

SPORE PRINTS

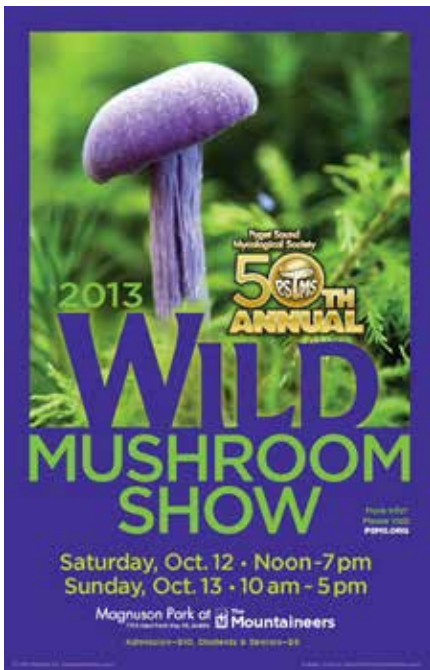
BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 495

October 2013



PSMS 2013 ANNUAL WILD MUSHROOM SHOW

Milton Tam



October is high season for mushrooms in Washington State and the month of our annual show! This year is shaping up to be one of the all-time great years for fungi, so go out, collect some mushrooms, volunteer your time, and become part of one of the most exciting events in PSMS. Our president, Marian Maxwell, has it right when she says,

I always look to the show as a measure of what our Society means to the public and to our members. The smiles and wonderment when

people see the fungi and the excitement generated by our show are electric. Knowing that I have a hand in it always gives me a sense of satisfaction. If you miss helping, you are missing out on experiencing the inner heart of our group.

This year marks our 50th annual show. We will be at the Mountaineers facility at 7700 Sand Point Way NE on October 12 (12 noon–7 pm) and 13 (10 am–5 pm). Be a part of PSMS and help with the show! No experience is necessary. You will learn a great deal and make new friends as well as renew long-term friendships. As a volunteer organization we depend on our show to keep us going, both financially and spiritually!

We now have on-line sign-ups for the committees for this year's show. Look on the Members' page (www.psms.org) under "Event Registration." Select the committee from the list for which you are willing to volunteer, and someone will contact you. You can also call the people below to volunteer, and there will be a further opportunity to sign up at the October meeting.

Remember that many of the committees require help before the show opens, on Friday afternoon/evening and early Saturday morning. Please call the committee chairs listed below for questions about their committees and what needs to be done. Thanks!

Exhibit Co-Chairs:

Milton Tam—206-525-9556 (miltontam@aol.com)

Randy Richardson—206-725-2996 (woodsnow4me@yahoo.com)

Show Committees:

Arts & Crafts—Marilyn Droege—206-634-0394. Help give breaks to the people selling crafts and art, Sat. and Sun.

Book Sales—John Goldman—206-778-0838. Sell books, T-shirts, hats, etc., Sat. or Sun.

Cooking & Tasting—Dennis & Jamie Notman—206-545-7343. Help as needed in cooking as well as in cleaning and preparing ingredients, Sat. or Sun.

Commercial Vendors—Milton Tam—206-525-9556.

Construction & Take-Down—Randy Richardson—206-725-2996 and Don Lennebacker—425-678-8350. Help needed Friday from 2–9 pm for set-up and Sunday from 5–7 pm for take-down.

Crowd Control & Greeting—Carlos Cruz—206-632-5088. Direct and assist visitors, say hello, Sat. and Sun.

Cultivation—Irwin Kleinman—206-323-2903 and Ken Feldman—206-329-9659. Help kids and their parents make oyster mushroom kits to take home. Sat. and Sun.

Display (Trays) Arranging—Marian Maxwell—425-235-8557. Fri. night: shovel sand into trays; Sat. morning from 7:30 am–12 noon, help to label and arrange mushrooms and carry completed trays to the tables.

Duff & Moss Collection—Marian Maxwell—425-235-8557. Don't forget to bring back some of the forest floor for our trays! Fri. 4–8 pm.

Floaters—Milton Tam—206-525-9556. Willing to help where and when needed. This is an important one! Fri., Sat., and Sun.!

