

SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 577 December 2021



All photos by Derek Hevel

PSMS Wild Mushroom Exhibit

AND THE SHOW GOES ON!

Milton Tam

Our 58th Annual Wild Mushroom Show was held at the North Seattle College's "new" cafeteria on October 23 and 24, 2021. This year we had four co-chairs who worked together to make the show happen: Derek Hevel, Marion Richards, Molly Watts, and Milton Tam. It was a challenge to organize an in-person show again during the ongoing COVID pandemic, but we managed to have a successful and well attended show. This was our third year at NSC, after not being able to have an in-person show last year when it was online and virtual. In an attempt to avoid crowding on the show floor, we pre-sold timed tickets and at times needed to limit entry. We also took standard precautions as required by the college such as requiring masks and admitting only guests who could demonstrate proof of COVID vaccination, which meant that children under 12 could not attend.

Since the cafeteria was a new venue for us, we developed a new floor plan to accommodate all activities. Fortunately, the venue had ample room for everything: the displays; commercial and arts/crafts vendors; and most of our usual activities such as dyeing,

microscopy, kids' table, mushroom ID, culinary, and cultivation. While all of us were worried about finding enough specimens after the long, hot, dry summer, the fall rains arrived just in time, and our collectors came through with a grand selection of mushrooms.

Our thanks go out to our collectors, who did a great job searching high and low for all those great specimens and enduring the wind and rainstorms that week. You made the whole show happen! Many thanks to our volunteers who set the show up, received the mushrooms, sorted them to genus on Friday evening, and created the display trays on Saturday morning. Thank you again, Joe Z., for getting the sand for the tray displays for about 20 years in a row! Thanks to Irene and Andy Iwata and other volunteers at admissions, who endured the cold and wind to get everyone into the show and keep order in line. Luise Asif, you once again ably coordinated our volunteers. Thank you to our speakers—Daniel Winkler, Noah Siegel, Shannon Adams, Danny Miller, Alana McGee, Dr. Steve Trudell, and Dr. Britt Bunyard, another set of great lecturers. The talks were well attended and enjoyed by the public. We also appreciate the leaders of all the show activities, including

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Spore Prints

is published monthly, September through June by the
PUGET SOUND MYCOLOGICAL SOCIETY

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MEMBERSHIP MEETING

Scott Maxwell

Tuesday, December 14, 2021, at 7:30 pm at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle

The December meeting has traditionally been a members-only event involving either a cookie bash or a themed potluck to make it special. This year owing to the COVID-19 restrictions in place (no food or drinks allowed), we are going to switch things up a bit and feature a special fungi adventure video created and produced by renowned photographer Taylor Lockwood, who has graciously agreed to share it with our membership. In addition we will be having door prizes, hosting a silent auction, and passing out courtesy gifts with our best wishes for you, our valued members.



More about the Silent Auction

We would like willing members to bring fungi, mushroom and/or outdoor recreation items that are in good to new shape for auction at this event. The proceeds from this auction will be used to fund the Ben Woo Scholarship Fund. This fund has provided scholarships largely to students, teachers and academics who are active in furthering the study of and education about fungi, ideally in the Pacific Northwest. It has funded projects being performed by PSMS members and nonmembers who have submitted applications to the Scholarship Committee and been approved by the PSMS Board of Trustees. Besides funding scholarships a silent auction is just fun to do and provides the membership with an activity that gets us up and out of our seats and talking with one another. Those who elect to bring auction items should come to the meeting at about 7:00 pm so we can label and stage these items on the tables at the north end of the hall. Any items that are not bid on will be returned to the original owner. For those bidding on auction items, please pay in cash or check made out to Puget Sound Mycological Society.



Attendance Requirements

This event is for members only and requires previous sign-up at the PSMS.org website. There will be a \$5 entry fee that will be collected online at the time of sign-up (no checks or cash). The \$5 will be used to purchase door prizes, some auction items, and courtesy gifts.

