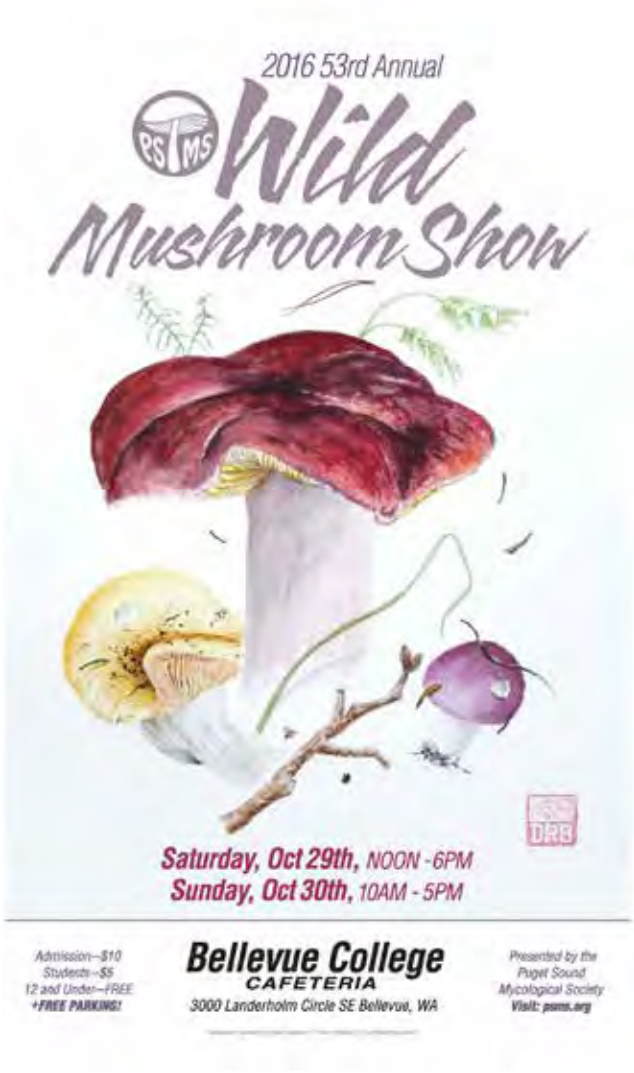
SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 525 **October 2016**



PSMS 53RD ANNUAL WILD MUSHROOM SHOW, OCTOBER 29–30, 2016, AT BELLEVUE COLLEGE

Milton Tam

Once again our Annual Wild Mushroom Show will be at Bellevue College, in the main cafeteria area, on Saturday and Sunday, October 29–30. Doors will open to the public at noon on Saturday and at 10 am on Sunday. There are free parking and easy access from I-90.

Remember that our show is a fund raiser but also an educational event that introduces the public to the incredible diversity of mushrooms and other fungi. All shapes, sizes, and colors of mushrooms will be displayed. There will be an identification table (so be sure to bring the mushrooms you find); lectures and talks by experts; mushroom cuisine to sample; a photography contest and other exhibits; commercial vendors; arts and crafts; a hospitality room for volunteers; and a cultivation table to assemble your own oyster mushroom-growing kit. You are also invited to a PSMS members-only reception after the close of the show on Saturday, October 29, from 7–9 pm.

For the show to be a success, we will need lots of volunteers, so please get involved and sign up for a job. You can sign up for various tasks at the October 11 membership meeting or on our PSMS website (www.psms.org). We also need everyone to get into the woods and bring back prime specimens of as many mushroom species as possible. Also don't forget to look in lawns, gardens, and urban landscaping. With the rains being late this year, we can't predict where they will be fruiting, so we may need more folks to collect farther afield. If you plan to go collecting, are willing to drive, and could use some gas money, be sure to contact me (miltontam@aol.com).

Mushrooms are perishable, so please collect on the Thursday and Friday before the show and keep them in a cool place until you can get them to us. Don't forget to bring back some moss and duff too! We will need them for the displays. Collected mushrooms can be dropped off after 5 pm on Friday, October 28, at Bellevue College by the cafeteria. Look for the PSMS signs.

SIGN UP NOW FOR A WATERCOLOR CLASS

Shannon Adams

Viazmensky with student.