Hospitality—Brenda Fong—206-329-5948. Help with refreshments and food for the show volunteers and to bring potluck items, Sat. or Sun.

Kids' Table/Feel and Smell—Pacita Roberts—206-362-2713. Staff the feel-and-sniff table, speak to kids and parents about mushrooms and fungi, Sat. or Sun.

Membership—Ann Polin—425-774-1044; 206-818-1780. Help sign up new members, Sat. and Sun.

Mushroom Collection—Nick Hershberger—541-231-1936. Help with going out to look for mushrooms on the days immediately before the show and bringing them back.

Mushroom Receiving & Sorting—Marian Maxwell—425-235-8557. Deliver mushrooms 4–8 pm Fri. night and Sat. after 8 am to receiving area.

Publicity & Media—Marian Maxwell—425-235-8557. Help us get the word out, from now until show time.

Ticket Sales—Sherwood Stolt—206-724-6268. Sell admission tickets, Sat. and Sun.

Spore Prints

is published monthly, September through June by the

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Annual dues: single or family **\$30**; full-time students **\$20**

MEMBERSHIP MEETING

Tuesday, October 8, 2013, at 7:30 pm at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle.

We are honored to have Dr. Bart Buyck, Associate Professor in the Department of Systematics and Evolution at the Museum National d'Histoire Naturelle in Paris, France, speak to us this month. The title of his presentation is "From Russulaceae to Russulales," discussing the taxonomic advances in this group over the past 50 years, mainly as a consequence of molecular phylogenetics.



Dr. Bart Buyck

Bart obtained his Ph.D. in 1989 at the University of Gent, Belgium, with a revision of "Russula in Africa" for which he received the Augustin Pyramus de Candolle prize of the Academy of Natural Sciences in Geneva, Switzerland. Since receiving his Ph.D., Bart has continued his research in tropical mycology, first with G. L. Hennebert at the University of Louvain-la-neuve, Belgium, and later at the University of Bujumbura in Burundi, Central Africa. In 1996, Bart joined the Laboratoire de Cryptogamie of the Museum National d'Histoire Naturelle, where he is also curator of the Mycology Herbarium. He has been an officer in the Mycological Society of France for several years. Throughout his career, Bart has been collecting edible and ectomycorrhizal mushrooms in many countries around the world and is particularly interested in Russulaceae, a group for which he is widely acknowledged to be the world's foremost expert, and Cantharellaceae. Bart was the creator of *Russulales News*, a journal published between 1991 and 1996 and which has since been continued on the web (<http://www.mtsn.tn.it/russulales-news/welcome.asp>). Recently it has been joined by *Cantharellus News* (<http://www.mtsn.tn.it/cantharellus-news/>).

CALENDAR

- Oct. 4-6 Field Trip (see PSMS website)
- Oct. 8 Membership Meeting, 7:30 pm, CUH
- Oct. 12,13 Annual Exhibit, The Mountaineers, Sand Point Way
- Oct. 14 Board Meeting, 7:30 pm, CUH Board Room
- Oct. 19 Field Trip (see PSMS website)
- Oct. 22 *Spore Prints* deadline
- Oct. 26 Field Trip (see PSMS website)

BOARD NEWS

Denise Banaszewski

The next planning meeting for the 2014 NAMAForay is Wednesday, October 2. Things are going well for the Annual Exhibit in October, but we need more people to volunteer. Only a few people have signed up to post posters, drop off cards, etc. Without publicity, our Show won't be a success. Please remember that this is your organization and it's only as good as you make it; therefore, you need to volunteer. All host positions for our fall field trips are filled. Thank you to the hosts for volunteering! Plans are in the works for new classes and some new advanced classes. We have made a donation to CUH for at least the past few years; this year we donated \$500 and left it to the CUH president to choose where the money was most needed. Our Hildegard Hendrickson Monday Night ID sessions have started, and last night (Sept. 16) we had dozens of people show up. Sometimes the ID clinics start off with one person per hour, but we're having a banner year for mushrooms this year. Thank you to Brian Luther, Josh Powell, Daniel Winkler, and everyone else who helped identify last night.

