SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 585 October 2022

59th ANNUAL PSMS WILD MUSHROOM SHOW

If you haven't heard yet, the annual Wild Mushroom Show is back this year and will be held at a new venue: Shoreline Community College! SCC is located at 16101 Greenwood Avenue North in Shoreline. The show will be held in the student union building. Doors will open to the public at noon on Saturday, Oct. 22, and at 10 am on Sunday, Oct. 23, but we will start the setup process on Friday.

Since this is a new venue, we are preparing a downloadable PDF with all the info you will want about the show. Check for the PDF on the main page at psms.org about two weeks before the show. Highlights of the PDF will include directions to SCC, parking info, admissions fees, lecture times, activities, and a feedback form. Also, we will not require proof of vaccination this year, but still strongly recommend that all individuals wear face masks at the show.

The show is all at once a fund-raiser, a classroom, an eatery, a boutique, a garden, a laboratory, and a crafts project! Lots of different mushroom-related activities will recharge your interest in mushrooms. There will be lectures on a variety of mushroom topics, mushroom cooking/tasting, photos of mushrooms, commercial vendors, arts and crafts, and a cultivation table with oyster mushroom-growing kits. All these activities help us introduce the public to the incredible diversity of mushrooms and other fungi.

The primary feature is our mushroom display, which includes hundreds of species in as many shapes, sizes, and colors of mushrooms as you can imagine. In order to create our display, we need everyone to get into the woods and bring back prime specimens of as many mushroom species as possible. If you hadn't noticed yet, the fall mushrooms are starting to pop. Beginning the week of October 17, please collect and bring in every mushroom you can find. Here are some guidelines for doing that:

Where to Collect: Find mushrooms on your own or organize a small group to collect at your favorite spots. We strongly encourage members to forage far and wide to collect those late specimens wherever they can be found. In early October, experts have suggested collecting display specimens in the foothills of Mount Rainier, on the Olympic Peninsula, and on the Washington Coast, but it is impossible to predict when and where our show mushrooms will flush. Also, don't forget those urban mushrooms! Look in lawns, gardens, and landscaping. If you can, please self-organize for a collecting trip in the week or two before the show. We're counting on YOU to make the display happen!

How to Collect: Before you go, stock up on plastic containers, foil, and wax paper bags to hold your specimens. Bring a garden trowel to dig if necessary to remove the entire mushroom intact, including underground structures. Then wrap each collection individually and put them in bigger cardboard boxes. Care for them all the way to the show because they must stay fresh and intact through Sunday. For example, store smaller specimens separately in their own container with moss or duff and mist (but not soak) them to keep them fresh and colorful. For geotropic mushrooms (those that quickly reorient their gills toward the ground), including amanitas, stand them upright in empty milk cartons so their stalks don't bend. Also, don't forget the little ones and the most common mushrooms, since everyone assumes someone else will bring them in. Better to have too many than none at all. Delicate inky caps should be collected on Friday or Saturday morning since they dissolve to ink so quickly. For the naturalistic displays, please also bring organic matter like duff, grass, leaves, bark, and moss. Include a few leaves from the nearest trees or grass for the grass-inhabiting varieties, both for ID and for display.

Record Collection Details: Put all your finds from one location in one container and add a paper label with your name, phone number, and location. A slip of paper is enough! You can keep your secret edible locations to yourself since we are trying to feed science, not our stomachs. We ask for your name and phone number on the chance that a researcher may request further info, but the written location alone is invaluable.

Drop Off Your Mushrooms: Show receiving is on Friday evening after 4 pm and Saturday morning outside the student union at Shoreline Community College (enter the campus at the main southeast entrance and look for the PSMS signs). The receiving area is at the entry plaza right as you enter the campus. We'll be waiting for your mushroom deliveries!

Thank You for volunteering!

A huge Thank You to all the wonderful people who have already signed up to volunteer to help with the fall Wild Mushroom Show, October 22–23. You still have an opportunity to sign up to help! Register on the psms.org member's page under "Event Registration" or email volunteers@ psms.com. This year, the shift options for volunteers are organized by committee first, then by day and time.