As with our other meetings during COVID-19, masks and proof of COVID-19 vaccination will be required for entry.

More information will be provided on the PSMS website at www.psms.org.

Board News, *cont.*

Back to In-Person Events! The December membership meetings (aka the Holiday Extravaganza) have always been special, and we are determined to make the upcoming members-only event on December 14 another fun one. You can purchase tickets on our website at psms.org for \$5.00. There won't be a potluck this year, thanks to the extremely tiresome pandemic, but there will be door prizes, a silent auction, a movie by Taylor Lockwood, and did I say—prizes! Planning is for cool prizes. Same restrictions still apply about the need for proof of vaccination!

CALENDAR

- Dec. 14 Membership meeting, 7:30 pm, CUH
- Dec. 14 *Spore Prints* deadline (early)
- Dec. 20 Virtual Board of Trustees meeting, 7:30 pm



BOARD NEWS

Su Fenton

This was a unusually busy board meeting with lots to discuss and sort our way through.

Annual Wild Mushroom Show: Derek Hevel and Marion Richards joined us to report on another successful Annual Wild Mushroom Show, which took place at North Seattle Community College. There was some challenge with admissions, mixing online scheduling with in-person ticket purchasing, but the show had most of the usual things that everyone enjoys at the show—lectures, a mushroom exhibition table, a mushroom tasting room, more vendors than usual, and mushroom cultivation kits. It was a great success despite fears to the contrary because of all the pandemic restrictions. And we are *very* excited that PSMS is back to almost normal with in-person events! Yay!

cont.

Ben Woo Scholarships: We also had the pleasure of hearing in detail the proposals from the four applicants for the Ben Woo scholarship grants. Topics were lichens, amanitas, powdery mildew, and commercial mushroom cultivation. Sadly, Sweta Agrawal, who presented the details to us, is resigning her position as Grant & Scholarships chair because of piling up responsibilities, including a new little one in her house. She will be sorely missed. If that position is something that interests you and you have the right background, please contact Luise Asif (asif@hotmail.com) or the Board of Trustees.



TRUFFLE HUNTING BIRDS: Rachael Funnell
 Iflscience.com, via
The Spore Print, L.A. Myco. Soc., Nov. 2021

Nicholas Cage fans may have already embarked on one man's journey in search of his truffle hunting pig when watching the movie *Pig*. If you enjoyed the film, the good news is there's potential for a sequel only this time titled *Birds*, as it's been discovered that two ground-dwelling bird species in Patagonia are proficient truffle hunters. Their fungus foraging skills make them the first non-mammalian species known to search for truffles, a feat published in the journal *Current Biology*.

The charming observation was something of a happy accident as researchers on the new study stumbled upon the birds' unusual behavior while searching for truffles themselves in Chile. The two that appeared to show particular interest in the researchers were the chucao tapaculos (*Scelorchilus rubecula*) and blackthroated huet-huets (*Pterotochos tarnii*).

"When you search for truffles you carefully move the leaf litter to see the soil underneath and this slightly disturbs the leaf litter and soil," explained study author and Assistant Professor at the University of Florida Matthew E. Smith to *IFLScience*.



Chucao tapaculos, Scelorchilus rubecula.

"In one remote forest in southern Chile (where the birds are not very used to seeing people and are unafraid), the birds actually followed us through the forest, and they visited the sites where we disturbed the soil and leaf litter. This was very surprising! It suggested that they were curious about what we might be searching for on the forest floor."

You may be familiar with truffles in the form of rich oils or grated onto pasta, but there are a wide range of truffles out in nature, not all of them so fancy, characterized by the fact they grow underground. Their subterranean lifestyle means they're reliant on animals consuming them and spreading their spores, animals such as pigs, boars, and, evidently, birds. The ecological role these animals play is a crucial one, as the roots of many tree species benefit from a symbiotic relationship in which both parties share nutrients, helping to keep the forest happy and healthy.