COLLECTING FOR THE ANNUAL EXHIBIT

Nick Herschberger

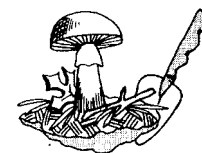
The main attraction of our annual mushroom show is, of course, the many fresh wild mushrooms. Each year, many mushrooms that are brought in cannot be used in the exhibit because they are too old or damaged. Here is a list of equipment to take along with you and some hints to ensure that your mushrooms make it to the exhibit floor.

Equipment

- A trowel or shovel
- A knife and/or small saw
- A spray bottle
- Small boxes, berry baskets, milk cartons, yogurt/cottage cheese containers, etc.
- Larger boxes for larger specimens and for carrying smaller containers
- Wax paper or aluminum foil

Collecting

Collect each specimen as if it will be the only specimen of this sort found and if it is not in good condition when it arrives at CUH, we cannot show it. Collect the entire mushroom, even structures that may be under the ground.



Try to collect a good population of each variety from one area, from buttons to mature mushrooms. Collect both common and rare mushrooms to be sure we have the most diversity.

Use wax paper or foil to protect the mushrooms. Spray smaller mushrooms to keep them from drying out or place them in containers with lids. Do not collect old or broken mushrooms, as they will not last for the show. Most mushrooms will need to be gathered within a couple of days of the show since we want them to be prime specimens.

Keep each collection and species separate. Include some of the surrounding substrate (dirt, moss, needles, leaves, etc.). If possible, cut off a piece of a log or branch with mushrooms growing on wood.

Every year, show collectors bring in some rare mushrooms. To make them scientifically useful, however, mycologists need to know where they came from, what they were growing with, etc. Please include a piece of paper with your name, phone number, and the place of collection, so a mycologist can contact you if necessary.

Summing Up

We hope every member will collect specimens for the show. You might find them in your own yard. Other places in the city where you can go are parks, ravines, cemeteries, and other people's yards (please ask permission to collect). Collect only whole, fresh, complete specimens. Dig them up with a trowel or cut them off the wood.

Keep them in separate containers (if possible). Identify the area where you found them (you don't have to identify the mushrooms) and add your name and phone number.

Bring your collections to the Mountaineers Building, 7700 Sand Point Way NE, between 4 and 8 pm on Friday, October 11. If you can't deliver them on Friday, you can also do so after 8:00 am on Saturday October 12. We need fresh specimens throughout the exhibit, so keep them coming in throughout Saturday. The mushroom sorting and categorizing are done by people who previously signed up for that committee and are approved. We ask that you do not bring small children or pets to the sorting Friday night or to the arranging Saturday (8 am to noon).

If you have any questions, please contact me at nhersch@hotmail.com or 541-231-1936.

PRESIDENT'S MESSAGE

Marian Maxwell

The Season has started! If things continue as they are now, this promises to be one of those years that people will say "Remember how the mushrooms were fruiting back in 2013? It would be nice to see that again!" It certainly appears as though we may be looking at a banner year this year. I am truly excited about the prospects this season. Join us, we are going to have a great time!

Our Monday night Hildegard Hendrickson ID clinic started on September 16 with a BANG! Dozens of people showed up to have their mushrooms identified. Identification Classes will start after the Mushroom Show. The planning for hosting the NAMA foray next year is continuing. Call Pacita or Teddy to help.

The 50th Annual Mushroom show is less than a month away now I was a bit disheartened to see how few people had signed up to

help so far, either at the September meeting or on-line. Keep in mind that there are a myriad of tasks that don't require mushroom identification skills in order to do them. I have forged more friendships helping with the show than at any other function that we have. We need more people to step forward to volunteer so that we don't burn out the people who are already volunteering for so many of the tasks. Have you put in time for our group recently? We are all busy, but we tend to make time for the things that are important to us. Is this group important to you? Can you spend an hour or two helping with our only fund-raiser of the year? Put your heart into it and sign up!

Milton's article lists the committee chairs whom you can contact to volunteer if you don't feel comfortable with on-line sign-ups. Remember that the relationship between a club and its members should be a symbiotic one. The club gives us something and, in return, to keep the relationship healthy, we too must give back. If you call our business line, at 206-522-6031, please *leave your name and number FIRST* before the message. Our machine tends to cut off at the end when people lower their voice, and many times we can't return calls if the message is cut off. In any case, CONTACT US by phone or by email, WE HAVE OPERATORS STANDING BY!