Spore Prints

is published monthly, September through June by the
PUGET SOUND MYCOLOGICAL SOCIETY
Center for Urban Horticulture, Box 354115
University of Washington, Seattle, Washington 98195
(206) 522-6031 http://www.psms.org

OFFICERS: Randy Richardson, President[2021–2023]
president@psms.org
Scott Maxwell, Vice President[2022–2024]
psms-VP@psms.org
Brenda Fong, Treasurer[2022–2024]
treasurer@psms.org
Su Fenton, Secretary[2021–2023]
secretary*@psms.org*

TRUSTEES: 2021–2023:
Wren Hudgins, Bruce Robertson, Vince Stanton, Molly Watts, Joe Zapatosky

2022–2024:
Luise Asif, Marian Maxwell, Anne Polyakov, Marcus Sarracino, Thad Steffen

ALTERNATE:

IM. PAST PRES:

SCI. ADVISOR: Dr. Steve Trudell

EDITOR: Agnes A. Sieger, 271 Harmony Lane, Port Angeles, WA 98362
sieger@att.net

CALENDAR

Oct. 1	Field trip (see PSMS website)
Oct. 8	Field trip (see PSMS website)
Oct. 11	Membership meeting, 7:00 pm, in-person and via Zoom
Oct. 17	Board meeting, 7:30 pm
Oct, 18	*Spore Prints* deadline
Oct. 22–23	PSMS 59th Annual Wild Mushroom Show, Shoreline Community College
Oct. 29	Field trip (see PSMS website)

BOARD NEWS

Luise Asif

Board Changes: Changes at the board level! We are sorry to say goodbye to Valerie Costa and many thanks for the incredible help she provided to PSMS Treasurer Brenda Fong in upgrading the accounting system. We wish her all the best for her exciting new adventure. Alternate board member Vince Stanton has stepped into her position. Also, we are sad that Su Fenton needed to resign and thank her for the excellent job she did as Secretary. If another board member steps up to fulfill her term, Su will be able to stay on as a trustee. We do need her talents to remain as a trustee and are grateful that she is willing.

Scholarship Program: Thanks to Steve Trudell's thoughtful suggestions, the board is working on streamlining the Ben Woo Scholarship and K–12 grant processes led by a Scholarship Program Coordinator. It was decided to have one deadline, March 1. The Board approved in a split vote that all schools can apply for funding. The Scholarship Program Coordinator has the power to approve applications that comply with the guidelines set to ensure timely response. After changes are made the board will vote on implementing the new guidelines. *NOTE*: PSMS needs to fill the position of Scholarship Program Coordinator. People are also needed for the K–12 Education Program outlined in last month's *Spore Prints*. Interested? Contact

membership@psms.org; Outreach@psms.org

In a majority vote with 1 abstention, the board rescinded the Land Use Declaration planned for the PSMS website. It was deemed outside of the PSMS mission of the understanding and education of mycology. The statement without action was deemed worse than none at all.

Membership Meeting: The October general membership meeting will again begin early to promote the fall mushroom show. We encourage people to come and pick up posters and cards to distribute and help promote it. Committee chairs and show chairs will be giving updates and call outs for volunteers. Remember you can sign up to help with the show by registering on the PSMS website. The Board approved the purchase of two Chrome Books for Membership Committee and show use to help keep lines short. Also we are excited to introduce the Cavallini Product line as a new source of sales at the PSMS show.

MEMBERSHIP MEETING

Scott Maxwell

The membership meeting on October 11, 2022, will be both in-person at the Center for Urban Horticulture and virtual on Zoom. *Please Note:* This meeting will highlight our upcoming Annual Show which will occur on October 22–23. This is an opportunity to get involved in the PSMS annual fund raiser. This also represents an opportunity to make new friends, learn more about mushrooms and see what goes on behind the scenes in preparation for this annual event. Be a part of making the public aware of the wonders of mushrooms and fungi. As we did in September's meeting, we will begin letting people into the meeting hall at about 6:30. At about 7:00 our show chairs will let you know how you can help, including picking up posters and cards advertising the event to the public.

Christian Schwarz

October's Speaker will be Christian Schwarz. Christian is a naturalist based in California, the land of milk (caps) and honey (mushrooms). He teaches Natural History of Fungi at UC Santa Cruz and co-authored *Mushrooms of the Redwood Coast*. He now spends his time photographing, teaching about, collecting, and researching macrofungi. Fungi satisfy his curiosity with their seemingly endless forms, from the grotesque to the bizarre to the sublime. Besides dabbling in mushroom taxonomy, he loves fish, plants, nudibranchs, moths, and dragonflies. He is passionate about

community science, especially iNaturalist. He is a Research Associate at the Norris Center for Natural History at UCSC as well as the Santa Barbara Botanical Garden.

Please attend, pick up posters, and enjoy the evening with Christian and your fellow members.

MUSHROOM MISSIONARIES

Luise Asif

Wren Hudgins presented two talks in West Seattle for Dirt Corps. Our talented fungi dyers, Marion Richards and Thad Steffen, led a dying workshop. Marian & Scott Maxwell were in Olympia for the 2022 Nisqually Watershed Festival September 24th. All took the opportunity to distribute show posters. Thank you!