PRESIDENT'S MESSAGE Randy Richardson



Randy Richardson

Welcome to all the new members. It may not be apparent sometimes, when things run smoothly but PSMS is a volunteer organization. A great way to get to know more members and feel like you're part of the system, is to volunteer. Elections will be coming up in a couple months, and we are looking for candidates now. You need no knowledge of mushrooms and foraging to run for one of the five Board of Trustee positions, which are open to all.

Executive board positions have additional requirements. More information regarding board duties and terms can be found in the PSMS bylaws ([www.psms.org/history & bylaws/bylaws](http://www.psms.org/history&bylaws/bylaws)). If you would like to see improvements, or to help keep things running as well as they do, contact a board member or run for a position.

Similarly, those red name badges you may see some people wearing are not a sign of importance; anyone can order one, with their name added. They are available through membership, for a fee. Wearing one makes it easier for others to know your name and help you feel more an integral part of our club.

Many, many thanks to all the dozens of volunteers who helped make this year's annual exhibit so successful. Despite some big obstacles, we brought together a great mushroom show, with high hopes for a less restricted one next year. Thank you!



David Hunt
Nov. 21, 1939 – Oct. 24, 2021

We are sad to report that David Hunt, a long-term PSMS member, has recently passed away. David joined PSMS in September of 1981. From 2001–2005 he served on the PSMS Board of Trustees. During that time, he was a co-chair of the 2002 and 2003 PSMS Annual Exhibits and, along with PSMS President at the time Karin Mendell, was a co-mentor to the 2004 show chairs. Many of us have fond memories having served alongside David on the board and on various committees.



Davis & Hobana Hunt

In addition he co-chaired the Fall 2002 Quinault Foray with Don and Cathy Lennebacker, where he showcased his amazing culinary skills! He also was a co-chair for the spring forays to Circle 8 in 2003 and 2004.

David was well liked in our club and was a close friend to many of our members. Because of health problems he was not able to be active in our club for the past several years. David was soft spoken with a kind heart, and will be missed by all who were privileged to know him. Our condolences to his wife, Hobana, who David dearly loved, and to his other friends and family.

—*Marian Maxwell*

Annual Mushroom Exhibit, cont. from page 1

Brian Luther, Danny Miller, Wren Hudgins, and Colin Meyer at the ID Table; Jamie Notman at Cooking & Tasting; Marion Richards at the Dyeing demonstration; Milton Tam at Cultivation; Pacita Roberts at Membership; Paolo Assandri at Books & Merchandise sales; Dory Maubach at the Kids' Table; Marcus Sarracino leading Hospitality; Paul Hill for doing the photo show; and Wren Hudgins for the ASK ME program. Thanks again to Daniel, Paul, Colin, and Wren (among others) for leading those informative tray tours, always a favorite with the public. As treasurer, Brenda Fong did a great job. Gracias to Lisa Page Ramey, who once again designed our show poster, post cards, and yard signs.

Finally, thanks to all the volunteers who found a couple of hours or devoted their entire weekend to make the show a success. We again enjoyed working with you, and we could not have had the show without your hard work! An extra big thank you to the take-down and clean-up crew who, when the show closed, got us out of there in less than two hours.

Sorry if we missed your name below, but we appreciate everybody's help equally!

