

MushRumors

Newsletter of the Northwest Mushroomers Association

Volume 30, Issue 3

September 2019

Home-cultured tempeh, or “Mold: It’s what’s for dinner”

While in the refrigerator section of the hippie food store, did you ever wonder, “what the heck is tempeh”? Tempeh is a food made of fungi-fermented soybeans, and I discovered that it is quite easy to culture at home!

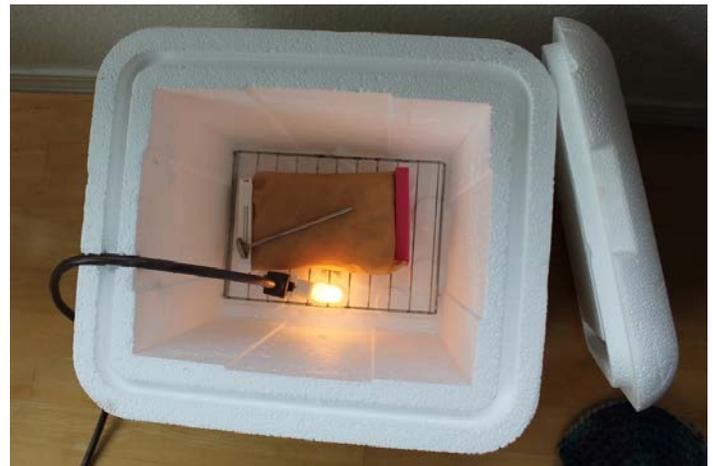
Tempeh originated in Indonesia where it is still very popular. It is cultured with a specific species of fungus: either *Rhizopus oligosporus* or *Rhizopus oryzae*. Closely related fungi occur commonly in the wild, though the varieties used for tempeh culture have been “domesticated” from them. This means that they no longer produce the toxins that the wild varieties produce, making them safe to eat [1].

I have found tempeh easy to make at home. The materials you need are:

- Dry soy beans. The Bellingham Food Co-op sells these in bulk.
- Tempeh “starter”: a bag of *Rhizopus oligosporus* spores. You can order it online.
- Some kind of incubator. Mine is simply a small styrofoam cooler, with one or two 4-watt night-lights for heat, and a thermometer.
- Kitchen parchment paper to wrap the tempeh during incubation.
- Racks.



Freshly fermented tempeh. Photos by Eric Worden



Homemade incubator

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The steps to culture at home are roughly:

1. Soak the dry beans in cool water overnight.
2. Dislodge the hulls from the beans by firmly pressing and rubbing them, because the fungal hyphae do not penetrate the hulls well.
3. Boil the beans for an hour, then drain.
4. Mix in a measured amount of starter and also a little vinegar, which inhibits undesirable bacteria.
5. Wrap the beans with parchment into cakes and stack them in a rack in the incubator.
6. Incubate the beans at 86 degrees F for 24-36 hours.
7. Blanch the fully fermented tempeh in order to stop further fermentation.
8. Make dinner plans!



Soybeans wrapped in parchment and stacked, ready for the incubator

Surprise! Freshly fermented tempeh has the most lovely aroma: I think it smells like apple cider with moist almonds. Even my bean-phobic wife describes it favorably as “peanuts and vanilla.” Like the aroma of a fresh Prince mushroom, these aromas do not survive much cooking.

The flavor of cooked tempeh is difficult to describe because there is nothing else quite like it. The flavor can be mild or strong, and certainly has a mushroomy component to it, perhaps similar to the sweet and savory Prince mushroom, *Agaricus augustus*. In addition to the mushroomy component is the soybean flavor, which actually is the heavier and funkier flavor component. The longer tempeh is fermented, the funkier it gets.

I have also had great success making tempeh out of other beans and grains like kidney beans, barley, and rice. These are all milder than soy tempeh and taste simply like mushroomy versions of their regular selves.

Now the reward: dinnertime! Tempeh has a bold flavor and it harmonizes with other bold flavors like garlic, chili, soy and fish sauce. Its heaviness tends to benefit from balancing with fresh or bright flavors like lime, vinegar, tomato, or cilantro. For a quick, delicious, and satisfying meal, I have prepared it mostly in rice or noodles with vegetables in spicy Asian garlic, soy, and fish-based sauces.

It also makes great tacos.