This fall, esteemed Russian watercolor artist Alexander Viazmensky will be holding a one-day watercolor class for club members and friends. No prior experience is necessary, but participants should come with a desire to learn how to observe and express the character of a mushroom. Many club members found that Alexander's prior class in 2012 opened the door into a new passion for painting which complements their mushroom hobby.

The class will be held at CUH on Thursday, October 27, from 9 am to 5 pm. The cost is $60 for members and $75 for nonmembers. A supply list is provided with registration or you can pay an additional fee for materials to be supplied.

Registration will be offered through the PSMS website, psms.org. We suggest members sign up promptly as the class is limited to 12 and we expect demand to be high. Please contact Shannon Adams (moonshell@gmail.com) with any questions.

Spore Prints

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CALENDAR

Oct. 8	Field trip (see website)
Oct. 11	Membership meeting, 7:30 pm, CUH
`Oct. 14	Board meeting, 7:30 pm, CUH board room
Oct. 15	Field trip (see website)
Oct. 18	*Spore Prints* deadline
Oct. 21–23	Ben Woo All-Sound Foray, Black Diamond Camp near Mt. Rainer
Oct. 29–30	PSMS Annual Wild Mushroom Exhibit, Bellevue College cafeteria
Nov. 15	Membership meeting, 7:30 pm, CUH (**3rd Tues.**)

BOARD NEWS — Luise Asif

PSMS Annual Mushroom Show: Milton Tam and Kim Traverse are finalizing details for this year's show which will again be held at Bellevue College. Shannon Adams was able to get an announcement into *Sunset* magazine and John Goldman succeeded in placing a notice in the AAA *journey* magazine. Please consider volunteering for the show. Sign-up sheets will be available at the general meeting. Posters and yard signs are also available.

Bridle Trails Project: The Bridle Trails project will be revitalized this fall and next spring under Daniel Winkler's direction.

MEMBERSHIP MEETING

Tuesday, October 11, 2016, at 7:30 pm in the Center for Urban Horticulture, 3501 NE 41st Street, Seattle

Noah Siegel with Ganoderma.

Our speaker this month is Noah Siegel, who will enlighten us on mushrooms of the Redwood Coast. Northern California is known for its seemingly endless wet winters which make the mushrooms flourish and for its majestic forest. Not only does it have the biggest trees, it also has the largest known Chanterelle and Porcini!

Noah just finished, along with Christian Schwarz, compiling *Mushrooms of the Redwood Coast.* Six years in the making, this newly published book is the definitive guide to mushrooms in the diverse ecological zones of this region. Gain a better understanding about the mushrooms of northern California, hear some of the stories behind the book, and enjoy a selection of breathtaking photographs from common edibles to rare and remarkable species.

Noah's field mycology skills are extensive—he has spent over two decades seeking, photographing, identifying, and furthering his knowledge about all aspects of macrofungi. He has hunted for mushrooms throughout the United States and Canada, as well as on multiple expeditions to New Zealand and Australia. He is one of the premier mushroom photographers in the nation, having won numerous awards from the North American Mycological Association photography contest. His photographs have appeared on the covers and have been featured in articles of multiple issues of *FUNGI Magazine* and *Mushroom the Journal*, as well as many club publications. Noah travels and lectures extensively across America, following the mushrooms from coast to coast, and everywhere in between.

Silent Auction: Shannon Adams will again have Hildegard Hendrickson memorabilia available for auction, proceeds to fund the Ben Woo Scholarship Fund.

Edible City Exhibit: PSMS has donated items to the Museum of History and Industry for the Edible City Exhibit to be held November 11 through December.

Monday ID Clinic: Under Brian Luther's direction the fall Monday ID clinic in the CUH atrium will begin September 26th.

PSMS CONSERVATION GROUP FORMING — Milton Tam

Are you interested in how policy decisions relating to mushrooming and mushroomers are made at state and local levels in the Pacific Northwest, such as how much to charge for collection permits, limitations as to where and when we can hunt, how much and what species we are allowed to take (or not take), what harvesting methods should be used, protection of rare/endangered mushroom species, regulating what mushrooms can enter the commerce stream, and use of public funds to protect and enhance fungi, among many other issues?

We would like to get a group of like-minded PSMS members together to discuss priority issues, formulate projects, and become advocates for sound, science-based conservation practices and land management. Once the committee is formed and active, our goal would be to make ourselves known at the state level, take a "seat at the table," and assist in developing policy, rules, and regulations for the equal benefit of all interest groups.