Lydia Abernethy	Jon Hall	Dennis Notman
Christie Aewquivel	Cheryl Hart	Erin O'Dell
Karen Armijo	Gwen Heib	Dennis Oliver
Denise Banaszewski	Tori Hennessy	Xochitl Palomino
Mark Boyle	Isabelle Heyward	Jung Park
Kate Brotzman	Kelsey Hudson	Anne Polyakov
Bruce Busby	BeAnne Hull	Tatiana Quintana
Melanie Buscho	Suzi Ibach	Randy Richardson
Kai Carpenter	Marion Irwin	Sandra Ruffner
Tracy Carrithers	Susan Isaacson	Peg Rutchik
Judith Cederblom	Robert Jaffe	Tom Rutchik
Lilly Chabra	Debbie Johnson	Mara-Louise
Becky Chan	Eric Johnson	Schmerfeld
Teresa Chen	Nancy Kelly	Steven Schmerfeld
John Chen	Donna King	Sheryl Shumsky
Shane Chiao	Aneta Kucharczyk	Kim Sing
Yaping Chiao	-Swamy	Kathy Slattengren
Valerie Costa	Ashley Laabs	Iris Song
Peg Crawford	Dan Laner	Thad Steffan
Carlos Cruz	Jon Leale	Andrew Sudangnoi
Jill Dineer	David Lin	Reba Tam
Kelin Doner	Elizabeth Lind	Anh Theriault
Donna Druliner	Kitty Loceff	Peter Truog
Courtney Duhome	Louise Locke	Tony Tschanz
Elizabeth Favara	John Marsh	Renuka Walavalkar
Tom Eng	Eliz Mattison	Darcy Walker
Laura Enstrom	Jess McComas	Tai Warner
Laura Feinstein	Tea McMillan	Dave Weber
Anne Feldman	Bob Meyers	Wuqi Weber
Ken Feldman	Eleain Meyers	Isaac Wen
Luis Felix	Julian Michael	Mary Winsor
Emily Floyd	Rilanti Michael	Jennifer Woodruff
Janar Floyd	E Molidor	Damien Woodruff
Madeleine Fougere	Ben Moore	Jay Yang
Maria Gerace	Steve Morton	Kat Yang
Eleanor Goodall	Lynn Morton	
Rohm Gustafson	Corey Nolan	

Great work, everyone! Let's do it again next year!

FIELD TRIP REPORT, Oct. 30

Brian S. Luther

Our last fall field trip was also our very first at this wonderful facility, thanks to Rachel Bishop who was our host here. We had 116 people attend; 30 had registered ahead with the facility and the rest were PSMS members.



Our first-time morning hosts were Tom and Peg Rutchik, who set out an impressive array of breakfast snacks, fruit, and endless hot coffee for everybody at 8:00 am. Thank you, Peg & Tom. What a great way to start out the day!

It had been raining all week prior, but we lucked out in having sunny conditions on both Friday and Saturday. The woods, however, were cold. Maybe half of the 137 species I counted displayed on the picnic tables were either frozen or partially frozen.

Special thanks to the six volunteer field trip guides who took groups out: Julia Benson, Al Philipps, Wren Hudgins, Dave Weber, Andrew White, and Denise Banaszewski.

Both Yellow and White Chanterelles (*Cantharellus formosus* and *C. subalbidus*) were found by some folks, along with a few Matsutake (*Tricholoma murrillianum*) and several other miscellaneous edible species. Most fungi collected, however, were nonedibles. Wren and I were kept very busy identifying all afternoon.



Brian A. Luther

Auriscalpium vulgare on an old Ponderosa Pine cone.

Interesting species included a collection of immature, but very large, long-stemmed *Gymnopilus ventricosus* and an *Auriscalpium vulgare*, a petite fungus with a two-inch brown hairy stem growing on a Ponderosa Pine cone that is characterized by a distinct eccentric cap with pronounced spore-bearing teeth underneath. We also had more hygrophoroid fungi come in than at earlier field trips: *Hygrocybe singeri*, *Hygrophorus erubescens*, *H. chrysodon*, *H. bakerensis*,

H. piceae, and *H. gliocyclus*. I was surprised and delighted to see a really neat collection of *Mycetinis copelandii* (formerly *Marasmius*) with its powerful aroma of garlic. It is common in California, but I had never seen it before here. The collection was a dead ringer for that species in all outward features, but when I did a quick microscopic examination the basidiospores were actually shorter and ever so slightly wider overall compared to *M. copelandii*. So, a more detailed examination is required to determine if this collection is just a variant of that species or is undescribed and new. This species is considered edible and, with its strong odor/flavor, can be used to season food.



Brian S. Luther

Mycetinis copelandii.