I have read that you can fry it and then infuse with a little sugar and smoke flavor to create tempeh “bacon”!

I hope I piqued your curiosity and culinary adventure spirit, and I’ll see you at the next potluck!

Read more about my adventure in home tempeh culture on my blog, <https://fallenforesttree.wordpress.com/2019/07/28/home-cultured-tempeh-or-mold-its-whats-for-dinner/>.
—Eric Worden

[1] <https://www.ncbi.nlm.nih.gov/pubmed/15740082>



A simple breakfast, rice tempeh



Tempeh taco!



Udon and meadow mushrooms with tempeh in black pepper sauce

Celebrating 30 years

The weekend of September 21–22, the Northwest Mushroomers Association will be gathering at Excelsior Group Campground on Mt. Baker Highway to commemorate 30 years of foraging, learning and educating about fungi, as well as 30 years of generally having fun and eating good food!

We'll arrive after noon on Saturday. We'll head out on forays that afternoon—nearby terrain beckons.

The campground is situated on the south side of Mt. Baker Highway about seven miles from Glacier. There will be a gate to drive through, and we will be in the “B” campground at the farthest end of the road. For overnights, tents, small and medium campers, and small trailers are welcome at this lovely campground along the Nooksack River.

Please bring food and utensils for a Saturday evening potluck, to be determined, around 5 or 6 p.m. If the fire season proves mild and no burn ban exists, we may have music around a campfire. Sunday is bring-your-own breakfast, maybe extended with mushrooms? Or pastries? Time will tell. Sunday morning forays are followed by bring-your-own lunch.

If you're camping, there's a \$10 fee collected on site. (Please email me, dyckmartha@gmail.com, so I have an idea of how many will be there overnight.) (For those not wishing to camp out, motel situations in the Glacier area exist with a 10% discount if you tell them you're coming to the event. The two providers are Blue T Lodge at bluetlodge.com, 360-599-9944, and Mt Baker Lodging at mtbakerlodging.com, 800-709-7669.)

Don't miss the anniversary campout! We should have had rain by later September, so mushrooms definitely may make an appearance . . . and everyone will have a chance to reconnect and celebrate what brings us all together: a love of mushrooms.

—Martha Dyck



Last year's Lummi Island fall foray. Photo by Martha Dyck

Calendar of events

Monthly meetings

Sept 12, Jack Waytz, [Mushroom Cookery](#)

Oct 10, Alison Pouliot, *Between Sex and Death*

Nov 14, Tristan Woodsmith of *Fungi Perfecti*

Special events and forays

Sept 14, Silver Lake foray

Sept 20–21, 30th Anniversary NMA camp-out

Oct 20, Wild Mushroom Show

Nov 16, Dilly Foray

Find details at northwestmushroomers.org/events-calendar or via your Google groups email.

Silver Lake Foray On Sept 14, join us at Silver Lake County Park. Silver Lake is usually a great foraging area in the early September days.

After the Silver Lake turnoff, stay left towards the Cedar campground area and find us at the smaller Cedar Shelter. We'll gather by 10 a.m. to head out on the trails around the lake and campground areas (maps available) and meet up

again at 12 pm for a potluck lunch (bring your own cutlery and cups) and mushroom identification and study of the mushrooms we've found.

The club is still looking for a long-term **Foray Chair** to support our foray hosts, identifiers and members. Are you interested? Without your volunteer commitment, these fun forays cannot happen! Contact Vince Biciunas 360-671-1559.

2019 Mushroom Identification Class

This fall NMA offers a 12-hour mushroom identification class, taught by mushroom experts!

The [classes](#) are offered in two, 3-week sessions of three classes each. Each class meets Tuesday evening from 7 to 9 pm at the ReStore conference room, beginning Sept 17, 2019 (the last class is October 22).

The first 3-week session will be an introduction to mushrooms and the procedures and resources used in mushroom collection and identification, emphasizing hands-on identification with keys. Students are encouraged to collect and identify mushrooms away from class and bring in their finds (identified or not) to each class. At the end of each class 10–15 minutes are taken to discuss the interesting finds of the week. First-session students will receive a copy of the new Kit Scates' picture key and copies of beginner's keys. They are encouraged to purchase Trudell & Ammirati's "Mushrooms of the Pacific Northwest" (available at the first session).