CAL POLY FLOAT FOR 2023 ROSE PARADE TO FEATURE MUSHROOMS

https://calpolynews.calpoly.edu/, Sept. 16, 2022

SAN LUIS OBISPO - The theme of the 2023 Tournament of Roses is "Turning the Corner," which symbolizes the positive change and unlimited potential that each new year can bring. The Cal Poly float, "Road to Reclamation," will demonstrate that how a new start can come from unlikely places—by transforming a dead tree branch into a catalyst for new life.

For students, it also represents their efforts to fully reclaim the learn-by-doing education that is the hallmark of Cal Poly, as well as the seven-decade partnership with California State Polytechnic University in Pomona, representing their schools in the 134th annual Pasadena classic.

The original concept for "Road to Reclamation" was submitted by mechanical engineering student Benjamino Cruz, a four-year member of the Cal Poly team. The 23-foot-tall float features an enormous purple snail scanning parade goers from its perch atop a 16-foot red-capped mushroom at the end of the float. Another mega-snail watches baby snails playing chase, while a third snail, its 6-foot-tall, coiled shell in shades of brown and gold, scouts the route at the front of the float.

The entry's forest floor will be festooned with a rainbow of oversize fungi, moss and lichen converting the fallen branch into nutrients for their community, while ladybugs flap wings in preparation to take off.

https://calpolynews.calpoly.edu/

Cal Poly students have shifted their sights from the heavens to a forest world of gigantic snails, mushrooms, and colorful fungi for their 74th entry in the upcoming Pasadena Rose Parade.®

ADVANCED IMAGING SHEDS LIGHT ON IMMUNE ESCAPE OF SHAPE-SHIFTING FUNGUS

https://www.monash.edu/, Sept. 21, 2022

Fungal pathogens have a major global impact upon human health—they are often difficult to diagnose and treat, and there is an urgent need for better diagnostics and more effective antifungal treatments.

Using newly developed imaging technologies, researchers at the Monash Biomedicine Discovery Institute have revealed how *Candida albicans*, a common infection, evades immune responses. According to the researchers this involves an "alien-like" shape shifting that allows the fungus to break out of immune cells.

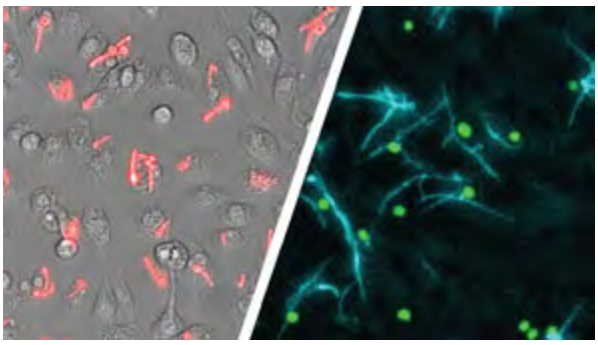
The paper, published in the journal *Cell Reports* by Professor Ana Traven and Ph.D. student Françios Olivier, describes how *Candida albicans* uses a sword-like filament to engage toxin molecules and cell death pathways that damage immune cell membranes—allowing it to escape and spread.

The imaging technology, developed by Olivier in collaboration with Monash Micro-Imaging, allows for escaping fungi to be pin-pointed in real time. According to Olivier, this study was made possible by the automation of imaging analysis and increased computer processing power: "We could harness a great deal of data which provided insight into this immune escape mechanism."

Candida is a yeast that often lives in the human digestive tract and mouth, as well as urinary and reproductive organs. Usually, it doesn't cause disease in its host, but under certain conditions, it can switch to a harmful form. *Candida albicans* remains a common cause of life-threatening disease in ICU, post- surgery, and cancer patients.

The immune system has a particular cell type, called the macrophage, which is responsible for gobbling up invaders (bacteria, fungi, cancer cells) and triggering immune responses. *Candida albicans* escape macrophages by morphing into long, filament-like cells. This escape leads to spreading of the fungus. In the process it triggers immune responses that can be harmful if not kept in check.

According to Traven, targeting the fungus as it is escaping "presents a promising therapeutic avenue, preventing both the spread of the infection and having the potential to dampen inflammation." Until now, the mechanisms behind this escape have remained unclear as researchers have not been able to study this escape maneuver in detail. Now they can.



