

# SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY  
Number 574 September 2021



## WILD MUSHROOM SHOW

The co-chairs of the 2021 Wild Mushroom Show are excited to announce our plans to have a **live show again this fall!** The show dates are **October 23** (12–6 pm) and **October 24** (10 am–5 pm) in the “new” cafeteria at **North Seattle College**, 9600 College Way N., just west of I-5 from the Northgate Shopping Center. This year’s co-chairs are Derek Hevel, Milton Tam, Molly Watts, and Marion Richards.



Scott Maxwell

The show is our opportunity to share with the general public our knowledge of and enthusiasm for the fungal kingdom. Get ready to put that “WOW” factor into the show and amaze the public with all the colors, shapes, and sizes of fungi we bring in for display.

Because of the ongoing pandemic and for everyone’s safety, our current plan is to require (1) proof of vaccination for all volunteers and guests and (2) masking up while indoors. We may have to adjust our plans as show time approaches, based on the status of the pandemic, the governor’s guidelines, and if the college remains open. We are keeping close tabs on the situation, so we’re crossing our fingers and hoping to have a live show. More updates to come.

We always need your help to make it happen! Year after year, we put on one of the largest and best shows on the West Coast. Volunteer for one or more tasks, including helping at the touch-and-feel table, cultivation, cooking and tasting, book sales, admissions, hospitality, and loading/unloading. Sign up at the September and October membership meetings or online at [PSMS.org](http://PSMS.org) under “Events.” Publicity posters, postcards, and yard signs will be distributed at our September meeting. And remember: as a volunteer, you’ll have access to that amazing potluck in the break room, and will be eligible to attend the volunteers-only Memorial Day field trip.

We will also need YOUR mushroom specimens for our display tables. As always, the strength of the mushroom season has yet to reveal itself, but we know it’s an odd year with heat waves and drought. We don’t know when the rains will arrive, but we’re all crossing our fingers for a well-timed fruiting in order to put on the best show. Come mid-October, we strongly encourage members to forage far and wide to collect specimens wherever they can be found. A month out, experts have suggested collecting display specimens in the foothills of Mount Rainier, the Olympic Peninsula, and the Washington coast, but it is impossible to predict when and where our mushrooms will flush. We encourage you to self-organize for a collecting trip in the day or two before the show. We’re counting on YOU to make the mushroom display happen!



## FALL SHOW VOLUNTEERING

Luise Asif

October 23 & 24, 2021  
North Seattle College

A preliminary broadcast message has gone out to all the wonderful folks who have volunteered to help with the 2021 Fall Show! A schedule of requirements will go out the end of September or beginning of October once the program for the show has been set.

Definitely needed will be people to help with setup Friday evening and Saturday morning as well as teardown Sunday. This includes help loading supplies at CUH on Friday and unloading Monday morning after the show. Detailed needs and shift times will be listed in the emails and at the October membership meeting.

## CANADIAN ART EXHIBIT LETS YOU HEAR THE FUNGI

Rocco Frangione  
*The Sault Star*, Aug 18, 2021

What sound does a mushroom make? A New Adventures in Sound Art (NAISA) exhibit in Sound River, Ontario, has the answer.

*cont. on page 6*

# Spore Prints

is published monthly, September through June by the  
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before the event, is fresh wild mushrooms. Put it on your calendar to have a foray to gather species to share for the October event.

**Membership Meeting:** The September general membership meeting at the Center for Urban Horticulture will also be in person and a speaker is scheduled.

**Vaccinations & Masks:** The news is probably not surprising, given the alarming rise of the Delta variant in the community, that

- *All in-person events hosted by PSMS require that all attendees must be vaccinated and bring proof to show.*
- *Indoor activities also require a mask.*

So take a picture on your phone or bring a hard copy! Let's have a great time together and be safe!!



## MEMBERSHIP MEETING

Scott Maxwell

Tuesday, September 14, 2021, at the Center for Urban Horticulture, 3501 NE 45th Street, Seattle.

**Note:** *Our first meeting of the Fall will be a hybrid in-person/Zoom meeting. Verbal participation will be restricted to in-person only to prevent Zoom bombing.*

*In line with the mandates provided by the University of Washington and the State of Washington, masks will be required and, by vote of the PSMS Board, proof of vaccination will also be required.*

**Program:** Our guest speaker is Dr. Fred Rhoades, who will present a broad perspective of our mycoflora and impact of environmental conditions here in the Pacific Northwest. This is an exciting opportunity to kick off our 2021 mushrooming season!