The second 3-week session (beginning Oct 8) will continue hands-on identification of mushrooms that students and instructors bring to class. This session is also good for prior students of ID classes to hone their mushroom IDing skills.

Registration is now open. The cost of each 3-week session is \$15, or \$30 for both. (Payment by cash or check will be collected in person at the first class.) Please register online using the [online form](#).

You may register for either session, or both. Classes will be limited to 25. If necessary, a waiting list will be maintained for each session. For the second session, priority will be given to students in this order (we do this because the class always fills up):

1. first-time students who sign up for the full course
2. first-time students who completed the first session
3. members who have taken a previous mushroom ID class

The class is open to members only—a great perk of membership! Make sure your dues are paid for fall. If you joined or renewed your membership at last year's Wild Mushroom Show, or since then, then your membership extends to the end of this year. If you have friends who might like to take these classes, urge them to join the club. Please see the NMA website [membership page](#) to renew or join.

—Eric Worden

Whatcom Land Trust shares sites with NMA

Board member Richard Mollette met with Rich Bowers, executive director of Whatcom Land Trust and Jennifer Mackey, the stewardship director, to discuss the possible use of WLT properties for either formal or pop-up forays. In exchange, Northwest Mushroomers Association agreed to create a data based catalogue of fungi found on the various properties. Members of the land trust would also be welcome to join a foray. It is to be noted, though, that the sites do not have any facilities or might be too small to host a formal foray, but might be ideal for quick pop-up ones. NMA must notify WLT before going out. Richard hopes to be able to go with two or three other members to preview this fall.

The sites are as follows:

Northwest Whatcom County:

- Fenton Nature Reserve
- Kelsey

Lake Whatcom Watershed:

- Ladies of the Lake
- Pratum

South Fork Nooksack River:

- Port Blakely & Edfro Creek

Middle Fork Nooksack River:

- Craver

North Fork Nooksack River:

- North Fork Eagle
- Racehorse Creek
- Maple Creek Reach
- Wildcat Reach

DNA solves mystery of the 2008 Bellingham “Candy Cap” Cold Case

This is the story of a mushroom identification cold case that spanned almost eleven years before DNA sequencing solved the mystery of the fall 2008 candy cap look-alike found near Bellingham.

I joined the NMA mushroom club in 2008, a year after moving to Bellingham from coastal central California. In the October–December 2008 club newsletter, *Mushrumors*, Jack Waytz posted an article about prolific fruitings in late fall of a mushroom identified as the candy cap, *Lactarius rubidus*, near Sudden Valley, just outside of Bellingham.

As the candy cap is uncommon in the Pacific Northwest (PNW), this was a great find. Having hunted candy caps in coastal central and northern California, I was familiar with *L. rubidus*. The candy cap is a highly sought after edible that when cooked or dried emits a strong maple syrup to curry-like aroma and is used to flavor pastries and other foods. I was excited about the possibility of finding candy caps in the Bellingham area, but became curious about the identity when the characteristic sweet aroma was not mentioned in the article.

So, I asked Jack if he had dried specimens that could be put to the “smell test.” Yes, he had dried some which were stored in jars at his home. But, alas, when the jars were opened they emitted none of the candy cap’s unmistakable maple syrup/curry fragrance. Examination of microscopic structures of specimens confirmed that this was not *L. rubidus*. So, the obvious question arose, if this isn’t the candy cap, but a look-alike, what species is it? Attempts at identification from the photos in Jack’s article along with

the microscopic traits of dried specimens proved inconclusive. However, it was suspected to be one of the orange cap *Lactarius* species found in the PNW, such as *L. luculentus*, *L. subflammeus*, or *L. substriatus*.

Fortunately, I stored a few dried caps of Jack’s collection, and would periodically wonder about the identity. In early 2019 a private lab in Oregon was found that did DNA sequencing of mushrooms, and DNA might be the key to unlocking the mystery of Jack’s look-alike candy cap. I also had saved some dried specimens of *L. rubidus* from California which could be used for comparison. Specimens of both collections were submitted to the lab for sequencing with the hope of finding a match with known sequences of mushrooms in the NCBI GenBank DNA sequence database. When results came in, the ITS (internal transcribed spacer) sequence of the California candy cap matched *L. rubidus*, whereas Jack’s collection matched sequences of *L. luculentus* var. *laetus*, one of the suspected look-alikes.