Monash Micro-Imaging

A microscopy imaging assay, developed by Olivier et al., captures the escape of a fungus (C. albicans) from immune cells (macrophages). Left: Fungi (red) contained inside the immune cells. Right: escaped fungal filaments (blue) and the nuclei of dead immune cells (green).

GERMAN MUSHROOM STAMPS

Brian S. Luther

Germany has issued several sets of colorful postage illustrated with fungi over the years, some from the separate post WWII countries of East and West Germany and one after unification in 1990. All are documented here.

In the following tables, M=mushrooms or fungi as the main stamp illustration; MID=mushrooms or fungi in the design of the illustration, background, or border but not the main stamp illustration; FDC=a first day cover, an envelope (cover) with the stamps affixed and cancelled on the first day the stamp(s) were issued, usually with a cancel and a colorful cover illustration (=a cache) of the same theme; Maxicard=a postcard having a full color illustration of the stamp and also cancelled on the first day of issue, just like an FDC. Presentation Pack (PP)=a sheet or pamphlet having the stamps affixed and cancelled on the date of issue, with additional details about each stamp. All catalog numbers are from the Scott Postage Stamp Catalogue.

German Mushroom Stamp Issues

DDR (East Germany)

Issue Date	*Value*	*Scott Cat. #*	*Type*	*Subject*
11/28/1972	15 p.	1413	MID	Mr. Owl & three *Amanita muscaria*
3/19/1974	5 p.	1533	M	*Rhodophyllus sinuatus*
"	10 p.	1534	M	*Boletus satanas*
"	15 p.	1535	M	*Amanita pantherina*
"	20 p.	1536	M	*A. muscaria*
"	25 p.	1537	M	*Gyromitra esculenta*
"	30 p.	1538	M	*Inocybe patouillardii*
"	35 p.	1539	M	*Amanita phalloides*
"	40 p.	1540	M	*Clitocybe dealbata*
10/28/1980	5 p.	2137	M	*Leccinum versipelle*
"	10 p.	2138	M	*Boletus miniatoporus*
"	15 p.	2139	M	*Agaricus campestris* ("campester")
"	20 p.	2140	M	*Xerocomus badius*
"	35 p.	2141	M	*Boletus edulis*
"	70 p.	2142	M	*Cantharellus cibarius*
11/27/1984	10 p.	2451b	MID	Four stylized *Amanita muscaria* below
"	35 p.	2451e	MID	Three of the same below
"	50 p.	2451f	MID	One of the same below

West Germany

Issue Date	*Value*	*Scott Cat. #*	*Type*	*Subject*
11/13/1980	40 p.	1340	MID	Altdorfer print with polypore

Post Unification

Issue Date	*Value*	*Scott Cat. #*	*Type*	*Subject*
8/9/2018	70c + 30c	B1144	M	Echter Pfifferling
"	85c + 40c	B1145	M	Echter Steinpilz
"	145c + 55c	B1146	M	Maronen Röhrling

Discussion

DDR (East Germany)

The 1972 stamp (Scott 1413) is one of a set of six children's TV animal characters showing Mr. Owl with three *Amanita muscaria* below.

Brian S. Luther

DDR 1972, Scott 1413.

The 1974 set of eight stamps are all titled Europaische Giftpilze (European Poisonous Mushrooms). All are labelled with both the German common names and scientific names. *Rhodophyllus sinuatus* is now *Entoloma sinuatum* and *Boletus satanus* is now in the genus *Rubroboletus*. The three FDCs issued for this set have three of the stamps on two of the FDCs and two on the last one, but curiously the stamps are not affixed going in sequential numerical value for the set. The cache shows a button, a mature mushroom, and a cap of an *Amanita*; the cancel is circular having a single *Inocybe patouillardii* in the middle. I show just one of these three here.


Brian S. Luther

DDR -1974 FDC (one of three).

Brian S. Luther

DDR - 1974. Scott 1533–1540.

The 1980 set is titled Europaische Speisepilze (European Edible Mushrooms), and the stamps are also labelled with the German common names and scientific names. *Boletus miniatoporus* is now known as *Neoboletus luridiformis*. Also, it has to be cooked very well before eating; if eaten raw it will make you sick, so I'm not sure it was a good idea for them to include this bolete in a grouping of edible fungi. The scientific name on Scott 2139 is misspelled as "campester." *Xerocomus badius* is now *Imleria badia.* There are two FDCs, with three stamps on each. The cancel is simple, round and uninteresting, but the cache shows a line drawing of oyster mushrooms, which by the way are not on any of the stamps. I'm showing you one of these.

Brian S. Luther

DDR-1980, Scott 2137-42.


Brian S. Luther

DDR - 1980 FDC (one of two).