I received many compliments from those attending, and we hope to do this again at this location in the future, only perhaps a little earlier in the season so we have fewer frozen fungi.



CHANGES COMING TO FIELD TRIP GUIDING

Wren Hudgins

Spring 2022 will see a few changes in how we arrange guided groups at field trips. The groups are aimed primarily at brand-new members who are handicapped in hunting mushrooms because they aren't familiar with the habitat in which their target edibles grow and thus, without any guidance, would really have no idea where to go. The proposed changes, which are not yet finalized, are trying to help these beginners and address three problems.

1. We almost always have more beginners wanting a guided group experience than we have guides to take them, resulting in some beginners left to fend for themselves.
2. When we put out the sign-up sheets for guided groups, there is often a crush of people rushing to sign up. This system rewards aggression and leaves out those reluctant to dive into the fray.
3. Even though we emphasize that the groups are for beginners only, we always get a few people who tell us that this is their first guided experience then we find out later that statement wasn't true. This situation also results in true beginners being left behind.

In the November membership meeting, I gave a talk about safety in the woods and invited members interested in guiding to contact me. Thus as of this writing we have a group of 11 prospective new guides. I have already scheduled the required forest navigation class for this group. Probably not all will make it through and end up being guides, but hopefully most will, and this will go a long way toward alleviating problem 1 above. Because of the high demand for guides, some guides have taken out more than the ten person limit, but that will no longer be allowed to happen. To the beginner about to be left behind because he or she is #11 on the sign-up sheet, this may seem like cruelty or capriciousness. It is neither. This is a serious safety issue and we will hold the line on it.

Another change I know we will implement is that, assuming we have at least two guides available at any given field trip, one guided group will be reserved for those active club members who want a guided experience, regardless of their experience level. By "active" I mean club members who have volunteered to help the club in the past year. We keep a list of active volunteers, so this group will be easy to monitor. I'm interested in rewarding those who pitch in to help the club.

Attempts to address problems 2 and 3 will be discussed in a future article, so stay tuned.

The Toadstool House

*I wish I lived in a toadstool house,
Beneath an old oak tree,
With a tiny door and a chimney pot,
and windows—one, two three.*

*I'd play with each wee squirrel,
Who chanced to come my way,
I'd get to know the woodland birds,
And feed them every day.*

*And if you ever wandered by,
I'd ask you in to tea,
Inside my little toadstool house,
Beneath the old oak tree,*



MISSING OREGON MUSHROOM HUNTER FOUND DEAD

<https://kpic.com/>, Nov. 10, 2021

MYRTLE POINT, Ore. - A 77-year-old man who vanished while mushroom hunting with friends Sunday has been found dead, the Coos County Sheriff's Office said.

Jessie Valle went missing off Weaver Ridge Road on Nov. 7, 2021.

"Valle reportedly walked off on his own to check an area for mushrooms, but did not return," the sheriff's office said. "His friends searched for Valle for hours before contacting authorities for assistance."

Search crews from both Coos and Douglas counties combed the woods for Valle.

"Unfortunately, it appears Mr. Valle succumbed to the environment and was found deceased. The family is aware," Captain Gabe Fabrizio with the Coos County Sheriff's Office said. "Sadly, mushroom hunters get turned around every year, we really try to push the idea of a GPS for reverse tracks."

80-YEAR-OLD OREGON MUSHROOM HUNTER SURVIVES NIGHT IN FOREST

Maddie Pfeifer

https://www.gazettetimes.com, Nov. 4, 2021

An 80-year-old Corvallis woman survived the night in the forest after getting lost during the day last month. She recently shared her harrowing tale.

Valerie Lake was mushroom hunting with her husband John Vansickle on Friday, Oct. 29, in the Alsea Falls area when the couple suddenly got separated. Before she knew it, Lake was all alone in the old growth forest surrounded by trees.

"When looking for mushrooms, you tend to look at the ground and lose your orientation," Lake said.