The candy cap, Lactarius rubidus, from coastal northern California. Caps are pale orange to orange-brown, dry to moist, latex thin, watery-white, scanty to absent, odor when fresh mildly pleasant, when dried or cooked strongly aromatic, like maple syrup or fenugreek. Photos by Richard Morrison



Lactarius luculentus var. *laetis*, the species identified in the 2008 Bellingham candy cap cold case



Lactarius subflammeus

The common name candy cap has been generically used for a group of four pleasingly aromatic North American species of *Lactarius*. Two of these species, *L. fragilis*, and *L. camphoratus*, do not occur in western North America. *L. fragilis* is found in eastern and southeastern North America, while *L. camphoratus* is found in eastern North America as well as Europe and Asia.

The other two species, *L. rubidus* and *L. rufulus*, occur only in western North America. Candy cap is the name applied to *L. rubidus*, which is common and often abundant in mixed forest ecosystems from the central coast of California into southern Oregon. It is found less frequently outside of this range. There are a smattering of reports of *L. rubidus* from Washington State, mostly from wooded areas around Seattle to

south of Olympia. The University of Washington herbarium (WTU) has only a single collection from Washington State. The candy cap is included in MushRoaming guru Daniel Winkler's booklet, *A Field Guide to Edible Mushrooms in the Pacific Northwest*. The description of the PNW "version" of *L. rubidus* on the MushRoaming.com website notes that the maple syrup odor is not as strong as the California version associated with oaks. The PNW candy cap is often found with Douglas fir, fruiting on or near well decayed wood and stumps.

At one time, *L. rubidus* was considered a variety of *L. fragilis*, and named *L. fragilis* var. *rubidus*. In 2013 it was officially elevated to the species rank of *L. rubidus*. As modern science continues to provide new knowledge about mushroom species and how they are

Candy cap—tasters' testimony

So ecstatic were we, that we had found candy caps in Sudden Valley, that Buck McAdoo and I decided that the best thing for us to do was eat a good quantity of them. I went to the Northwest Homegrown Cookbook series and used a recipe for candy cap waffles found in Cynthia Nims book, entitled simply, *Wild Mushrooms*.

Buck brought his waffle iron to my house on a rainy late October Sunday morning, and we ate a rather ridiculous quantity of these waffles. The flavor was excellent! Very rich and earthy, with a hint of sweetness, brought out beautifully with a good drizzle of organic maple syrup. By noon we were

well sated and quite pleased with ourselves.

With a good portion of the rest of the assemblage, I found a recipe for candy cap persimmon pudding from the online cookbook of the Mycological Society of San Francisco, called *Wild About Mushrooms*.

Not only did Buck and I savor this wonderful conflagration of flavors, but since I had so many "candy caps," I was able to make another portion of this grand desert, which I froze, and served at to the attendees at our Survivors Banquet the following spring! It was very well received, and no one was the worse for wear.

—Jack Waytz

related, there will be inevitable changes in names and our understanding of phylogenetic relationships. It is possible that with new information future mycologists may decide that the California/Oregon and PNW candy caps deserve to be distinct species.

The second species of western candy cap, *L. rufulus*, is called the southern candy cap and is found under live oak from northern coastal California down into Southern California. It has not been reported from the PNW.

If you are out mushroom hunting in the PNW and believe you've come across the candy cap, the following are key traits in identification.

- Odor is the most critical trait. Fresh mushrooms have a mild to slightly burned odor, or sometimes no odor; but, they do not smell like maple syrup! Only when mushrooms are dried or cooked is the maple syrup/curry odor released. Note that the maple syrup aroma of the PNW candy cap may not be very strong.

- Latex scanty, watery white (like whey) sometimes absent, color unchanging.
- Cap 2–8 (12) cm wide, orange, orange-brown to pale buff orange, dry to moist, center only slightly depressed, margin uplifted, typically wavy in age.
- Gills buff to pale orange.
- Stem 2–10 cm long, pale orange to orange-buff, fragile, interior often hollow.
- Taste of fresh mushrooms mild.

All candy caps contain strongly aromatic compounds with aromas ranging from maple syrup to curry to fenugreek, which give them their culinary appeal. The aroma of dried *L. rubidus* from California is quite persistent, and can be retained in specimens for decades. The aroma of cooked or dried candy caps can permeate a room, clothing, fabrics, even paper, and linger for some time.