If you are interested in participating and/or learning more, please reply to Milton Tam (miltontam@aol.com). We'll decide on a place and time to meet, but will need to put the initial meeting off until November, since October is already upon us and for most of us is a very busy month.

FUNGUS IDENTIFIED AS KEY FACTOR IN CROHN'S DISEASE

https://www.sciencedaily.com/, Sept. 20, 2016

A team of international researchers led by the Case Western Reserve University School of Medicine has for the first time identified a fungus as a key factor in the development of Crohn's disease. The researchers also linked a new bacterium to the previous bacteria associated with Crohn's. The groundbreaking findings, published on September 20th in *mBio*, could lead to potential new treatments and, ultimately, cures for the debilitating inflammatory bowel disease, which causes severe abdominal pain, diarrhea, weight loss, and fatigue.

"We already know that bacteria, in addition to genetic and dietary factors, play a major role in causing Crohn's disease," said the study's senior and corresponding author, Mahmoud A Ghannoum, PhD, professor and director of the Center for Medical Mycology at Case Western Reserve University and University Hospitals Case Medical Center. "Essentially, patients with Crohn's have abnormal immune responses to these bacteria, which inhabit the intestines of all people.

"While most researchers focus their investigations on these bacteria, few have examined the role of fungi, which are also present in everyone's intestines. Our study adds significant new information to understanding why some people develop Crohn's disease. Equally important, it can result in a new generation of treatments, including medications and probiotics, which hold the potential for making qualitative and quantitative differences in the lives of people suffering from Crohn's."

The researchers assessed the mycobiome and bacteriome of patients with Crohn's disease and their Crohn's-free first degree relatives in nine families in northern France and Belgium, and in Crohn's-free individuals from four families living in the same geographic area. Specifically, they analyzed fecal samples of 20 Crohn's and 28 Crohn's-free patients from nine families and of 21 Crohn's-free patients of four families. The researchers found strong fungal–bacterial interactions in those with Crohn's disease: two bacteria (*Escherichia coli* and *Serratia marcescens*) and one fungus (*Candida tropicalis*) moved in lock step.

The presence of all three in the sick family members was significantly higher compared to their healthy relatives, suggesting that the bacteria and fungus interact in the intestines. Additionally, test-tube research by the Ghannoum-led team found that the three work together (with the *E. coli* cells fusing to the fungal cells and *S. marcescens* forming a bridge connecting the microbes) to produce a biofilm—a thin, slimy layer of microorganisms found in the body that adheres to, among other sites, a portion of the intestines—which can prompt inflammation that results in the symptoms of Crohn's disease.

This is first time any fungus has been linked to Crohn's in humans; previously it was found only in mice with the disease. The study is also the first to include *S. marcescens* in the Crohn's-linked bacteriome. Additionally, the researchers found that the presence of beneficial bacteria was significantly lower in the Crohn's patients, corroborating previous research findings.

HILDEGARD HENDRICKSON MEMORIAL SILENT AUCTION

Shannon Adams

Thanks to the generous donation of Hildegard's mushroom memorabilia, books, and ornaments, the club is able to hold a series of silent auctions at fall membership meetings. The first of these auctions occurred at the September meeting, where close to $500 was raised for the scholarship fund that provides grants for the study of mycology.

The second silent auction will take place at the member meeting on October 11, 2016. Items will be on display and ready for bidding beginning at 7 pm. Bidding will close 15 minutes after the speaker concludes. Please bring cash or checkbooks if you think you may be tempted by anything from a vintage mushroom-themed coffee mug to a broach, table setting, or field guide.

Many items are of sentimental value, and we hope that club members old and new find something to cherish in memory of Hildegard, who was a great mushroom hunter and friend of so many in our community.

SIGN UP FOR THE BEN WOO MEMORIAL ALL-SOUND FORAY OCTOBER 21–23, 2016

James Nowak

We still have a few spots open for the Ben Woo Memorial All-Sound Foray to be held at the Black Diamond Camp in a beautiful old growth forest setting from Friday dinner October 21 through Sunday breakfast October 23. Black Diamond Camp is near Mt. Rainer, about 30 miles east of Enumclaw just off Route 410 near the Crystal Mountain ski area turnoff. A detailed description was included in the September 2016 *Spore Prints*.