ITALIAN POLITICIAN CAUGHT MUSHROOMING INSTEAD OF ATTENDING PARLIAMENT

Nick Squires

<http://www.telegraph.co.uk/>, Sept. 13, 2013

Claudio Burlando found himself in a stew after tweeting photographs of himself with a haul of porcini mushrooms—on the day that he was meant to be in the regional parliament of Liguria for the first meeting of the autumn.

Burlando is a member of the center-Left Democratic Party and the president of the northwestern region which encompasses Genoa. At 11.30 am on Thursday he tweeted pictures of the mushrooms he had gathered wandering the woods outside the tiny village of Rondanina, his home town—just as a meeting of the regional council was in full swing.

The pictures on his Twitter feed were noticed by other members of the regional government, provoking what one Italian newspaper described as "a vigorous controversy."

Burlando said that he had booked the day off weeks ago on the understanding that the regional council normally convened on Tuesdays, rather than Thursdays. "The date of the sitting was changed at the last minute," he said. "Had it been a day out with friends I would have cancelled it, but this was a family reunion that only happens once a year ... I tweeted the photos because I had nothing to hide."

The mushrooms, at least, did not go to waste. "I'm cooking them right now," he told *La Stampa*, an Italian daily.



Politician Burlando shows off his haul of porcini. Were his fellow pols really outraged or merely jealous?

MISIDENTIFICATIONS ON MUSHROOM STAMPS

Brian S. Luther

Many countries, especially western or more developed nations, clearly have consulted mycologists prior to issuing stamps with a mushroom or fungus theme, ensuring accurate identification and labeling. But some nations have been careless, failing to have experts review the stamps before they are printed and offered for sale.

I've previously brought to your attention misspellings on a couple of sets of mushroom stamps (Luther 2012; 2013). There are many other sets worldwide with misidentifications and/or misspellings. They are far too numerous to mention all of them, but I thought I'd call your attention to one of the most obvious examples—the set of Nicaraguan stamps issued February 20, 1985 (Scott Postage Stamp Catalogue numbers 1403–1409). The mislabeling is so apparent that even a person with only a very basic knowledge of mushrooms would notice something was wrong. You only have to be able to tell the difference between gilled mushrooms and boletes.

In the following list, the initial numbers are from the Scott Postage Stamp Catalogues, and C\$ is the stamp's value in cordobas, the monetary unit of Nicaragua.

1403 (C\$ 0.5) - *Boletus calopus* is the only correctly identified illustration in this set of stamps, but the color is somewhat off.

1404 (C\$ 0.5) - This stamp shows a gilled mushroom, not a bolete, but it's labeled *Strobilomyces retisporus* and it doesn't look anything like this peculiar genus as well.

1405 (C\$ 1.0) - This stamp also illustrates a gilled mushroom but is titled *Boletus luridus*.

1406 (C\$ 1.0) - Another gilled mushroom is shown, labeled as *Xeroconus illudens*.

1407 (C\$ 4.0) - The illustration appears to show either a polypore with very fine pores or a cantharelloid or *Craterellus*-like fungus with a smooth or slightly wrinkled hymenium, but is named *Gyrodon merulioides*, a bolete that doesn't look anything like this.

1408 (C\$ 5.0) - Gills are visible under the edge of the caps, but the stamp is labeled *Tylopilus plumbeoviolaceus*, a bolete.

1409 (C\$ 8.0) - A gilled mushroom is shown, but the stamp has the scientific name *Gyroporus castaneus* printed on it, another bolete.

The real identity of most of the illustrations is uncertain. Back in the mid-1990s I started cataloging a list of misspellings, misidentifications, and other errors on myco stamps, but the list rapidly became too long. You'd think that more care would be taken checking for important details like correct identification on actual postage.

References

Luther, Brian S. 2012. The first African mushroom stamps. *Spore Prints* No. 485 (Oct.), pp. 6–7. On-line and in color at www.psms.org.