Vansickle searched for Lake for about two hours but couldn't locate her. She told herself her husband would either find her or call the local authorities.

Vansickle did the latter. According to a Facebook post from the Benton County Sheriff's Office (BCSO), Vansickle reported his wife missing at around 6:30 pm that night.

The BCSO, Marys Peak Search and Rescue, Corvallis Mountain Rescue Unit, Benton County Sheriff's Mounted Posse, and Region 3 K9 Search & Rescue units were called in to help with the search.

As it began to get dark, Lake realized that she probably wouldn't make it out of the forest until the next morning. Fortunately, her experience as a backpacker and camper kicked in. Lake said she spent time camping in Zimbabwe when she lived there, so she wasn't particularly scared. "I was level headed because I'm experienced in the outdoors I'm just happy I wasn't in Zimbabwe because the lions would have gotten me," she said.

Knowing that it was going to get cold, she made sure to move different parts of her body throughout the night to avoid hypothermia. Lake also knew finding water was an important part of making it through the night. Her water bottle was with her husband, so instead, Lake sucked water out of lichen and leaves.

cont. on page 6

80-Year-Old Oregon Mushroom Hunter, cont. from page 5

During the night, the search and rescue team utilized whistles, dogs and horns to try and alert Lake. However, she wasn't wearing her hearing aids like she usually does, and she thought the whistles were coming from an owl.

Lake spent the night trying her best to stay warm. When the daylight finally came, she decided she needed to craft a plan and find a way out.

As she started walking through the forest, Lake noticed a group of planted trees that were not old growth. She deduced there must be a road nearby.

She headed toward the trees and found a trail which she followed until she made it to the Alsea Falls access road.

She eventually made it to the forest campgrounds and woke up some campers. The camp host had been alerted by BCSO about Lake, so the host drove her to where the rescue team and her husband were stationed.

According to BCSO, Lake received a full medical examination before going home. Lake said she made it out without any injuries—and even avoided getting a cold.

Vansickle said he was pretty stressed while Lake was lost, but the search and rescue team impressed him with their dedication to finding his wife. “They were remarkable,” he said

The sheriff's office expressed similar sentiments. “Thanks again to our volunteers for your efforts,” BCSO said in the Facebook post. “We know you don't do it for recognition, but want the community to know what amazing resources our office has to keep the community safe.”

Lake was also thankful to all of the people who participated in the search. Although the team didn't technically find her, she hopes community members will see how valuable the search and rescue team is.



CHRISTMAS COLORS, GIFT GIVING, CHIMNEYS, FLYING REINDEER, AND *AMANITA MUSCARIA*

<https://microdose.buzz>, Dec. 2020

The hallucinogenic mushroom in question is not the psilocybin mushroom, but in fact, the *Amanita Muscaria* mushroom. Also known as “Fly Agaric,” the *Amanita* mushroom is already commonly associated in folklore with fairies and gnomes—so it is perhaps unsurprising that the mushroom has some lineage to stories of flying reindeer and tiny elves. However, as explored in this piece, there is actually a fairly solid foundation behind why so many believe the Fly Agaric muscimol mushroom is tied to the following: the story of Santa, the colors he wore, the gifts he gives, the chimneys he enters, the milk and cookies he eats, and the flying reindeer he rides.

Indeed, we may be telling a *very* different Christmas story this year!

Shamanic Traditions Near the North Pole



According to writer and mycologist Lawrence Milliman, the *Amanita* Christmas origins likely started in Lapland, Finland—a region near the north pole where indigenous people (known as The Sámi) are believed to have practiced shamanistic rituals revolving around *Amanita muscaria*. Amongst psychedelic enthusiasts, it is common knowledge that the use of psychedelic drugs—plants and fungi alike—are common staples of various shamanistic cultures.