The cost for the weekend is $165.00 per person. Registration and payment must be done online and paid for via PayPal or credit card (no checks). The fee includes two nights' accommodations in a dormitory style setting, five meals, and evening entertainment. Please plan to join us for this exceptional event, learn more about Ben Woo and the Russulas that he studied, collect abundant fungi, enjoy mushroom cuisine, meet new folks, and gather with old friends. To register go to the PSMS home page (www.psms.org), click on "Event Registration," the "Events" heading, and follow the prompts.

SOMEBODY STOLE "THE BLOB": WHAT IN EARTH FOR?

Patti Wetli

https://www.dnainfo.com/, Sept. 21, 2015

DNAinfo/Patty Wetli

The Blob...here.

NORTH CENTER, ILL - Is there a black market for indeterminate chunks of fungal matter?

"That's a good question," said Larry Bartoli.

The retired police officer is otherwise at a loss to explain why someone (or some persons) would steal "The Blob."

The Blob, readers may recall, is a mysterious mound that spilled out of Larry and Linda Bartoli's yard more than 15 years ago and has been a fixture ever since on the sidewalk in front of their home at 2121 W. Montrose Ave.

The couple embraced the oddity of The Blob—which Linda believed to be the "ghost" of a dearly departed mulberry tree—and even affixed signage to their fence to attract attention to the curiosity.

Sometime around Labor Day, The Blob went missing.

Larry Bartoli was sitting on his front porch and noticed that the sign was gone. Upon further investigation, he saw that The Blob itself had been prised from its concrete ledge. Not a scrap remained. Just a stain on the sidewalk to mark the spot where The Blob once lived.

"Why? What was purpose?" Bartoli asked. "It's just amazing, after all the years it's been there...."

Bartoli is as mystified by the fungus fiend's methods as he is the person's motive.

Despite The Blob's spongy appearance, the mound was rock hard, not so much as budging even when Bartoli dinged it with his snow blower.

"You couldn't just bend down and pick it up," he said. "You'd have to use a spade. The actual piece on the sidewalk was almost three feet long."

Though the value of the fungus was entirely sentimental, that's precisely what made it so priceless to Bartoli.

"Darnit, there goes a bit of history on Montrose Street. Gone, gone, gone," he said. "So many people enjoyed seeing it. It was so amusing—anybody that looked at it laughed at it. It was funny to watch people kneel down and take their picture with it."

"I'm hoping maybe it will grow again," Bartoli said.

Why wouldn't it? After all, it's The Blob. Indescribable! Indestructible! Nothing can stop it! The Blob!

DNAinfo/Patty Wetli

The Blob...and gone!

I really don't think you should eat
The black fungus that's grown on that wheat.
It is ergot and it
Can cause seizure and fit—
Ergotism—(and gangrenous feet!)
— BobHale , OEDILF

EGYPT EASES ERGOT BAN ON WHEAT AFTER SELLER OUTRAGE

The Associated Press, Sept. 21, 2016

CAIRO - Egypt has lifted a ban on even trace amounts of the ergot fungus [*Claviceps purpurea*] in its wheat imports, after sellers enraged by Cairo's demands boycotted tenders, threatening the supply of the world's largest importer of the grain.

Wednesday's announcement by the Cabinet reinstates rules allowing imported wheat cargoes to contain up to 0.05 percent of ergot, in line with global standards.

Egyptian officials vacillated over the issue this past year, sometimes allowing imports to contain the harmless traces and other times insisting on an all-out ban and rejecting some ships. The move sowed confusion in the markets.

NEW MYCORRHIZAL DATABASE SHOWS HELPFUL RELATIONSHIPS BETWEEN FUNGI AND PLANT ROOTS

Sofia Osborne

https://thegatewayonline.ca/, Sept. 12, 2016

After 10 years of work by 80 international contributors, including the University of Alberta, the largest database on mycorrhizal fungi is now online.

Mycorrhizas are mutually beneficial relationships between fungi and plant roots, where plants provide fungi with carbon in return for nutrients and water. The new database, called the MicoDB, examines plants' relationships with mycorrhizal fungi.

Justine Karst, an Assistant Professor in the Department of Renewable Resources and one creator of the MicoDB, said it compiles data from more than 4000 studies from more than 400 different publications.

The database could be used as a record of mycorrhizal interactions in this time period that could one day be compared to future data as the climate changes, Karst said. She explained that the plants forming symbioses may change as the world becomes dryer and mycorrhizal relationships may become even more important.