The aromas of the candy cap species are produced when the ester quabalonone III is hydrolyzed to form sotolon, the same chemical compound that is synthesized commercially and used to produce artificial maple syrup. The type of aroma produced is dependent on sotolon concentration. At low concentrations sotolon smells like maple syrup, but at higher concentrations it takes on the aroma of curry or fenugreek. Other volatile compounds have been identified in candy caps which can add to the complexity of the aromas. Dried candy caps are used as a maple flavoring in sweet foods like cookies, pastries, and ice cream, but also can be used in savory dishes to impart a curry or fenugreek flavor. Candy caps are harvested commercially, and sources for them can be found by searching online.

As for *L. luculentus*, two varieties occur in the Pacific Northwest, *var. luculentus* and *var. laetis*, with the latter being more common. *L. var. luculentus*, has a dull, light yellow-brown cap, a cream to buff spore print, and peppery taste. In contrast, *L. var. laetis* has a bright orange to orange-brown colored cap, white spore print, white latex that can discolor or spot the gills brownish, and a mild to slightly peppery taste. Neither variety is known to be poisonous, but there seems to be no specific information on edibility other than general precautions such as “not recommended.” Jack used the mushroom in several tasty recipes with no apparent ill-effects on those who ate them, providing evidence that the species is edible. And, from comments, quite tasty in recipes like persimmon and candy cap pudding.



Lactarius substriatus



Lactarius rufus, named the Red Hot Milk Cap due to its acrid and peppery taste

Besides *L. luculentus*, three other species in the PNW that might be confused with the candy cap are *L. subflammeus*, *L. substriatus*, and *L. rufus*. *L. subflammeus* has a sticky orange to reddish brown cap, white spore print, latex that is milk white and unchanging on exposure to air, and a peppery taste. *L. substriatus* has a slimy to sticky orange to orange-red cap, cream spore print, milk white latex that slowly changes to light yellow on exposure to air, and a peppery taste. Neither *L. subflammeus* nor *L. substriatus* is known to be poisonous. *L. rufus*, commonly known as the red hot milk cap, has a dark reddish brown to brick red cap, thick white latex, and a very acrid, peppery taste, often latently. It is considered poisonous.

We humans are susceptible to confirmation bias, and our minds can trick us into believing something is true even when there is evidence to the contrary. The cautionary tale for mushroom hunters is, of course, that even knowledgeable, experienced mushroomers can make a mistake in identification. For a mushroom enthusiast, being wrong about the correct name for a find is of relatively minor importance, and has little consequence as long as one is not intent on eating it. However, if plans are to consume the find, being wrong could have unpleasant, serious, or even

fatal, consequences. So, any time you plan on eating your mushroom harvest, be 100% certain of the identification by carefully comparing the characters with reliable descriptions of the species. It is also wise to take heed of potential adverse reactions and cautions. For a hopeful mycophagist, any deviation from an identification character should raise the red flag warning of “when in doubt, throw it out.”

—Richard Morrison

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iNaturalist: Please read about changes coming to our NMA Google groups on how to identify mushrooms online through photographs

The Board has been exploring the best method for handling members’ requests for mushroom identification from photographs submitted on NMA Google groups. When we drafted this policy we were trying to balance several issues important to us all:

- Identification conducted through photographs of a specimen can never replace the physical examination of the specimen. So, we looked for a way in which the largest pool of identifiers could offer verification and comments on submitted photos.
- It was also important that we continue to provide a person asking for identification the ability to comment and/or ask questions of the identifiers.

The use of iNaturalist came to mind. To read about the iNaturalist app—what is it and how to use the it—please go to [this link](#), where you will find an introduction and instruction on how to use iNaturalist written by our Scientific Advisor Dr. Fred Rhoades.

We are happy to promote the use of iNaturalist. When you use this app to submit identification queries, you are not just getting an answer to your question. You are also performing a function critical to the biological sciences—that of the amateur scientist. With every photo you submit, the knowledge base on fungi in our area is increased. This data can be used for many purposes, from

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Mushroom of the Month

Cortinarius riederi (Weinmann) Fries

It was a bit late in the afternoon of November 7, 2013, and numerous club members were about, all of us combing the Stimpson Family Nature Reserve for whatever late season treasures it might yield. It must have been a Friday following a speaking engagement for us all to be there together. There were fungi everywhere. I tried to line up what species I would photograph next, always aware I might skip over one by mistake. And then I spotted the cluster you see here, a cespitose cluster in moss and needle duff a bit to the left of the main trail as it diagonally ascends after the first big bend.