Luther, Brian S. 2013. Fungus illustrated stamps from Greenland. *Spore Prints* 494 (Sept.), pp. 4–5. On-line and in color at www.psms.org.



Brian S. Luther

Top: Scott Catalogue 1403, 1404, 1405
Bottom: Scott Catalogue 1406, 1407, 1408, 1409. These last four are airmail stamps.

US TRAVEL MAGAZINE ACCIDENTALLY ENCOURAGES READERS TO TRY POISONOUS MUSHROOMS

Esin Huseyin

tnmagazine.com, Sept. 16, 2013

Arizona Highways, an award-winning travel magazine, perhaps took their name a little too seriously—when they accidentally informed subscribers on a particular way to get high.

In October's issue as part of the magazine's nature factoid section the Fly Agaric mushroom is featured and labelled as edible.

Arizona Highways latest issue has been mailed to its 123,000 subscribers. "We regret the error," said the magazine's publisher. Considered to be poisonous, the mushroom also contains psychoactive chemicals.

Win Holden (publisher of *Arizona Highways*) said that the "issue will not be sold on newsstands, and we are alerting our subscribers to the mistake."

According to UK drug advisory website, tucking into a Fly Agaric isn't the best idea: "People don't tend to eat fly agaric mushrooms raw as they can make you feel really sick and also because there is a greater risk of poisoning and death from this family of mushrooms."



DEADLY FUNGUS MATES WITH CLONES OF ITSELF

Tanya Lewis

<http://www.livescience.com/> Sept. 10, 2013

A fungus that causes a deadly brain infection has a curious mating strategy, in which it reproduces with clones of itself, a new study finds.

Most species that reproduce sexually produce offspring that are a genetic mix of two different parents. But the yeast *Cryptococcus neoformans* produces offspring "unisexually," from two identical parents. These offspring have additional copies of certain chromosomes, or threadlike structures that carry DNA, creating genetic diversity from scratch, study researchers say.

Sexual reproduction exists to increase the genetic diversity of a species, making it more adaptable to different environments. But sex comes at a price, requiring two individuals to spend energy and resources looking for a mate. [Microscopic Worlds Gallery: Fascinating Fungi]

"Normally, it takes two parents that are genetically different from each other, and the offspring are recombinants," or genetic combinations, said study researcher Joseph Heitman, a molecular biologist at Duke University in Durham, N.C. "But if there's no pre-existing genetic diversity to mix up, what would be the function of the unisexual cycle?"

Cryptococcus neoformans has two sexes, known as "a" and "alpha." An "a" and "alpha" can reproduce sexually (with each other), but since the vast majority of individuals are the alpha type, they were thought to reproduce asexually (from one individual). Then, in 2005, Heitman and his colleagues found that two genetically identical alpha yeast could reproduce together — unisexually.

Yeast sexual pairings often result in offspring with multiple copies of a chromosome, known as aneuploidy. This condition is associ-

ated with several human disorders, particularly Down syndrome, which results from having an extra copy of chromosome 21. But in fungi, aneuploidy can confer advantages, such as resistance to anti-fungal treatment.

In the new study, Heitman and his colleagues found that *C. neoformans* clones produced offspring that had traits different from their parents', such as drug resistance or pigmentation. The majority of those offspring had extra copies of chromosomes.

Some of the yeast later lost the extra chromosomes and became identical to their parents, suggesting the extra copies were responsible for the diversity of traits seen in the baby yeasts.

The yeast was reaping the benefits of sexual reproduction without some of the costs associated with sex, the researchers reported today (Sept. 10) in the journal *PLOS Biology*.

"This study pulls a lot of the pieces together into one coherent story," said microbiologist Richard Bennett of Brown University in Providence, R.I., who was not involved with the research. His own team has found that another yeast, called *Candida albicans*, also reproduces unisexually and produces aneuploid offspring. Whereas scientists had theorized that aneuploidy might yield diverse offspring, Heitman's team put everything together, Bennett told LiveScience.

In humans, *C. neoformans* can cause a life-threatening infection of the membranes that surround the brain. Most people are exposed to the fungus, but the infection generally strikes people with weakened immune systems. The pathogen causes more than 600,000 deaths a year, and is responsible for a third of all AIDS-related deaths.