"You could use this as a baseline," she said. "Here's what we found in this period of time, and then fast forward to the future, maybe it will look different."

Since most plants form symbioses with fungi, it's hard to make generalizations about mycorrhizal relationships, Karst said. The public database allows anyone to do their own analysis related to their interests.

Karst also emphasized the value of the database for students and instructors as a tool for learning about statistics and data analysis. The database provides many subsets of data, all checked for quality, a process that Karst said was a particularly difficult part of the project as there were 80 contributors.

It was in her undergraduate degree that Karst became interested in studying fungi. Her botany professor explained how trees shared carbon through underground mycorrhizal networks, and that information stayed with her, she said. Karst went on to earn a PhD in mycorrhizal ecology.

Scientists who don't study mycorrhizas can also use the database in their own work, Karst said. For example, the database may be used to study invasive plants that don't need mycorrhizal fungi, as they may out-compete native plants that need relationships with fungi.

While many people might think of fungi as small and insignificant, Karst said both assumptions are untrue. She added that some fungi can reach kilometers in size underground and many are vital in nutrient and carbon cycling.

"(Mycorrhizal fungi) are using carbon from a plant and then leaking that carbon out to the soil, so they are very important in the carbon cycle," she said. "So even though you can't see them, they're still performing very important ecosystem functions."

WYOMING ERGOT SPREADING FROM BARLEY TO OTHER CROPS

Marcus Huff

Northern Wyoming Daily News, Sept. 13, 2016

WORLAND - "I kind of started noticing this stuff in the grass about two years ago, but I wasn't sure what it was" says Bill Wilson, inspecting his sorghum plants north of Worland. "Now it's everywhere."

Wikipedia

Ergot on harvested barley.

This year, Wilson first noticed the ergot kernels invading his sorghum buds about a week ago.

"There used to be barley farming all around me out here, and that burning, but they've pretty much rotated to sugar beets now," said Wilson.

As a lumberjack by profession, Wilson is familiar with tree fungus and how it spreads, and has a theory about ergot, as well. "When you burn a tree with mistletoe fungus, that stuff just spreads worse 'cause the heat pulls it up into the sky and drops it down again. I think this ergot is doing the same thing."

While Wilson was growing sorghum for personal consumption, Wilson is more concerned for local ranchers and farmers if the disease is indeed spreading. "Man, those farmers can till and rotate their crops, but if this gets to livestock grazing areas or into their feed, these ranchers are going to be dead in the water."

According to a report by Washakie County Extension Educator Caitlin Youngquist, livestock or poultry that consume even small amounts of contaminated grains or grasses can develop clinical symptoms of ergotism. Cattle are more susceptible than sheep. Symptoms can vary based on several factors, but often include excitability, staggering, convulsions, backward arching of the back, gangrenous tissue on feet, and sloughing of tissue on ears and tails.

The only cure for ergotism is to identify and remove the contaminated feed source.

Recently, a local barley farmer (who wishes to remain anonymous due to contract obligations with MillerCoors) described to the *Daily News* an instance in which a dead deer was found on their property, showing possible signs of ergotism, including gangrenous hooves. When Wyoming Fish and Game did not respond to inspect the animal as requested, the landowners disposed of the carcass. The same farmer predicts that the disease is more widespread locally than MillerCoors had originally acknowledged.

"The impact to livestock and wildlife is a very real possibility," noted Youngquist. "It seems to be a bit of a perfect storm." Youngquist advises that all livestock growers inspect their feed and seed for possible ergot contamination. "This stuff could be in hay fields, ditch banks, really anywhere. We're already seeing it in various grasses, obviously," said Youngquist.

In August around 50 local barley growers and concerned citizens attended a special meeting at the Worland Community Center Complex to address the issue. Led by University of Wyoming Department of Plant Science Professor William Stump, MillerCoors Agronomist Dave Dougherty, and Youngquist, the meeting concentrated on management of the disease, causes, and possible remedies.

Grains such as barley, oats, rye, wheat, and durum and grasses such as brome, rye, foxtail, and orchard grass are susceptible to the disease, which is virtually untreatable with conventional pesticides. The fungus produces toxic compounds called ergot alkaloids, which can cause artery shrinkage in humans.

"I will admit that we [Miller/Coors] had some ergot in our seeds," added Dougherty.

According to MillerCoors 2009 malting standards, sample barley may contain up to 0.1 percent weight of ergot kernels.