The 1984 set of six stamps shows fairytale scenes, with three of these having small *Amanita muscaria* mushrooms at the bottom of each.

Brian S. Luther

DDR 1984, Scott 2451b. *DDR 1984, Scott 2451e* *DDR 1984, Scott 2451f.*

West Germany

The single 1980 stamp shows a print by German renaissance artist Albrecht Altdorfer showing a scene in the foreground with a tree stump having a polypore on it and some stone buildings in the background. We can only speculate on what species the artist depicted—there are many possibilities.

Brian S. Luther

West Germany - 1980, Scott 1340.

Germany Post Unification

The 2018 set has three stamps in it, showing paintings of *Cantharellus cibarius*, *Boletus edulis*, and *Imleria badia* (formerly *Boletus badius*), but are labelled only with the German common names, not the scientific names. This is a special semi-postal[1] issue titled Für die Jugend (for the youth). They came on separate full sheets of ten and all are perforated with gum. The Deutsche Post also issued a PP, which has the stamps on it with a circular cancel showing a line drawing of a single Steinpilz, or *B. edulis*,

Brian S. Luther

Germany 2018. Scott B1144. *Germany 2018. Scott B1145.* *Germany 2018. Scott B1146.*

as well as two other cancels in gray at the bottom. The back of this sheet gives details about each of these mushrooms, and has a forest scene below with photos of all three of the fungi. The beautiful stamp illustrations for this set were taken from the 1896 mushroom book by Edmund Michael, *Fuhrer für Pilzfreunde*. I have not seen either FDCs or maxicards issued for this set.

In an earlier article I also discussed how Germany issued some local money illustrated with fungi (Luther, 2016a) and also documented a Nazi era mushroom cancel from Germany (Luther, 2016b). If interested, I've also previously documented all the myco-stamps known at the time from the neighboring country of Austria (Luther, 2017).

References

Luther, Brian S. 2016a. Mushrooms on money. *Spore Prints* 520 (March), pp. 4–6. Online and in color at www.psms.org

Luther, Brian S. 2016b. WWII German postal cancel with mushrooms. *Spore Prints* 524 (September), p. 8. Online and in color at www.psms.org

Luther, Brian S. 2017. Fungi on stamps and postal items from Austria. *Spore Prints* 529 (February), pp. 6–8. Online and in color at www.psms.org

---

[1] *Semi-postals are stamps specifically issued by countries to help benefit a particular charitable cause, in this case for youth services; in the Scott Catalogues all semi-postals are designated with the prefix "B" and are listed at the end of the regular stamp issues, or "back of book" by philatelists.*

Song of the Mushroom King

I am the Cep—the Mushroom King.
My praises mushroom pickers sing.

I am so easy to discover.
I look like me—not any other.

I'm very tasty fresh or dry
To you and to the mushroom fly

So pick me when I'm firm and young.
Just finding me is HALF THE FUN!

—Joe Lenart, *The Sporeprint*
Los Angeles Myco. Soc.

THESE FUNGI DEMAND MORE PUMPKIN IN THEIR PUMPKIN SPICE LATTES **Lauren J. Young**

https://www.popsci.com/, Sept. 15, 2022

Pumpkin spice latte season is officially here. Starbucks baristas have been whipping up the popular beverage since they rolled out the fall menu at the end of August, even before the weather started to cool. But human PSL enthusiasts aren't the only ones this autumn indulging in that warm mix of nutmeg, cloves, cinnamon, and pumpkin purée. One mycologist is brewing a special blend of pumpkin spice for a different kind of customer: fungi.

"Fungi are pretty closely related to animals," says Matt Kasson, an associate professor of forest pathology and mycology at West Virginia University. "I thought, well, people have preferences. Maybe fungi have preferences for these pumpkin spices, too."

That's how Kasson, an avid supporter of team PSL, ended up with a lab smelling of pie. He created stacks of agar plates, or containers of gelatinous fungus food, full of pumpkin spice ingredients. Kasson's fungi project, which he dubbed_#WholeLatteDecay on Twitter, tests the ability of 17 species of fungi to grow on the unique conditions of spices, milk, sugar, and other ingredients commonly found in pumpkin spice lattes. His Twitter feed has been filled with similar fungus food experiments, such as Operation #MoldyTwinkie and #FungalPeeps. In time for fall, pumpkin spice lattes seemed like the perfect next candidate for a moldy takeover.