Helen Lau

Dr. Rhoades

Dr. Rhoades's talk is titled "A year of mushrooms" and will feature a selection of macrophotographic and other views of northwestern mushrooms and their friends in mushroom habitats, presented in order of their occurrence and starting on the date of the presentation (mid September). Dr. Rhoades will go through his collection of images by date in the year and choose an interesting selection that will illustrate habitats, environmental relations, and other aspects of their biology.

Dr. Rhoades did graduate study in both mycology and lichenology in the 1970s with Bill Denison at Oregon State University and George Carroll at the University of Oregon. For his Masters and Ph.D. theses, he studied the growth rates and population biology of the important, northwest foliose lichen *Lobaria oregana*. During this time he surveyed mushrooms in the Willamette National Forest and began learning how to identify them. From 1977 to 2009 he was an instructor of biology at Western Washington University in Bellingham, where he taught a variety of cryptogamic botany (spore-producing organisms) and general biology courses until retiring. He currently lives in Bellingham and continues to give occasional programs and forays. He spends much of his field time photographing a variety of lower life forms including mushrooms, lichens, bryophytes, slime molds, and the odd plant or animal.

## BOARD NEWS

Su Fenton

**DNA Project:** The club's favorite fungal identifiers, Danny Miller and Daniel Winkler, Zoomed into the board meeting to tell us about their newest project, which is made possible by a generous donation and matching grant from Microsoft employee and PSMS member Yi-Min Wang. The proposal they shared with us, and the board approved, is for a PSMS citizen science fungal DNA project. As we have been learning, DNA testing of fungi is the best method to straighten out the confusing and contradictory taxonomy and nomenclature of Pacific Northwest species. A bottleneck created by lack of official type sequences and a requirement of technical knowhow has slowed the process. The project includes encouraging citizen scientists to dry and send samples for DNA sequencing, reducing costs through a number of steps and supporting other projects that are sequencing older original samples. If you have some lab experience and strong knowledge in this area and you find yourself licking your chops after reading this, you might want to contact them and see how you can be involved.

**Wild Mushroom Show:** Derek Hevel, man of many PSMS hats, also Zoomed in to tell us about the progress made in preparation for the Annual Fall Show, which we are hoping will be in person. Contact Luise Asif, volunteer coordinator, if you want to help out with this fun event. One thing they always need, a day or so

## CALENDAR

- Sept. 14 Membership meeting, 7:30 pm, CUH, in person and via Zoom
- Sept. 20 Board of Trustees meeting (virtual)
- Sept. 21 *Spore Prints* deadline  
**Submit articles to guest editor Ron Post**  
ronpost4@gmail.com, (206) 999-9292
- Sept. 28 Field trip (see PSMS website)
- Oct. 4–6 Field trip (see PSMS website)

## BEN WOO FORAY

Luise Asif

October 15–17, 2021  
Friday 3:00 pm – Sunday 11:00 am

We are pleased with the response to this year's foray. Registration is full, but with the upheaval that COVID is causing, regrettably there are some cancellations. We were able to draw from the waiting list. Space is available for sign-up on the waiting list. The program is set, and workshop presenters are eager to share their expertise.

We are monitoring events and following CDC recommendations to ensure the safety of attendees. Thank you to all for the good-natured compliance with this year's requests to keep everyone safe and healthy. An update will be sent to all foragers the week before the event.

Looking forward to an exciting weekend and an abatement of the virus in all its forms!

Be thinking rainy thoughts!

## THANK YOU TO OUR FINANCIAL SUPPORTERS

Brenda Fong

Over the years many members have contributed financially to help PSMS continue in its mission of fostering the understanding and appreciation of fungi in the world around us. The Board would like to thank the many members who have added the extra 5, 10, 20, or more dollars when they join or renew their PSMS membership. We'd also like to thank those members who make contributions through their work, often going through a company matching fund program, as well as members whose contributions come through their Amazon purchases when they sign up for the AmazonSmile program. And for his generous, annual contribution, a special shout out goes to PSMS member and scientific advisor Steve Trudell

The PSMS Board would also like to thank nonmember and recent speaker Dr. Cathy Cripps for her financial support.