Understanding how the yeast reproduces could eventually lead to better anti-fungal treatments, Heitman said.

TIRE-SLASHING SUSPECT SAYS HE WAS HIGH, FIGHTING GOBLINS

Ashley B. Craig

Charleston Daily Mail, Sept. 11, 2013

CHARLESTON, W.Va. - Authorities say the young man at the center of South Charleston's mass tire slashings told them he was high on psychedelic mushrooms at the time and thought he was battling other-worldly creatures. "... he thought he was playing some Japanese anime cartoon or game and was stabbing goblins or something," said Bob Houck, South Charleston's assistant chief of police.

David Williams, 21, of Third Avenue was arrested Monday afternoon and charged with felony destruction of property in a pair of incidents that left some 70 vehicles in two South Charleston neighborhoods with flat tires.

A second person, Jocelyn Melin, 22, of South Charleston, also was arrested. Houck said Melin was with Williams Saturday night when more than 33 vehicles were hit in the residential area near the Dunbar Toll Bridge. However, detectives believe she damaged only a few of the vehicles, leading them to charge her merely with destruction of property, a misdemeanor.

Officers also tied Williams to another 37 vehicles with slashed tires in the area of King Street and Glendale Avenue off Montrose Drive that were reported Thursday morning.

Houck said Williams told officers during an interview he ingested the mushrooms before the first round of slashings.

MUSHROOM HUNTING WITH THE PROS

Langdon Cook

<http://www.huffingtonpost.com/>, Sept. 5, 2013

In early August I got a call from a producer for the PBS TV series *Food Forward*. He had seen a review copy of my new book, *The Mushroom Hunters: On the Trail of an Underground America*, and wanted to film itinerant mushroom harvesters for an episode on wild foods. I knew just the guy to talk to.

Doug is one of the characters in my book. He's been hunting mushrooms commercially in the Pacific Northwest for 30 years. Before that he was a logger and he also captained a crab boat. Sometimes Doug cuts steel to make a little extra cash or digs razor clams. He's been roaming up and down the West Coast for decades doing outdoor jobs to pay the bills, mostly picking mushrooms. In recent years I've been roaming with him, meeting the pickers and buyers who work in a hidden economy known as the mushroom trail. Many of the pickers are refugees—from the Old Economy at home or war-torn countries abroad. They move with the seasons, preferring the fluctuations of a crop tended by nature (and the Gold Rush hope of hitting the mother lode) to the more stable yet monotonous alternative of agricultural work.

Recently Doug has put down more permanent roots in the woods outside Chehalis, Washington, where he's care-taking a property and building a little cabin for himself. In his mid-50s, he told me he was getting too old for mushroom picking and needed to rest his body. The TV shoot seemed like the perfect way to go out—a valedictory lap on the mushroom trail.

On the Thursday morning before Labor Day weekend, we met at a café in the moldering timbertown of Hoquiam, on the Olympic Peninsula, two hours southwest of Seattle. As luck would have it, the first major rainstorm of the season greeted us. We drove north through a downpour into the foothills of the Olympic Mountains, a former wilderness of jumbo Douglas firs, Sitka spruce, and red-cedar converted into an industrial forest of lumber products. These were dense, dark, and untraced woods that would unnerve the average hiker. Near a salmon stream, Doug had us pull over so he could check his lobster patch. The lobster mushroom is a species of fungus that parasitizes another species of fungus, transforming a white, gilled, and rather unpalatable mushroom into a bright orange and choice edible. The kingdom of fungi is full of such oddities. Doug said he couldn't remember the last time he ate one; for him, a mushroom is strictly currency.

After picking a few lobsters, we moved on. Our main quarry was a species of mushroom partial to the young Douglas firs so common in the cut-over timberlands of the Northwest, the beloved golden chanterelle, a wild edible found on restaurant plates from San Francisco to New York and all over the world, where it might be scattered across a cut of meat or used to spruce up a rich pasta sauce. The southern Olympic Peninsula, with its Paul Bunyan spirit and miles of timberlands, is the center of chanterelle harvest in North America.