The number of acres impacted by ergot has not been disclosed by MillerCoors at this time.

Explaining that there has been a rise of ergot in Big Horn Basin barley over the last three to four years, Dougherty attributed the increase to a variety of practices, including minimum tillage in exchange for burning, sprinkler irrigation (which spreads spore-contaminated water), late summer seeding, and inadequate monitoring for the disease along ditches and in grass.

MillerCoors media representatives have agreed to answer a series of questions from the *Daily News* regarding Big Horn Basin ergot levels, and their answers will be featured in a future article.

Steven B. Johnson

Erot on seed heads.

Fungus Factoid

There are three main types of fungus-growing ants, depending on what they grow: coral fungi, yeast, or Lepiotaceae of the tribe Leucocoprineae. The last category consists of approx. 200 species in 12 genera of the Attini tribe. These, in turn, are subdivided into "lower" and "higher" attines depending on what fungi they grow and what they feed them. Lower attines grow less specialized fungi that more closely resemble Leucocoprineae found in the wild and use "ancestral substrates" composed of plant, wood, arthropod, and flower detritus. The higher attines grow highly domesticated fungi that cannot survive on their own and use freshly cut grass, leaves, and flowers (hence the common name "leafcutter ants").

—Wikipedia

MUSHROOM HUNTING STRATEGIES

Wren Hudgins

The best mushroom hunting strategies are specific, not generic, but it's challenging to write an article covering hunting strategies tailored to 10 different species of edibles. Consequently I'll offer suggestions which can be applied generally or modified to suit your specific quarry.

1. The more you know your quarry, the higher your chances are for success. Study its characteristics, stages of development, and look-alike imposters. If you really know what you are looking for, your chances of recognizing it in the field are greatly boosted. Many beginners studying photos and guide books put too much reliance on what's obvious to them; mushroom cap color. Cap color is not a reliable indicator for many mushrooms although it is quite salient. Know the cap color (and shape) variations that are possible for your quarry.

2. Know your seasons and habitat. About 80% of our PNW mushrooms fruit in the Fall. It would be a poor choice to hunt morels in October and another one to conduct your morel hunt only on the west side of the Cascades. Most of the edibles we seek grow in a mixed conifer forest with fir, Douglas fir (not a true fir), and hemlock. Getting good at this game means knowing your trees. Many mushrooms have symbiotic relationships with trees and shrubs and knowing about these relationships helps you find the mushroom. Sometimes a particular mushroom (e.g., the Birch Bolete, *Leccinum sca*brum) has a relationship with only one kind of tree (birch) and sometimes a mushroom has relationships with several kinds of trees. Often we don't know all the trees and shrubs that can form mycorrhizal relationships with a particular mushroom. Sometimes it's a question of knowing where not to look. For example, if you are hunting chanterelles and find yourself in the midst of alder or cedar trees, best to go the other way—toward the conifers.

3. Timing counts. Our mushrooms prefer a temperature range between warm to cool, not hot and not cold. Summer temperatures first become cool enough up at elevation in the mountains, so that is often where the first mushroom fruitings of the fall will take place. Then the mushrooms will "come down" in elevation as the fall season progresses. Likewise freezing temperatures will come to the mountains first, so the season will end there first. So the fall mushroom season starts high in elevation and progresses, as time goes by, to lower elevations. Conversely, but for the same reasons, the spring season starts low and progresses to high.

4. If you are hunting a particular mushroom, try to determine the most productive elevation zone for hunting. You can do this by having an altimeter (GPS, phone app GPS, watch, stand-alone altimeter, map and compass) and noting the elevation of your first mushroom. Then go up or down, hunting at different elevations, until you find more. Note those elevations. Doing this a few times, you will determine that the most productive zone for this particular trip is between say 2,000 ft elevation and 2,800 ft. You would then spend the rest of your day between those two elevations.

5. Do the same thing with slope aspect. Note whether your first mushroom is on a north-facing slope or a south-facing one. Note the aspect for your second and subsequent mushrooms. Most likely there will be a pattern with exceptions. For example, perhaps 4 of 5 mushrooms you find are on south-facing slopes. That would tell you that the mushrooms are enjoying the extra warmth found on south-facing slopes and you'd focus there. However, if you decide to look on a north-facing slope, you might want to look at a relatively sunny north exposure, or perhaps on ridge tops.