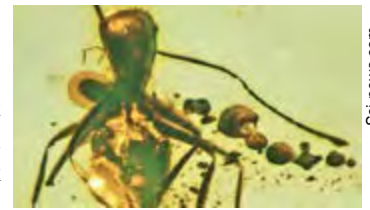
A special thank you goes to a Hilcorp employee and Hilcorp Alaska, who established the Serhat Cetinkaya Fund at the Alaska Community Foundation, for their generous grant supporting our mission.



## 50 MILLION-YEAR-OLD “ZOMBIE MUSHROOM” PRESERVED IN AMBER

<https://www.cvbj.biz>, Aug. 20, 2021

How does the fungus manipulate the behavior of the carpenter ant? The answer lies in the extended phenotype, a concept coined by biologist Richard Dawkins in his famous book *The Selfish Gene* that explains the suicidal behavior of some organisms when a parasite lodges inside them. Basically, the fungus is expressing its genotype (genes) in the ant's phenotype (observable traits) and not in its own. Or, put another way, the ant's behavior is not a consequence of the expression of its own genes but of those of the parasite.



*Baltic allocordyceps*, preserved in amber.

### Hyperparasitic fungi

The terrifying relationship of parasitism between this type of fungus and its victims is quite well studied and more and more details about its operation are known. For example, in 2012 the magazine *PLoS ONE* echoed the discovery of an unusual defensive strategy against the zombie fungus: another fungus. “It is a case in which biology surpasses fiction,” explained David Hughes, a researcher at Pennsylvania State University and author of the article. “The hyperparasitic fungus castrates the fungus that turns the ant into a zombie to prevent it from expelling its spores. Thanks to the fact that the hyperparasitic fungus prevents the spread of these spores, fewer infections will occur in other ants.”

### An ancient species that was introduced through the rectum of ants

As if that were not enough, and to continue challenging the imagination, a few weeks ago the magazine *Fungal Biology* revealed the discovery of a new species of fungus similar to those in the genus *Ophiocordyceps* that invaded ants by entering their rectum. It is the oldest specimen known so far of a fungus that parasitizes ants; it was found in a piece of amber about 50 million years old. This sample contained a carpenter ant of the genus *Camponotus* from whose rectal orifice the fungus emerged. The fungus been baptized *Baltic allocordyceps*.

It is a new genus and species of fungus that shares some characteristics with *Ophiocordyceps* but also shows several unique developmental traits, including that the ascoma or structure of sexual reproduction of the fungus does not arise from the neck or head of the ant. “In the sample you can see a large orange cup-shaped ascoma with perithecia—flask-shaped structures that let out spores—in development that emerges from the rectum of the ant,” explained George Poinar, a researcher at the State University of Oregon and first author of the article. “Separate fungal bodies are also preserved that have perithecia and what look like sacs in which the spores develop. All the phases, both those attached to the body of the ant and the independent ones, are of the same species.”

For the authors, as it is the oldest fossil record known so far of fungal parasitism in ants; this finding will be used as a reference in future studies on the origin of the fungus–ant association and in which, surely, biology will continue to surprise us with discoveries that surpass the most convoluted stories of fiction.

## MUSHROOM STAMPS FROM PAKISTAN

Brian S. Luther

In 2005 Pakistan issued a single set of ten different stamps showing mushrooms as the main illustration. They came on full sheets of 30, with three full sets per sheet. The sheets are labeled “Mushrooms” at the top and “2005” at the bottom, but have no selva illustrations.

In the table, M = mushrooms or fungi as the main illustration; FDC = first day cover, an envelope (cover) with the stamps affixed and postmarked on the first day issued, also normally having a cancel and an envelope illustration (i.e., a cachet) of the same theme; PP = presentation pack, a separate information brochure providing details about the set, with the stamps included. Rs = Pakistani rupee.