"This is all a ploy by me to get people interested in fungi and sometimes you have to use these things that people are familiar with and give them some kind of mind bomb," he says. Fungi are well-known for decomposing all kinds of organic matter—from bread left out on the table, to over-ripe citrus on trees, to a forgotten cup of pumpkin spice latte—but it's easy to gloss over how important they are. Prompted by his experiments, Kasson says, "people start asking questions like, 'Oh, why did fungi grow here? Why did it grow there?' "

Earlier this summer, for instance, Kasson was tending to his garden in Morgantown, West Virginia, when he encountered a problem: His patch of pumpkins were decaying. Wispy white strands of the soil fungus, *Athelia rolfsii*, which causes southern blight in plants, rotted the pumpkins. While this was disappointing for his crop, it also gave him an idea for his autumnal experiment back at his lab.

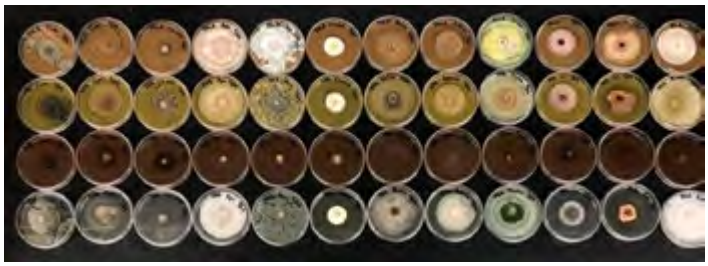
"I was witnessing my pumpkins kind of being dissolved in front of my eyes by this one fungus, and it got me thinking about how certain fungi really like pumpkins." The true test is whether the decomposers will enjoy the pumpkin, too. Fungi often act as "gatekeepers," doing the initial legwork for bacteria and other organisms to follow afterwards, Kasson explains. These are complex foods for fungi, but some species have specialized chemical "toolkits" available to help break them down. For instance, certain fungi can change the pH or secrete enzymes to modify conditions to be more favorable for its own growth, he says. "So we can learn something about their different tools in their toolkit, essentially, by exposing them to really unique substrates or really extreme environments."

It's been almost a week since he first began the experiment and inoculated the fungi, so they still smell pleasant—for now. The scent can shift as the decay progresses, going from a lovely floral or fruity fragrance to rancid pepperoni in three days, Kasson says. The fungi have also been forming colorful spectacular shapes: puffy white cotton, crusty green mats, orange carpets, brown spikes and appendages. There have been some species that haven't been growing on the plates just yet, he says, but they are changing the color of the media.

"Often that's a sign that the fungus is trying to modulate or change the environment before it grows," Kasson explains. A variable growth rate between species is normal, and Kasson suspects that those plates might see growth soon.

So far, most of the fungi species seem to be faring poorly on the minimal pumpkin spice agar, which is likely due to the limited amount of nutrients needed for growth, he says. Though some of the generalist fungi, such as species of *Trichoderma* and *Coprinellus*, do show signs of slow growth on these plates—hinting that these fungi can tolerate a poor nutrient environment or heavy spice load.

He did notice a surprising pattern: Most of the fungi species grew better on the media made with the Starbucks pumpkin spice latte. But *A. rolfsii*—the southern blight pathogen—did better on the pumpkin pie media compared to the pumpkin spice latte. The growth patterns could mean that some of the ingredients in PSL could be problematic for fungi like *A. rolfsii*. It also suggests that the species preferred to grow on the substrate it was found consuming in the wild.



Matt Kasson

All the agar types plated with the 17 species of fungi on day six of the experiment. The rows from top to bottom: pumpkin spice latte agar, pumpkin pie agar, pumpkin spice agar, and potato dextrose agar.

BIG BALLS OF FUNGI ARE CROPPING UP IN QUEBEC, TO TWO FORAGERS' DELIGHT

Émilie Warren

CBC News, Sept. 18, 2022

Mélanie Greffard

Mélanie Greffard and her husband usually head out to a nearby forest or the Eastern Townships to forage for mushrooms. So the pair had quite the surprise when they stumbled upon a *Calvatia gigantea*—a giant puffball the size of two basketballs in their backyard near downtown Quebec City last week. It weighed in at nearly six kilograms.

"At first, it's almost kind of scary, like, 'What is this thing?' " Greffard said, laughing. "We were really impressed with how big it was."

Mélanie Greffard

Greffard has been cooking this giant puffball she found in her backyard for more than a week.

Giant puffballs are large mushrooms, edible when fresh, that grow on grassy areas, often on lawns or fields. They typically appear in August and September, but puffballs the size of Greffard's are a rare find.

Greffard, who grew up in the countryside, credits her mother with getting her interested in mushroom picking as a child. She said this discovery was pure luck.