Back at my all-purpose office I described it as such: Caps 5–8 cm wide, viscid, convex with inrolled margins becoming obtusely umbonate in age. Pale rusty ochre with a grayish band at the margin and all overlaid with innately fibrillose streaks. The context was grayish. The gills were adnate, crowded, edges entire. They were an intense bluish-lavender darkening to purple when bruised. Stems were 7–8½ cm long and 1–1½ cm thick, dry, pale lavender at apex, then dingy ochre-buff below. Bases were pale purple, clavate or with a slight emarginate bulb. The stem is stuffed, the context a smoky purple at apex becoming buff at base with occasional yellow tinges. The velar material consisted of vinaceous fibrillose shards on the stipe. The spores were rusty, the odor and taste were mild.

The viscid caps and dry stems immediately placed it in the Subgenus Phlegmacium. I soon arrived at Section Glaucopodes, and here I stopped. The *Cortinarius glaucopus* group is quite showy, but also encompasses several varieties including the *var.*



Cortinarius riederi. Photo by Buck McAdoo

submagicus of Bon. You have to be in a certain frame of mind to probe the varieties, and I simply wasn't there on that day.

Five years quickly went by. Then per chance I met Christian Schwarz at the Black Diamond Resort during a Key Council foray. He urged me to get on board with iNaturalist and enter some taxa there. Why not enter a few Cortis? The idea began to grow, and I ended up putting all 282 photos of my *Cortinarius* collections into the site. You get points for identifying species to genus, and I noticed that John Plischke III wasted no time getting on track with that until the exercise must have seemed ridiculous. However, it did bear fruit. Shannon Adams, a *Cortinarius* student originally from South Africa, but now living in the Seattle area, began to pick through them.

She identified about eight of them, including the *Cortinarius riederi* we see here. I forwarded my photo to Ian Gibson of Matchmaker who subsequently accepted the identification. So, thank you, Shannon, for getting this photo out of the closet!

Observations from other experts are as follows. Tor Erik Brandrud suggests that *Cortinarius riederi* is like *Cortinarius glaucopus*, but with larger spores and without the emarginate bulb. Breitenbach & Kranzlin added that the cortina was whitish to pale ochre. Caps can be ochre to reddish-brown and the gill edges crenate. KOH applied to the cap cuticle turns it a red-brown. The spores are elliptical and weakly verrucose, measuring 10–14.5 x 6.7–9 µm. The basidia have clamps at the bases and the cheilos are shaped like the basidioles. They claimed it was a rare species, found in mineral rich coniferous forests in the fall. They are referring to Switzerland here. Our own Steve Trudell, on the other hand, claims it is widespread and common in the Pacific Northwest. He notes that the cortina is pale bluish at first, and the stem base is often napiform and lacking a distinct rim.

Another look-alike mentioned is *Cortinarius anserinus*. This shares the violet gills and stipe apex, but it is found with beech and has more verrucose, lemon shaped spores. Synonyms mentioned are *Cortinarius fulvochrascens*, *C. lilacinopes*, *C. sphagnophilus*, *C. anomalochrascens*, and *C. pseudoarcuratus*. Both *Cortinarius lilacinopes* and *Cortinarius pseudoarcuratus* are depicted as having marginate basal bulbs, so already distinctions can be perceived as edging towards murky. Then in 2014, a team of seventeen Spanish mycologists dealt with *Cortinarius riederi* in *Fungi Non Delineati LXXI*. They added a few more features such as KOH applied to the cap flesh turned it a café con leche

color. The rhizomorphs were white and the odor was mildly fungoid. Cap margins could be wavy at times. And microscopically, the pileipellis consisted of irregularly interwoven hyphae in a slightly gelatinized matrix. The subpellis was a dense layer of parallel hyphae. The ornamentation could be intracellular or granulose, and there were so many different interpretations out there, they weren't sure which one occurred in Spain.