In 2018, Milliman told *The Atlantic* that “long ago, the Sami people believed that the shaman, who ate an *Amanita muscaria*, ended up *looking like an Amanita muscaria*.” According to Milliman, the lore goes that the shaman who ate the red and white [mushroom] indeed became red and white in appearance. Folklore aside, it is quite interesting that both ... Santa ... and the *Amanita muscaria* mushroom are red and white. Milliman goes on to say “he came on a reindeer drawn sled”—another peculiar detail that brings us further from coincidence and closer to evidence.

The Psychedelic Origins Behind Santa's Gift Giving

Other scholars are less sure the story starts in Lapland, but still certain it starts in the general arctic region amongst the indigenous shamans using *Amanita muscaria* in their rituals. John Rush, Sierra College anthropologist and instructor,



told *Live Science*, “As the story goes, up until a few hundred years ago, these practicing shamans or priests connected to the older traditions would collect *Amanita muscaria* (the Holy Mushroom), dry them and then give them as gifts on the winter solstice.”

Another way to view this gift giving, according to Milliman, is that shamans were believed to bring “healing and problem solving,” which are indeed quality gifts to bestow! Nonetheless, both scholars agree that shamans gave their gifts by entering the roof of local homes. “Because snow is usually blocking doors,” Rush stated, “there was an opening in the roof through which people entered and exited, thus the chimney story.”

Milliman even states that the shaman was rewarded for their gift giving efforts with lots of food (perhaps the origin of leaving milk and cookies for Santa). However, this is just scratching the surface of the following parallels discussed below.

Flying Reindeer and Fly Agaric Mushrooms

A large part of the holiday spirit may have to do with “spirit animals.” According to Milliman, reindeer (common throughout Northern Europe and Siberia) love to eat mushrooms, and this includes *Amanita* mushrooms. “One of the effects [of *Amanita Muscaria*] makes you feel like you're flying. And one can imagine that's how reindeer feel as well.”

Carl Ruck, Professor of Classic Studies at Boston University, backs this idea, but with a twist. “Amongst the Siberian shamans, you have an animal spirit you can journey with in your vision quest.”



Ruck told *Live Science*. “And reindeer are common and familiar to people in eastern Siberia.” In other words, per Ruck’s view, Siberian medicine men who ingested Fly Agaric may have hallucinated that the reindeer were flying.

Whether the shaman prototype of Santa and his reindeer *felt* they were flying or *saw* visions of flying reindeer, or both, doesn’t change our narrative too much here. To be clear, a shaman bearing the gift of red and white mushrooms, possibly dressed in traditional red and white clothing in homage of the magical mushroom, comes during the dead of winter on a reindeer-drawn sled through the roof of your home. Or perhaps he enters your chimney, you both take the sacred mushroom, and you are left with the “gift” or psychedelic insight and healing. Who are we to say this intense tradition would not leave it’s mark on our storytelling and winter celebrations to come?

A Debate of Details, Not Mushrooms

As discussed above, Milliman, Rush, and Ruck may interpret the *Amanita* Christmas origins differently. Indeed, historian Ronald Hutton denies the origins all together. However, on a more serious note, there are a few parallels that can be stated concretely:



- Santa is red and white, Fly Agaric mushrooms are red and white.
- Santa takes a trip on his sleigh, shamans trip on psychedelic mushrooms amid rituals.
- Christmas gifts are found under a tree, mushrooms can and often do have symbiotic relationships with trees.
- Santa lives near the north pole, and the aforementioned shamanic cultures of Northern Europe and Siberia are indeed near the north pole.

And to end on a less serious note, one thing is for sure: Christmas is magical, and so are psychedelic mushrooms.

GIANT WHITE TRUFFLE AUCTIONED OFF FOR A WHOPPING \$118,000

Ben Cost

New York Post, Nov. 15, 2021

An Italian truffle weighing around 2 lb sold for an eye-popping 103,000 euros (\$117,795.64 USD) at the 21st World White Truffle Auction on Sunday in Alba, a town in northern Italy’s Piedmont region. The pricey fungus now belongs to chef Umberto Bombana, who founded the Michelin-starred 8½ Otto e Mezzo restaurant in Hong Kong.