"We're right in the heart of Quebec City … and nature is all around us. It's just right there, in our backyard," she said. "It's just really cool to see that."

Greffard found a puffball at the same spot last year, but it was in its "puffing stage," which is when the fungus begins to change color inside and starts producing spores and is no longer edible.

So she was happy when she saw that this one was firm inside and "very nice and white," a sign it's still good to eat.

Greffard made two soups with the fungus, dehydrated parts of it and even gave some slices away to friends. But a week later, she still had some in her fridge.

Greffard has been cooking this giant puffball she found in her backyard for more than a week.

The family finally ate the last pieces on Friday, fried in panko crumbs.

Greffard said she's not too sad it's finally gone, except for the mushroom soup still in her freezer.

"I'm getting a little bit of an overdose of mushrooms now," she said. "Our house smelled like mushrooms for 24 hours, I think, because we had to dry some in the oven."

Robert Rebselj

Robert Rebselj was also able to enjoy the giant fungus this year.

Robert Rebselj

Robert Rebselj's girlfriend found this giant puffball weighing about 3.5 kg.

The Quebec City resident, who has been picking mushrooms for about 20 years, is usually the one in his household who finds puffballs. But this year, his girlfriend struck mushroom gold. She found a giant puffball in a city park that weighed about 3.5 kg. Rebselj said it was the biggest puffball he's ever seen.

"I was pretty impressed and a bit jealous too, because I'm supposed to be the mushroom picker here," he said.

Rebselj made a soup with the fungi, using a recipe he found online."We're going to be eating it for, like, the next month."

BANANAS THREATENED BY DEVASTATING FUNGUS GIVEN TEMPORARY RESISTANCE

Michael Le Page

https://www.newscientist.com/, Sept. 21, 2022

Banana plants that produce the world's most widely eaten variety of the fruit have been made temporarily resistant to a devastating fungal disease that is spreading around the world and destroying plantations. The hope is that the work could lead to ways to make bananas permanently resistant.

Wikipedia

Cavendish bananas.

"The question is, can we continuously trigger this mechanism?" says Gert Kema at Wageningen University in the Netherlands. "We need to know more about it."

The main banana exported to Western countries used to be a variety called Gros Michel. But in the 1920s, a strain of *Fusarium* fungus called tropical race 1 (TR1) began wiping out plantations in banana-producing areas. By the late 1950s, growers had switched to the Cavendish banana, which isn't as tasty as the Gros Michel, but is highly resistant to TR1.

Now, however, another strain of *Fusarium* called TR4 that can kill many varieties, including the Cavendish, is spreading to more and more countries. In many places bananas are a staple crop, so this fungus is a threat to food security as well as livelihoods.

panamadisease.org

Cavendish bananas infected with Panama Disease TR4.

Kema and his colleagues wondered if exposure to TR1 would protect Cavendish bananas against TR4. The team uprooted young plants and dunked them in a solution containing assorted types of TR1 fungus. At various time intervals from 30 minutes to 10 days later, they then immersed plants in a solution with spores of TR4 in it.

The team found that prior exposure to a particular strain of TR1 from Brazil provided significant protection against TR4 up to 10 days later.

"Somehow you are switching on a protective mechanism that also protects plants from TR4," says Kema. "But the protection is only temporary."

This kind of protective effect has been found in other plant species before, he says. Plants don't have immune cells that remember pathogens like animals do, so the effect is the result of switching on general protective mechanisms rather than specific ones that result from a vaccine. The team is now trying to work out the precise mechanisms in bananas, with the aim of finding ways to permanently turn them on without exposing plants to a live fungal disease.

FAO

Banana tree infected with Fusarium wilt TR4.

Even if it can be done, this, or other approaches such as genetic engineering, won't solve all the industry's problems, says Kema, not least because TR4 is far from the only disease affecting bananas.

The main issue is the world's heavy reliance on a single variety of the fruit, he says. Cavendish accounts for more than half of all bananas grown and 95 percent of exports. Because the Cavendish is sterile like most edible bananas, all Cavendish bananas are genetically identical clones. All this makes plantations especially vulnerable to diseases.

Diversification is crucial, says Kema. The banana industry needs to invest in developing new varieties that are both tasty and disease-resistant, supermarkets need to stock them, and consumers need to buy them. "Banana production at this point in time is not sustainable," says Kema.

FIRST LEGAL MUSHROOM DISPENSARY IN U.S. OPENS IN FLORIDA

Josh Cascio

https://www.fox13news.com/, Sept. 21, 2022

www.fox13news.com/

Carlos Hermida runs the Chillum Mushroom and Hemp Dispensary in Ybor City, Florida.