### *Myco-Stamps from Pakistan*

Date of Issue	Value	Scott Cat. No.	Type	Subject
10/1/2005	Rs 0.5	1071a	M	<i>Lepiota procera</i>
"	"	1071b	M	<i>Tricholoma gambosum</i>
"	"	1071c	M	<i>Amanita caesarea</i>
"	"	1071d	M	<i>Cantharellus cibarius</i>
"	"	1071e	M	<i>Boletus luridus</i>
"	"	1071f	M	<i>Morchella vulgaris</i>
"	"	1071g	M	<i>Amanita vaginata</i>
"	"	1071h	M	<i>Agaricus arvensis</i>
"	"	1071i	M	<i>Coprinus comatus</i>
"	"	1071j	M	<i>Clitocybe geotropa</i>

The illustrations are simple and not detailed, but nonetheless the species are readily recognizable and they're attractive and collectible. All stamps are labeled with the scientific name vertically (in parenthesis) along the right margin and are perforate with gum. The names on the stamps are European. This is often seen on international postage stamps, where countries just depict common European mushrooms. Pakistan does have unique endemic species of fungi, but none are shown in this set.

The FDC is also attractive, having all ten stamps. Because there are 30 stamps, or three full sets per sheet, however, there are in fact three slightly different FDCs in terms of the stamps affixed, based on which of the set of ten were selected from the sheet to put on the cover. They either start with (from left to right) *Boletus luridus*, *Lepiota procera*, or *Cantharellus cibarius*. I showing only one here. Curiously these FDCs are different from any others I've ever seen in that each can have from one to three cancels. All other FDCs that I'm aware of consistently have the same number of cancels on them. So, in fact, if you include the different arrangement of the ten stamps in combination with the number of variable cancels, there are several distinct FDCs that were issued. The cancel shows four stylized mushrooms, and the colorful cachet has 15 mushrooms: one mature *Lepiota* sp., three unknown mushrooms, a single yellow form of *Amanita muscaria* as well as two of the red form, and a clump of eight *Clitocybe*-like mushrooms, possibly intended to represent *C. geotropa*, which can grow (but not always) in cespitose-like clusters; however, this may



Brian S. Luther

Pakistan 2005, Scott 1071 a-j. Full sheet of 30..



Brian S. Luther

Pakistan Scott 1071 a-j.

also just be a stylized mushroom illustration. Even though two color forms of *A. muscaria* are on the FDC cachet, this species is not shown on any of the stamps in the set.

The Pakistan Post Office also issued a separate PP in the form of a three-page flier, or information brochure on the set, with writing on both sides. It also has the ten stamps affixed on the front that are cancelled on the first day of issue; this is titled “Mushrooms - In the Series of Medicinal Plants - Special Postage Stamps, October 1, 2005.” This PP describes the stamp details along with basic information about mushrooms and mushroom cultivation. Unfortunately, two of the mushrooms listed to cultivate are *Inocybe geophylla* (misspelled as *I. ceophylla*), which is very poisonous, as well as *Amanita “nano.”* This last one refers to the Nano Amanita, *Amanita rubescens*. Both are mycorrhizal and cannot be cultivated, even if for some reason you wanted to. There's also general info on the very back page about terms of sale, etc., from the Director General of the Pakistan Post Office.

At least so far, I have not seen any maxicards (= postcards of the set, issued on the first day of issue) produced for this set.



Pakistan 1071 a-j FDC.



Front of three page Pakistan Presentation Pack (PP).

## PSILOCYBIN FOUND TO “REPAIR” NEURAL CONNECTIONS IN THE MAMMALIAN BRAIN

Bryony Porteous-Sebouhian

<https://www.mentalhealthtoday.co.uk/>, Aug. 19, 2021

In a new study appearing in the journal *Neuron*, scientists looking into the deeper roots of why psilocybin (found in magic mushrooms) can provide long-lasting therapeutic effects to those suffering from major depression have found that the psychedelic compound can physically repair neural links in the mammalian brain.

In this most recent study, co-authored by Alex C. Kwan and Ling-Xiao Shao (associates of The Yale University School of Psychiatry and Neuroscience and the School of Medicine, respectively), mice were monitored for 24 hours after the administration of psilocybin to document the effects of psilocybin on the architecture of the brain.

### All in the brain

To do this, the scientists involved in the study used a laser scanning microscope to produce high-resolution images of “dendritic spines.”

Dendritic spines are “small protrusions in neural dendrites,” a dendrite being the branches you see on images of synapses that look almost branch-like; they are responsible for “spreading the message” so to speak, when they receive electrochemical stimulation from other neural cells.