—Buck McAdoo

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building a map of the species in a given area to tracking the impact of climate change. What had once been a simple question and answer on Google groups becomes essential data for our understanding of our region's fungi.

There is a learning curve to using iNaturalist. NMA will offer mini-tutorials at our forays and events for those who have questions about the app.

So, look for these changes:

- There will be a footer at the bottom of your Google groups message that will direct you the "how to."
- Using the step-by-step instructions, get familiar with the app and submit your photographs for identification.
- You may encounter the same problems as when you used Google groups. The quality of your photographs may be too poor to allow identification, Be sure to follow the same procedures as we used on Google groups to get a good photo.
- You might get more than one identifier weighing in, possibly with different answers, just as on Google groups. Don't despair. This is where it

Wild Mushroom Show, 10/20/19

The wonderful world of fungi

How many mushrooms can you identify?

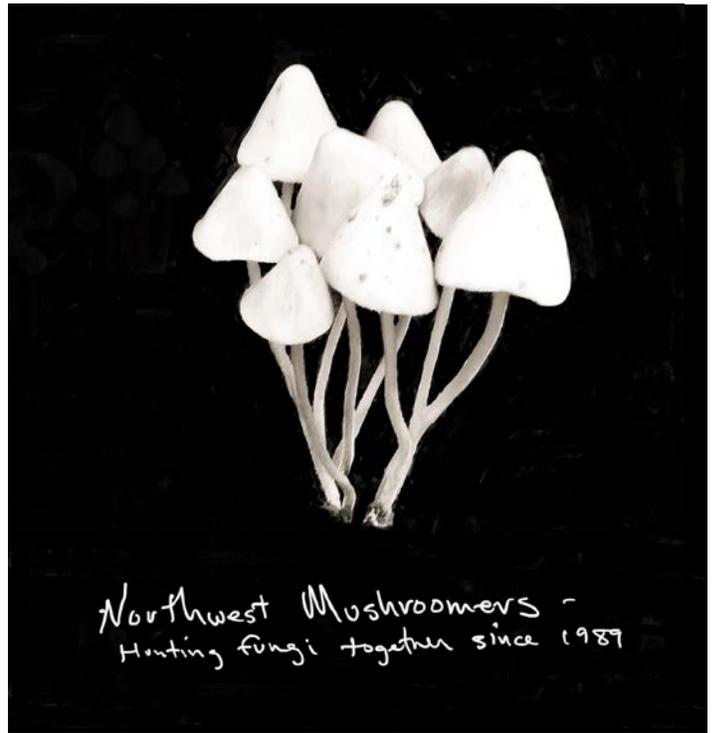
On October 20, 2019, the Northwest Mushroomers Association hosts its 30th Annual Wild Mushroom Show at Bloedel Donovan Park, from 12 noon to 5 pm. Admission is \$10 for adults, \$7 for students and seniors, children free.

Over 300 varieties of mushrooms grow in our area and many will be on display, identified to genus and species, and with edibility recommendations. The displays will be fresh, colorful, and amazing. You can learn how to tell species apart, focus on look-alikes, and see information on some mushrooms' medicinal properties. In addition to visiting the show's mushroom-related book sales, an ecology and conservation table, children's activities, and hourly presentations in the Pavilion next door, the public can bring in a mushroom or two for our experts to identify. Mushroom club membership allows you to register for identification classes and attend forays and meetings in the coming year.

One mushroom cannot be substituted for another, as their individual characteristics make each distinctly different. There are look-a-likes but not BE-A-LIKES. Knowing which mushroom one is searching for and looking at can be sometimes confusing. Yet there is a path through this complex world of fungi.

Come learn with us or just enjoy the colorful beauty of the mushrooms on display.

—Richard Mollette



The elf cap, *Conocybe apala*, art by Mark Johnson for the coming special edition, NMA anniversary tee-shirt

Volunteer at the mushroom show

Please reserve Saturday and Sunday, Oct 19 and 20, to take part as a volunteer in the coming mushroom show.

The wild mushroom show is an extraordinary feat that has taken place for nearly 30 years with the help of NMA's many enthusiastic and generous members. You can sign up for a shift or a task soon online, at one of our upcoming member meetings, or via the Google groups email. It takes a village to pull off a mushroom extravaganza!