In fact, this year white truffle prices have hit all-time highs at between \$4,500 and \$5,000 a pound for wholesale ’shrooms. Experts attribute the spike to a piddling harvest caused by an unseasonably hot, dry summer in northern Italy, along with COVID-19 pandemic-related supply-chain issues that have doubled shipping costs.

LOOKING FOR WAYS TO REDUCE NEGATIVE IMPACTS OF ERGOT-INFECTED CEREALS

Sarath Peiris

<https://www.cjwwradio.com/>, Nov. 15, 2021

PhD student Jensen Cherewyk, at the University of Saskatchewan (USack) has received the Natural Sciences and Engineering Research Council’s Alexander Graham Bell Canada Graduate Scholarship, to test whether ammonia and UV light can reduce the harmful effect of ergot in cereal crops.

“I was not expecting it, and I’m very grateful,” Cherewyk said about receiving the scholarship, which is awarded to the top tier of doctoral scholarship applicants and provides \$35,000 a year for three years.

Ergot is a fungus (*Claviceps purpurea*) that proliferates during rainy, damp growing seasons and creates black or dark-purple kernels that replace the normal kernels of cereal crops such as rye, wheat, and barley. Sclerotia contain ergot alkaloids, poisonous chemical compounds that have two different configurations—an S-form (S-epimer) and an R-form (R-epimer).



Ergot.

It’s known that R-epimers produce their toxic effect primarily through the mechanism of vasoconstriction, the narrowing of blood vessels, which slows or blocks blood flow.

Cherewyk’s research focuses on mechanisms of the S-epimer, which constitutes about 30 percent of the alkaloid concentrations in affected grains. Historically this epimer hasn’t been studied closely or included in ergot standards because it was deemed not bioactive. Since R-epimers can convert to S-epimers and vice versa, it’s important to measure both, she says.

The allowable level of ergot alkaloids is regulated in animal feed and human diets owing to their harmful effects, which can range from gangrene, lameness, and loss of tails in cows. Over the centuries, human manifestations of ergot poisoning, such as hallucinations, convulsions, and psychosis in those who consumed infected grains, are linked to the Salem witch trials and other persecutions.

“My research shows that the S-epimer is toxic and could have detrimental effects,” says Cherewyk. “I’m looking at how these epimers cause toxic effects and studying ways to detoxify them for livestock and potentially humans.”

Her published findings last year about the S-epimer’s vasoconstriction potential attracted attention from major American scientific societies, which recognized them as an important advancement in ergot research.

Dr. Barry Blakley (DVM, PhD), professor in the Western College of Veterinary Medicine and at USask’s Toxicology Centre, says worldwide standards for ergot are based only on the R-epimer, and Cherewyk’s work will lead to the inclusion of both epimers in the standards.

Cherewyk’s work is unique for its analytical component that delves into how different concentrations of these alkaloids affect their impact and how grain storage times and temperatures affect the concentration of these compounds.

She also has started laboratory research on exposing ergot-contaminated grains to ammonia to study if the process detoxifies the

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alkaloids—something that researchers in animal science and other areas think is an exciting idea, says Blakley, who co-supervises Cherewyk’s PhD work with WCVM associate professor Dr. Ahmad Al-Dissi (BVetSc, PhD).

“Farmers already use ammonia to increase protein in low quality grain, so this is a very practical approach toward preventing disease and improving feed quality for animals,” he says.

Cherewyk is also studying if exposing contaminated grains to ultraviolet light could detoxify the ergot.

“So, there’s clinical, diagnostic, analytical, practical, and theoretical components to her research that covers everything, and has implications for human health as well,” Blakley says.

“This research has very local content that directly impacts producers in Saskatchewan and has significant economic implications for this province and Western Canada because it affects not only the cattle industry but grain exports.”

Cherewyk is another key contributor among a list of researchers who have helped establish USask as the center of ergot research in Canada and earned it international respect in the field, adds Blakley.



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