Amazingly, after just one dose of psilocybin, the brains of the mice showed a significant increase in the number of dendritic spines as well as growing size, all in just 24 hours. Not only this, but these neural improvements were persistent a month later, showing the effects of psilocybin do not have the same efficacy rates of other psychiatric medication.

Another aspect of the study was to monitor how psilocybin could improve the impact of long-term stress responses on the brain and on behavior. To do this they exposed mice to short-term stressors. After just one dose of psilocybin, they found that the drug induced behavioral improvements poststressor and increased activity between neurotransmitters.

### What does this “structural remodeling” mean for the treatment of depression?

In their write-up of the study in *Neuron*, the authors include a discussion around the possible implications of these findings, especially as they pertain to psilocybin’s therapeutic properties. The study states, “depression is associated with a loss of synapses in the frontal cortex (Holmes et al., 2019). Restoring the number of neuronal connections may correct such deficit, providing a biological mechanism for alleviating symptoms of depression.”

On the claims that psychedelic psychiatric treatment can increase “neural plasticity” the study commented, “structural remodeling is integral to learning and facilitates the storage of lifelong memories (Xu et al., 2009; Yang et al., 2009). Psilocybin-induced neural plasticity could prime the brain for integrating new psychological experiences.

The study’s authors believe that the reasoning behind the improvements that psilocybin provides is due to their findings:

- production and growth of dendritic spines in the medial frontal cortex
- persistent neural modifications.

Speaking to *Yale News*, Dr. Kwan said, “We not only saw a 10 percent increase in the number of neuronal connections, but also there were on average about 10 percent larger, so the connections were stronger as well. It was a real surprise to see such enduring changes from just one dose... These new connections may be the structural changes the brain uses to store new experiences.”

Of course, as with all research into the effects of psychedelics on the brain, our behavior, and our psychology, this is in a very early stage. So early in fact, they have not been able to move toward human subjects. For many this will raise questions around the validity of the findings.

However, these recent results seem to fill in the gaps and fit the missing pieces in the puzzle of “what makes psilocybin so effective as treatment for depression?”

### Referemces

Holmes, S.E. et al. 2019. “Lower synaptic density is associated with depression severity and network alterations.” *Nat. Commun.* 10: 1529.

Xu, T. et al. 2009. “Rapid formation and selective stabilization of synapses for enduring motor memories.” *Nature*; 462: 915–919.

Yang, G., Pan F., and Gan W.B. 2009. “Stably maintained dendritic spines are associated with lifelong memories.” *Nature*. 462: 920–924.

## Hear the Fungi, *cont. from page 1*



The Mycorrhizal Rhythm Machine is a hollow sphere about eight feet high people can walk into and listen to the sounds plants make.

Artist Tosca Teran of Toronto created the display which has plants and fungi, like oyster mushrooms, sitting on shelves in the sphere. The interior is large enough to accommodate four to five people at a time sitting on benches.

Teran achieves the sound aspect by attaching electrodes to the roots which are connected to other units and ultimately to a synthesizer which gives a musical sound to what the plant or mushroom is experiencing.

The sounds occur in real time, and if a person touches a mushroom, for example, Teran says the nature of the sound changes. “There are also changes to the sounds throughout the day even when no one is around and nothing is going on,” Teran said.

The sound artist says the plants and mushrooms produce different sounds, and she’s learned that mushrooms of the same species can emit different sounds.

“I have found that there are differences and that’s bizarre,” she said. “They have different patterns and energy. Also the oyster mushrooms have lots of patterns compared to other mushrooms.”

Perhaps an analogy to this is to consider that people are all human, but as humans we have different sounding voices even though we belong to the same species.

Teran plans to record the sounds because she “wants to research further what’s going on” in the plants and mushrooms. But Teran’s initial takeaway from what the plants and fungi emit is something like a life force or heartbeat.

“Also the sound changes when the mushrooms are not looked after or enough changes have taken place in the surrounding conditions,” Teran said.

She knows this through a personal experience when she first began experimenting with sounds from fungi. Teran says she normally cleans the electrodes before attaching them to the plant or fungi and uses a solution to rid the electrodes of foreign substances.

In this instance she was trying to remove slime mold but didn’t get it all before attaching the electrode to the fungi. “The next day the fungi had a dry mold around it and the sound was entirely different,” Teran said. “I interpreted that the (fungi) was freaked out and stressed out because it was being eaten by this other organism.” Since that incident, Teran has been using new electrodes on a regular basis.