—NMA Board

iNaturalist continued

gets interesting. You have the opportunity to ask more questions or add additional comments to assist the identifiers and follow the identifiers' thinking process as they work on your question. The more familiar you become with iNaturalist, the more fun you will have. You can submit photos of any biological organism...even create a bio map of your own yard, school, or workplace.

A lot of changes, but some things will remain the same. As before, we encourage members to post mushroom-related content and discussions to the Google groups email list. But for mushroom identification issues, our group's most knowledgeable identifiers will now be using iNaturalist.

—NMA Board

Members share photos of some early season favorites



“I get lots of these every summer in my ‘secret’ Bellingham spot ... so long as other people don't step on them first. This is *Agaricus campestris*, aka meadow mushroom or pink bottom. They come out in midsummer after lawn grass has gotten dry and brownish, and is then watered again and greened up. They are fine eating. Also high in vitamin D :)”

—Eric Worden



“It was the end of June and I was delighted to find one of my favorite mushrooms, *Marasmius oreades* or the fairy ring mushroom. I found multiple large rings in grass patches around the city that I am confident are not treated with any harmful chemicals. These mushrooms might not look like much but they have a wonderful sweet flavor and fry up well like most mushrooms. I like to use them in omelettes and stir-fries and have heard that they make delicious cookies! I also came across some good oysters and two nice artist conks that we enjoyed drawing on. We will keep the dry artist conks as a perfect conversation starter.”

—Brandon Sigurdson



A “Princely” Jim Reddin with two different collections of *Agaricus augustus*



Typically-fall mushrooms began early in 2019. At right, the Starship Enterprise, or *SS Boletus edulis*. At far right, bear’s head, *Hericium abietis*, found on August 6, 2019, around 3000 feet, south side of Mount Baker. Photos by Erin Moore



Coming soon! Fall mushrooms, the annual mushroom show and ... NMA Board elections

It’s an exciting time of year again when we gear up for some serious foraging, the annual mushroom show, and, of course, the election of our NMA Board for next year. Just a few dates to remember:

- **September 10 to September 25**—Nominations will be open from September 10 until September 25.
- **October 1 to October 15**—The election is open from 5 p.m. October 1 to 5 p.m., October 15. You will receive a slate of candidates and a link to the

online voting program. Please note that voting can be done *only* through the online voting program.

- **October 20**—Our current President will send out an email to NMA members listing our newly elected Board members.

I am always eager to talk to members about running for the Board. If you are interested and haven’t spoken to me yet, there’s still time. Please email Linda Magee, NMA nominations chairperson, at 360nmatreasurer@gmail.com.



Northwest
Mushroomers
Association

Northwest Mushroomers Association (NMA)
P.O. Box 28581
Bellingham, WA 98228-0581

northwestmushroomers.org
facebook.com/NorthwestMushroomersAssociation

The Northwest Mushroomers Association promotes the understanding and appreciation of mushrooms: furthering the study of fungi, their identification, natural history, ecology and conservation. We serve mushroom enthusiasts in northwest Washington State, including Whatcom, Skagit, and Island counties.

Membership meetings are 7–9 p.m. on the second Thursdays of April, May, June and September, October, and November, at the Squalicum Yacht Club in Bellingham. To stay apprised of forays, events, meetings, and more, please join our googlegroups email list automatically by signing up as a member. Or visit northwestmushroomers.org/events.

MushRumors is published online March 1, June 1, September 1, and December 1 at northwestmushroomers.org.

Club members are encouraged to submit stories, photos, recipes, and artwork. We appreciate your interest! Submissions should be made three weeks prior to the date of publication. Send to [chanterellerin \(a\) gmail.com](mailto:chanterellerin(a)gmail.com).

Renew your membership

If you want to participate in NMA, please become a paid member, or renew your membership!

An annual membership is \$25 (general) for families or individuals, \$50 (benefactor), or \$15 for students. You can renew online with a credit card or PayPal. Please see our website at: northwestmushroomers.org/join-or-renew-membership/

If you renew now (Sept 1), your membership will be current through the end of 2020.

You can also mail a check to the following address (please include names and email addresses so we can find you in our records):

NMA attn: Membership
PO Box 28581
Bellingham, WA 98228-0581

For membership questions, please email 360nmamembership@gmail.com



The gypsy mushroom, Cortinarius caperatus. Photo by Erin Moore