Dressed in hoodies, jeans, and work boots—without a shred of Gore-Tex—Doug and his picking partner Jeff led the film crew down a steep and slippery slope covered in rain-washed salal and Oregon grape. It was tough going and wet—walking-through-a-car-wash wet. Despite the noon hour, it seemed like night was falling. “Don't worry,” Doug reassured his guests. “We won't get you lost in the woods.” The stumps of the original forest, some of them as wide as VW buses, dwarfed the new conifers crowding

around them. At the foot of these trees we spotted them: the fluted, egg-yellow caps of golden chanterelles peeking from the moss. Clusters of chanterelles appeared every few yards—a pound here, a few pounds over there. Doug guessed this one slope could fill his and Jeff's five-gallon buckets several times over, with about 80 pounds apiece. For their labor, the buyer in Aberdeen would pay them \$2 per pound, about \$160 for the day. A week ago and the price was closer to \$7 per pound, but now, with the beginning of the rainy season, the mushrooms were popping, and Doug was competing with Mexican immigrants, Southeast Asian refugees, and other former loggers and fishermen like himself.

The film crew marveled at this golden twinkling bounty and Doug laughed. “It ain't so much,” he said in the laconic way of experts in the rural arts. “You should see this place when the flush is really on.” He got down to business and the film crew tagged along. It didn't take long before everyone was soaked and sweaty from bushwhacking up and down the folds of a soggy Northwest forest. The crew, struggling hopelessly to waterproof their gear, seemed a little irritated at the implacable weather. Doug grinned. “This is just a drizzle,” he said, bending down to slice off another mushroom at the heels, his bucket filling as the tape rolled, making what might be his last run through a patch that he's picked every season for the past 20 years.



The end of a day of profitable mushrooming.

DEADLY FUNGAL DISEASE MAY SPREAD IN U.S.

Annie Hauser

<http://www.weather.com/>, Sept. 13, 2013

The Pacific Northwest—a region known for stunning natural vistas and a love of outdoor recreation—is also home to a deadly fungal disease that's spread through the air, according to public health officials. The *Cryptococcus gattii* fungus is rare, but spreading, researchers say in a new report published in *Emerging Infectious Diseases*.

As of June, only 171 sicknesses caused by *Cryptococcus gattii* (*C. gattii*) have been reported to the U.S. Centers for Disease Control and Prevention since 2004, according to NBC News.

In the Pacific Northwest region of Canada, it has sickened at least 338 individuals since 1999, health officials told NBC News. Since 2010, 34 people have died as a result of *C. gattii* in Canada and six in the United States, NBC News reports.

At least 100 of the 171 American cases have been confined to Oregon and Washington, but North Carolina, Rhode Island, New

Mexico, Michigan, Georgia, and Montana have also reported cases, according to this most recent study. In Florida, an otherwise healthy man contracted the infection, even though he had not traveled to endemic areas, researchers said. Outside of North America, tropic and sub-tropic regions have endemic rates of *C. gattii*.

The CDC doesn't consider *C. gattii* to be a massive public health threat, and there is currently no means of preventing an occurrence of the disease, but it does want to raise awareness of it.

Severe infections are characterized by deadly lung and brain infections, according to NBC News. Infection from *C. gattii* is characterized by trouble breathing, pneumonia, and possibly meningitis, researchers wrote in this most recent study. Some patients have also reported aches and pain throughout their body. These symptoms could help explain some American cases of meningitis that have not been attributed to *C. gattii*, researchers believe.

IDAHO TRUFFLE INDUSTRY BEGINS TO SHOW PROMISE

Sean Ellis

Capital Press, Sept. 9, 2013

Fifty truffles were discovered in Idaho orchards this year and the state's fledgling industry is showing signs of promise. Truffles fetch up to \$1000 a pound and the handful of Idaho farmers who have planted truffle-inoculated trees have high hopes for them.

EAGLE, Idaho - Idaho's fledgling truffle industry is starting to show signs of promise. Five of the valuable truffles—they fetch from \$400 to \$1000 a pound—were found in Paul Beckman's orchards last year, the first truffles ever discovered in Idaho.