On another occasion during Teran’s earlier days experimenting with sound from plants, she was at the University of Toronto which featured a plant exhibit and a young child was hitting one of the plants.

Teran said the hits produced “a horrible sound” from the plant and when the youngster asked what the sound was, Teran told him “the plant was responding to the hits.

“So there is some kind of life force at work here,” she told the *Nugget*.

Since opening day, quite a few South River and area residents have seen the sound-making machine, and Darren Copeland, NAISA’s artistic director, said he gets asked a lot of questions about it.

Because the sphere can be taken apart, Teran is hoping to take it on the road to other communities after Sept. 20 when the exhibit leaves South River ,so other people can experience the sounds plants and fungi emit.



Tosca Teran Photo

*Sitting inside the Mycorrhizal Rhythm Machine lets people hear the sounds that plants and mushrooms make.*

## **TAIWAN APARTMENT MORPHS INTO HANGING MUSHROOM FARM AFTER LANDLORD REFUSES TO FIX LEAKS** **Liam Gibson**

*Taiwan News, Aug. 17, 2021*

TAIPEI - A Taichung tenant has documented her residential apartment’s transformation into a mushroom farm after her landlord refused to fix leaks for over two months.

The tenant revealed she pays NT\$22,000 (US\$805) in monthly rent but that over the last two months, the place has been leaking nonstop, according to a *Liberty Times* report.

She reported the drippage to the landlord, but they refused to resolve the issue.

The humidity in the air and wetness of the surfaces soon created the perfect conditions for fungi, and the moist walls of the rented house suddenly started sprouting rows of mushrooms, much to the surprise of the tenant, who took to a Facebook group famed for breaking news to share what had happened.



Facebook

The post generated a lot of buzz, with some netizens dubbing the mushrooms “installation art.”

In her initial post, the tenant lamented, “I rented this two-room apartment for NT\$ 20,000—I guess money really can’t buy you respect.”

*Hanging mushrooms.*

Some netizens were outraged by the negligence of the landlord, responding, “It’s so evil, it feels like the spores are flying into your lungs,” while others encouraged the woman to take action, “Really move as soon as possible, otherwise your respiratory system will have problems or that place will damage your immune system and you will get sick.”

Others took a more light-hearted approach, “Hot pot tonight!” and “Add [other] vegetables tonight?” while some tried to cheer her up, “You can’t buy respect, but you can buy shiitake mushrooms...” and “You rented out a greenhouse, right?”

## DEATH CAP MUSHROOMS ARRIVE EARLY IN GREATER VICTORIA, B.C. Christine van Reeuwijk

*Saanich News*, Aug. 15, 2021

The *Amanita phalloides*, or Death Cap mushrooms, are out early this year.

Death Cap mushrooms, common in Oak Bay and across Greater Victoria, typically grow under various species of imported trees such as hazelnut, hornbeam, beech, linden, sweet chestnut, and oak.

Because the trees are hosts, the mushrooms will come back every year unless the host tree is removed, said Chris Hyde-Lay, manager of parks for Oak Bay. His department removes them from municipal property every year. “They’re incredibly dangerous.”

Ingesting the mushroom can lead to severe illness or death, and they are especially dangerous for children. In 2016, a Victoria three-year-old died after ingesting a Death Cap mushroom.

Death Caps are pale and yellowish in color with a large cap and skirting underneath. They often have a sweet, honey-like smell. They grow in irrigated areas with host trees.

“They’re out a bit earlier than what we experienced last year, but they’ll be out and about until November or so,” Hyde-Lay said. “It’s just something we want people to be aware of.”



## NOTORIOUSLY POISONOUS MUSHROOM CAN NOW BE FOUND UNDER GARRY OAKS TREES

Dawn Gibson

*Oak Bay News*, Mar. 10, 2021

Beings of nature have a fascinating way of adapting to their environment.

*Amanita phalloides*, or Death Cap mushrooms, originated in Europe but were accidentally introduced into B.C. through hitching rides on the roots of trees such as the sweet chestnut. Once planted in the yards of urban neighborhoods here, the fruiting bodies began to make their presence known.

Initially, the notoriously poisonous mushroom would only show up near the base of transplanted European trees. And for a while, the only place they could be found was in Vancouver or the Greater Victoria region.