6. If your mushroom is gregarious, carefully spend extra time in the area when you find one. I carry one hiking pole with colorful surveyor's tape tied to the handle. When I find my first gregarious mushroom, I will stick it upright in the ground in the vicinity of that mushroom and walk ever larger circles around it, looking carefully all the while. Then I'll walk those circles in the opposite direction. Search the same terrain from different angles.

7. Slow down. The faster you go, the less you will see. I cannot emphasize this enough. Sometimes I'll find my first morel of the day and instead of picking it right away, I'll sit down and meditate on it; relax, study it, appreciate it.

8. If you are the first person to hunt this section of forest this season, then it doesn't matter where you go in the forest. However, the more likely scenario is that other mushroom hunters have come before you. In this case it helps to know that people generally take the path of least resistance in a forest. The path of least resistance would be a trail, but after that it means openings in the brush and level ground. People veer away from irritants like tight brush and steep slopes, so those would be the areas least hunted for mushrooms.

9. Pay attention to the recent weather. If weather has been fairly wet, check out ridges and slopes with good drainage, where water would not tend to be retained. Conversely, if weather has been dry, check out swales, valleys, and depressions in the ground, places that might tend to hold water longer than surrounding terrain. If the weather has been very dry, check logs on the ground for lignicolous mushrooms which would draw their moisture from the rotting log.

10. Mark your spots with GPS waypoints. Many mushrooms will continue to fruit in the same areas year after year.

11. The forest is dynamic. Although a good mushroom spot may continue to produce mushrooms for years, things change in the forest. Trees die and fall, mycorrhizal relationships are lost, sunlight penetrates where it didn't use to, conditions gradually change. For this reason it's wise to not just go to all your usual spots every year to collect but to invest in the future and do some exploration for new spots every year.

12. Know your jurisdictions. Are you hunting on National Forest land, BLM land, DNR land, State Park land, National Park land? Harvesting rules differ by jurisdiction and most are listed on our club's website at http://www.psms.org/rules.php. Could it be private land? Do you have permission? If you happen to come across that fabled huge chanterelle patch, you can take many more of them home if you are on National Forest land as opposed to National Park land, for example. Knowing all this at the outset may influence where you choose to hunt. I am trying out a micro SD card purchased for my GPS which purports to show land ownership wherever I am. In the early testing stages, it looks to be helpful. If I wander onto private land without intending to, I think I'll know it now. Small price ($99) to keep me legal.

LOCAL SCIENTISTS NAME NEW CHANTERELLE SPECIES AFTER CHICAGO

Evan Garcia

http://chicagotonight.wttw.com/, Sept. 22, 2016

Field Museum

Cantharellus chicagoensis, the Chicago chanterelle.

Chicago-area scientists have named a new species of mushroom in the city's honor. And it might end up on your pizza.

Cantharellus chicagoensis, or the Chicago chanterelle, was studied and identified by researchers from the Field Museum and Chicago Botanic Garden with help from Northwestern University students. Their findings were published in the July–August 2016 issue of the scientific journal *Mycologia*.

Like other chanterelles, the Chicago chanterelle is used in cuisine and collected to be sold to restaurants, according to Patrick Leacock, the Field Museum's adjunct curator and an author of the study. The mushrooms have been described as having a sweet and savory flavor, a juicy texture, and traces of light fruitiness, he said. Smell also sets this mushroom apart. Several types of chanterelles have a fruity smell reminiscent of an apricot, but the Chicago chanterelle is practically odorless.

Mushroom hunters searching for Chicago's unofficial fungus may have luck looking under patches of oak trees in Cook County forest preserves, where Leacock and his team gathered several specimens. The best time to spot them is in July or August. But it's best to look, not touch: Foraging for mushrooms in Cook County forest preserves is illegal, and some local experts warn of dangerous look-alikes that can be mistaken for edible mushrooms.

In the complex family of chanterelle mushrooms, there are several different species. Until decades ago, scientists treated yellow chanterelles as a single species: *Cantharellus cibarius*. But eventually, they observed yellow chanterelles belonging to separate species from the *Cantharellus cibarius*, which is now believed to grow only in Europe.

The Chicago chanterelle is the most common type of chanterelle found in northeastern Illinois, hence its name. It's also found in northwest Indiana and Wisconsin.

Scientists first differentiated the Chicago chanterelle from other mushroom species by observing its morphology, or its physical structure and form.

