sage

1 tsp. dried crushed oregano

1/2 tsp. fresh ground pepper

1 tsp. hot pepper sauce

3/4 cup olive oil

•Put mushrooms in a large bowl and mix well with all the other ingredients.

•Divide into two 13 X 9 inch glass baking dishes or roasting pans. Cover tightly with foil.

•Bake, covered, at 350° for 1 hour (stir after 30 minutes), then uncover, stir well, and bake an additional 30 minutes.

May be eaten warm, or cooled and frozen in 1½-2 cup portions. Very useful for adding to any recipe calling for cooked mushrooms.

—**Joe & Kathy Brandt (Reprinted from Mushroom, The Journal)**

The Mad Mycologist

Like Death he stalked the ravished land,
His cutting implement in hand,
Pale Oyster Mushrooms cried in fear:
"The Mad Mycologist draws near!
His bloodlust will not be abated
Until we're all decapitated!"

He stripped barren fields and woods
of Chanterelles and Scarlet Hoods.
No Parasol was safe from him—
The Fungus Fiend, the Reaper Grim.
Smug Deathcaps smirked: "He won't hurt us

For we are much to poisonous!"

Plump Puffballs pleaded as he past,
And Weeping Widows wept their last.
The Horns of Plenty blew no more,
As Ceps lay slaughtered by the score.
A small voice cried out: "Please don't eat us!"
The last words of a Bay Boletus.

One day he slew two Agarics
(Defying bylaw twenty-six)
They gloated "Ha! We've got him now!"
And hauled him off to court in Slough.
"Off with his head!" the jury cried.
"He's guilty of Mass Fungicide!"

The moral of this tragic tale
is "Wickedness must not prevail",
That he who harms a helpless fungus
Is not fit to dwell among us,
But shall go to Hell and boil!
(Or lightly fry in olive oil.) —P. Versehoyle



The Incredible 'Fantastic Fungi' Will Make You Love Your Mushroom Neighbors

Death! Decay! Drugs! Something for everyone! And it's on Netflix!

By Emma Stefansky

Published on 8/4/2021



Mycologist Paul Stamets with a collection of Mayan mushroom stones | Moving Art

It's only recently that modern science has begun discovering that the benefits of fungi extend far beyond merely using a select few of them as a food source, or in medicine, or to decompose cast-off leaves in our gardens. Fungi—mushrooms, molds, and mildews—have been operating in secret this whole time, literally underground, and their secrets are only now coming to light. The documentary *[Fantastic Fungi](#)*, which is now [streaming on Netflix](#), unearths the hidden lives of fungi all over the world, discovering how they form connections both in the natural world, and in the human one.

We've always had some notion that fungi were important—they're everywhere in nature, most of them falling under the category of "decomposers," organisms that take the energy to live from breaking down things that have died, molecule by molecule. But these tiny stewards of the wild places of the world have an even more complex purpose, one that scientists have found out about only within the past few decades.

Beneath the soil of the planet's forests, certain species of fungi have created a network of tiny fibers called mycelium extending for miles and miles to link one end of a wooded place to another. [The trees in these forests](#) extend their roots down deep and connect to the mycelium, which then connects them to other trees, offering itself as a pathway to exchange nutrients and information from plant to plant. The film illustrates this phenomenon with gorgeous time-lapse video of mushrooms sprouting from the ground and sparkly computer-animated maps of what the mycelial network looks like. (If this sounds like something out of [James Cameron's *Avatar*](#), it is: Cameron used this scientific breakthrough as inspiration for the interconnected shared consciousness within the jungles of Pandora.)



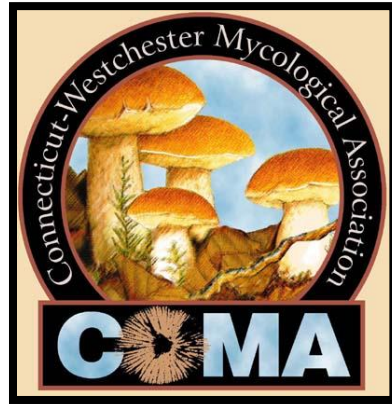
And then, about halfway through the documentary, it's shroom time. The science begins to mingle with the mystical as Brie Larson's narration (in character as the little mushrooms, of course) brings us up to date on how the fruiting bodies of fungi have been used as psychedelic drugs in practices that go back hundreds, even thousands of years. But the doc is never too *yeahhhhh brooooo* about it all. Instead, interviews are included with patients of various ailments who credit the psilocybin compound found in magic mushrooms with helping them manage pain and connecting them with a higher form of spiritual consciousness.

Where fungi can connect trees to trees and build a stronger, healthier forest, they also have the ability to connect the human mind with a greater appreciation for and understanding of the world, as well as a positive spiritual perception. *Fantastic Fungi* works equally as a fascinatingly informative nature documentary about an Internet that existed long before humans invented it, and as a PSA for the benefits of a substance that many believe has a deep connection to planes of existence above our own.

(Note from the Editor: A little too stoner for some but a beautifully photographed work)

We hope that you enjoy this edition of Spores. Submissions are always appreciated from COMA members. Sometimes we need to edit out content for brevity and readability but every effort is made to preserve the gist and tone of what is sent in.

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