According to Metchosin biologist Andy MacKinnon, however, in the last few years Death Caps have learned to live on the roots of Garry oak trees. This means that the mushroom species has adapted, spread itself farther, and can now also be found anywhere Garry oaks grow.

MacKinnon grew up in Vancouver, graduating with a master’s degree in mycology from the University of British Columbia. He noted that although Death Cap mushrooms have evolved to survive on the native oak trees, he is unsure of how this will affect the ecosystem.

“We really have no idea what the effect on the tree is,” said MacKinnon, who is currently helping with a study that investigates what fungi species grow on Garry oak roots. “It is difficult to tell whether the Death Cap would displace other fungi that grow on the roots or just grow in addition to what is there already.”



*Amanita phalloides*

### *Advice to the Novice Mushroomer*

*In fields and in woods, in fall and in spring,  
A mushroomer’s guide I used to just bring,  
To help me best know, right on the spot,  
Whether this one, or that, was edible, or not.*

*On each it took me quite some time,  
To key in on color, size shape, or the slime,  
But absolute certainty had never resulted,  
Only when experts were later consulted.*

*So my basket contained only those few that I took,  
After cautiously studying some pages in a book,  
While my comrades ran round and quickly collected,  
Baskets of goodies that I must have neglected.*

*I thus would advise you, if you are able,  
To take new finds home, and, laid out on the table,  
With guides and spore prints, allaying all fears,  
Learn a few new species for following years.*

—Boris Subbotin

*The Sporeprint*. LA Myco Soc.

## GORGE FUNGI FORAY

Place: Hood River, Oregon

Date: September 24 & 25

Cost: \$175 per person (\$100 w/o foray)

Presenters: Dr. Michael Beug (mycologist), Rachel Zoller (Wildcraft Studio), Krista Cushman (Wildcraft Studio), Neil Brent (Columbia Mushroom Co.)

Workshops • Dinner • Movie • Tastings • Mushroom foray • includes Dr. Beug’s New Guide Book: *Mushrooms of Cascadia*

For more information, see [www.groworganics.org/events](http://www.groworganics.org/events).

## HUGE MUSHROOMS SPROUT AT SOUTHERN TAIWAN MUSEUM DURING PANDEMIC CLOSURES

Liam Gibson

Taiwan News, Aug. 19, 2021

TAIPEI - Ten species of enormous wild mushrooms have sprouted at a museum in Tainan since the establishment was closed to the public due to recent outbreaks of COVID-19.

The sudden drop-off in visitors has given the natural ecosystem of the museum grounds time to renew and, combined with recent heavy rainfall in southern Taiwan, has contributed to a flourishing of 10 different mushroom species, according to a UDN report.

Among the 10 species, staff at the Tainan ShanShang Garden and Old Waterworks Museum say enormous enoki mushrooms had burst up through the ground. At full height, the fungus stands more than 30 cm tall with a diameter of over 25 cm, larger than the palm of an average-sized hand. Staff humorously call the variety the “Snorlax” (a type of Pokemon) of the mushroom world due to its sturdiness.

Staff say most people do not often get a chance to witness mushrooms like this. Yet now, thanks to the ideal conditions, they are popping up all over the grounds, from tree trunks to grassy undergrowth.



*Giant enoki sprout at Tainan museum.*

## MAN HIGH ON MUSHROOMS FATALLY SHOOTS FATHER SHIELDING 1-YEAR-OLD SON

Mary Ellen Cagnassola

<https://www.newsweek.com/>, Aug. 25, 2021

A 22-year-old man told police he was “high on mushrooms” when he shot and killed a tourist eating dinner with his family in Miami Beach on Tuesday, according to the Associated Press.

Tamarius Blair David Jr. of Norcross, Georgia, fatally shot Dustin Wakefield, 21, as Wakefield shielded his 1-year-old son from the bullets. David is being held without bond and is charged with second-degree murder with a weapon and attempted murder.

David’s arrest report said that he told police he walked into La Cerveceria restaurant around 6:30 pm and “randomly chose” to shoot Wakefield. David was arrested in an alley next to the restaurant, yelling, “I did it. I did it.”

*Ed. Note: Articles for next month's newsletter should be submitted to guest editor Ron Post*

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*by September 21, 2021.*

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