The Chicago chanterelle is smaller than other chanterelles found in the region, according to Leacock.

"When it's young, it often has a pale, greenish tint around the margin, which very few chanterelles have," Leacock said. "In the Chicago area, that's the only one that would have any green on the edge. It also tends to get gray and scaly around the center of the cap, which the other ones don't. There are subtle color differences."

After observing the mushroom's physical features, researchers extracted DNA out of a tissue sample from the mushroom, made copies of a particular segment of DNA, and ran that through the Field Museum's DNA sequencer to determine its structure. That information was then compared with DNA of other mushrooms documented in GenBank, the National Institutes of Health's online genetic sequence database.

GIANT MUSHROOM SCULPTURES ILLEGALLY DUMPED IN PLACERVILLE, CA

http://sacramento.cbslocal.com/, Sept. 20, 2016

PLACERVILLE - Authorities are looking for whoever dumped some giant handmade mushrooms on the side of the road in El Dorado County.

The El Dorado County Sheriff's Office posted on Tuesday that the mushrooms were illegally dumped on a property in the Placerville area.

It is unclear what the mushrooms were used for or where they came from. Some people commenting on the sheriff's office post are speculating the mushrooms could be from someone's yard who didn't want to pay for the dump fee, or even something left over from Burning Man.

Whence cometh these mushrooms? Nobody knows.

FUNGUS-INFECTED BREAD SERVED ON AIR INDIA FLIGHT

Sunil Thapliyal

http://www.asianage.com/, Sept. 8, 2016

On an Air India flight from Visakhapatnam to Delhi, bread having fungus was served to some of the passengers for breakfast.

"I was traveling with some of my friends from Visakhapatnam to Delhi by Air India flight (AI-452) on Saturday morning. Shockingly fungus in bread was served to us in breakfast. We raised the alarm and informed the crew members about the unhygienic food. Also asked them to bring us the compliant book. We were surprised to see that the crew members did not inform other passengers and denied to provide the complaint book," said a senior journalist on the condition of anonymity. "I lodged a written complaint to concerned authorities to look into this matter" he added.

Meanwhile another senior journalist, Jaishankar Gupta, narrated the incident in his social site wall. "Finally we have reached Delhi back from Visakhapatnam safe and sound, however the Air India service was very poor and we had to suffer a lot. We were served bread having fungus for breakfast; we might have fallen sick. This is not my personal experience but of every journalist who was returning to Delhi from Visakhapatnam after attending a three-day BRICS Urbanisation Forum Meet."

VIRGINIA RUMBLE'S MUSHROOM SOUP

Mycolog, Humboldt Bay Mush. Soc., Sept. 2016

4 Tbs butter
1 Tbs olive oil
1 medium onion, grated
2 cloves garlic, split
3 Tbs tomato paste
1 lb sliced fresh mushroom caps
1.5 pts chicken consume
2 Tbs sweet Italian vermouth
4 egg yolks
2 Tbs finely snipped parsley
2.5 Tbs grated Parmesan cheese
French or Italian bread, thickly sliced.

Heat the butter and olive oil a in sauce pan; add grated onion and garlic and sauté until golden brown; discard garlic, if you are faint of heart. Add the tomato paste and the thickly sliced mushrooms; sauté five minutes. Add the chicken consume and vermouth; season with salt, pepper, and herbs to individual taste. Simmer for ten minutes. Beat the egg yolks gently with parsley and grated cheese.

Grill on one side only, thick slices of buttered French or Italian bread. Place the grilled bread, butter side up, in warmed soup plates.

Stir the egg mixture carefully into the simmer soup. Service immediately over the bread.

Pass grated Parmesan cheese for garnish.

We prefer chanterelles; however, any firm mushroom such as *Agaricus oceanu*s can be used. We also prefer fresh Parmesan cheese, flat-leafed Italian parsley, and sour dough bread. The original recipe (not Virginia's version, did not identify what type of herbs to add to individual taste. I think we did not add any. You might try oregano, thyme, or rosemary.

MUSHROOM CLASSES

Pacific Northwest Key Council President Lee Whitford will hold two one-day mushroom programs at the Cedar River Watershed in North Bend on October 15 and 16, 2016. The program will include both field and class work and focus on ecology and identification. For information, visit https://secure.rec1.com/WA/cedar-river-watershed/catalog/index?search=fascinating+fungi .

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