YBOR CITY, Fla. - A shop in Ybor City, FL, claims it is the first legal mushroom dispensary in the United States.

Just like marijuana, magic mushrooms or "shrooms," as they are known, are illegal under federal law. Now, however, just like Delta 8 marijuana, which is a weaker but legal version, "shrooms" are also finding their way onto store shelves legally.

Ybor's Carlos Hermida believes in the benefits of "shrooms" so much, he's added them to the name of his business. It is now the Chillum Mushroom and Hemp Dispensary. He says it is the first legal mushroom dispensary in the U.S.

"These are mushrooms that will get you high and make you trip," Hermida said. "They have psychedelic effects," he noted.

He says they're legal because they don't contain the mind-altering compound psilocybin, which is a schedule 1 drug akin to substances like heroin, meth, and LSD. These products do, however, contain other compounds that have basically the same effect.

"Psychedelics in general are very beneficial for trauma, PTSD, and anxiety, and even micro dosing can help the average person get through the day," he said.

Once considered mostly a hippie drug, psychedelics have made a comeback recently. In fact, their use as therapeutics is the focus of the new Netflix series "How to Change Your Mind."

Still, some like Ellen Snelling of the Hillsborough County Anti-Drug Alliance, worry about the darker side of these products and whose hands they might fall into.

"My biggest concern is children. Getting in the wrong hands, the developing brain does not need to be exposed to this drug or any drug," Snelling stated.

Nevertheless, if they prove to be anything like Delta 8, expect to see a lot more of these products sprouting up all over.

THE OLDEST SURVIVING MUSHROOM RECIPES

Editors Note: The following article is from a discussion about old mushroom recipes on the Bay Area Mycological Society blog site. Larry Stickney contributed the following comments. (From the *Zeitschrift für Mykologie*, Mai, 2003, by permission.) Translated from the original German by Monika Lutz.

Thought to be the most ancient extant record of recipes in the Western world, *De re coquinaria* (*The Art of Cooking*) by Apicius Caelius also contains some interesting mushroom recipes. The cookbook, found in the Vatican Library, contains detailed description of about 500 recipes from the time of Diocletian, a Roman Emperor from the 4th century. Little is known of Apicius, although legend has it that he was a wealthy Roman who, after losing his wealth, poisoned himself after hosting an enormous banquet. Its first appearance in print occurred in the last decades of the 15th century, and by that time the work had acquired many additions. Its ten chapters cover topics from sauces and spices to wine-making techniques, and provide a detailed view of Roman cuisine. Noted physician Martin Lister's annotated version of Apicius's text was first issued in London in 1705 in an edition subscribed to by Isaac Newton and Christopher Wren, among other notables. The frontispiece shows a Roman kitchen from an 18th-century viewpoint. What the Ash tree mushrooms are in the recipes is anyone's guess.

If you are a friend of old Roman cuisine, here are Roman mushroom serving suggestions from Apicius Caelius:

(a) Boiled, whole warm Ash tree mushrooms can be mixed with fish-stock and plenty of ground pepper.

(b) Ash tree mushrooms can be marinated with pepper, sweet reduced wine, and oil.

(c) Steamed mushrooms can be served with salt, oil, undiluted wine, and chopped fresh cilantro.

(d) You can create a meal with boletes by cooking them with sweet reduced wine and fresh cilantro which gets removed from the cooking broth before serving.

(e) The stems of the boletes can be served drizzled with fish sauce (fish-stock) or sprinkled with salt.

(f) Put sliced stems of boletes together with eggs in a shallow bowl, drizzle with lovage, honey, broth, and a little oil.

(g) Dried morels are served with a marinade of simple wine broth.

(h) Boiled morels can be served with a dressing of salt, oil, fresh wine, chopped cilantro, and pepper.

(i) Boiled morels can be served with the following sauce: celery seeds, garden rue, honey, pepper, a little sweet berry wine, fish-stock and oil, thickened with starch, add pepper and serve.

(k) Recipe for morels: mix caraway, garden rue, broth, a little sweet wine, oil, fresh cilantro, and leek and serve this as sauce.

(l) Drain the boiled morels, add them to a pot with oil, spiced fish-stock, and salt; add wine from dried berries for color and thicken with starch. Chop small morels and discard the fibers, mix into boiled barley and eggs, add fish-stock and pepper; add nuts and pepper, and fill into casings; fry in a pan, add wine-broth, and serve instead of meatloaf.

Trident Booksellers and Cafe

Chicken a la ancient Rome.

The Culinary Cellar

De re coquinaria (The Art of Cooking) by Apicius