Beckman's truffle-hunting dogs found 50 more this year. "That's a good trajectory. His orchards could conceivably produce a tremendous volume of truffles at that rate," said Charles Lefevre, owner of New World Truffleries and one of the founders and organizers of the Oregon Truffle Festival. Truffles, a fungus, attach to the root tips of trees and provide them micronutrients.

Beckman has planted about 35 acres of truffle-inoculated trees in the Eagle foothills, and neighbor Brad Sprenger and a handful of others in the area have planted a few dozen more. "We hope this turns into a new crop for southwest Idaho that is very lucrative to farmers who plant and raise them," Beckman said.

Beckman planted his first trees in 2006 and Sprenger planted his orchards the following year. About 10,000 truffle-inoculated trees have been planted in the valley, and the area may have the largest concentration of truffle orchards in the country, said Lefevre, who inoculated the seedlings planted in Idaho and serves as a mentor to Idaho's truffle farmers.

Based on production in other areas, it's reasonable to expect the Idaho orchards will produce about 35 pounds of truffles an acre when they're mature in a few years, Lefevre said. At up to \$1000 a pound, the payoff could be significant. "If it turns out the way we think it's going to, then it's really going to be some good money someday," Sprenger said.

But the payoff isn't immediate—it takes about eight years for trees to begin producing a significant amount of truffles—and Beckman said farmers have to be in it for the long haul. "You just have to be patient because it takes time for everything to mature and for truffles to start to be produced," he said.

Beckman said the worst-case scenario is that he ends up with an orchard full of hazelnut and oak trees. "It's no different than any other farming operation. There is risk and reward built into it," he said. "However, you have the potential for a healthy return on these in the future."

Beckman said the truffles he found this year were small and crumbly, and Lefevre said a cold snap that hit the area in January could have affected them. "Cold weather like you had this year is something that affects a truffle crop ... and that's one of the risks," he said. "But truffles are so valuable it's worth it. All of Paul's truffles that he says are small and crumbly are still marketable."

AUSTRALIA'S ELUSIVE UNDERGROUND ORCHID

Rebecca Brewin

<http://www.abc.net.au/>, April 16, 2013

Discovered near Corrigin in May 1928, the Western Underground Orchid (*Rhizanthella gardneri*) is the only flora of its kind in Western Australia and only one of three species found in Australia. Unlike other flowers, the underground orchid doesn't get its energy from the sun through photosynthesis. The plant feeds on a fungus, *Thanatephorus gardneri*, that forms between the flower and thickets of *Melaleuca uncinata*, commonly known as Broombush, Broom Honey myrtle, or Brushwood.

Other underground orchids are found in New South Wales and Queensland.

According to the Department of Environment and Conservation (DEC), each plant produces up to 100 small, inward-facing red colored flowers, surrounded by six to 12 large cream or pink bracts.

The bracts form a tulip-like head that curves over the flowers leaving a small opening at the soil surface, which is then covered by leaf and bark litter.

DEC Esperance District conservation officer Julie Waters said the discovery was made by chance during land clearing.

"The underground orchid is known from about 80 plants in six different locations; it's very rare and very hard to find," she said.

"It grows entirely underground underneath Broombush thickets. The original discovery was when they were clearing land for farming and they ploughed it up and thought 'hmmm what's that funny looking thing?'"

After its discovery the flower was found six more times up until 1959, then wasn't seen again until 1979 near Munghlinup, 300km south of previous known locations.

"To find the underground orchid, even where we know it is, we wait until it's flowering (late May or early June) and then go crawling underneath the broom thicket and lift the leaf litter up and see the flowers under there," she said.



Rhizanthella gardneri.

cont. on page 8

Elusive Underground Orchid, cont, from page 7

“It’s very sensitive to getting trampled over so that’s why the known populations that we’ve got are highly secretive.

“If we have a look and do some surveys we have to cover the plants back up so they don’t dry out; it’s a very weird plant.”

It is believed that small burrowing animals spread the orchid’s seeds by eating the flower.



Like all Western Australia flora, the underground orchid is placed in a ranking system. “Because this plant has around 84 individuals, that automatically puts it in the critically endangered category,” Waters said.

The DEC have a number of recovery actions in place to protect the plant, including research into what the underground orchid needs to thrive, fire management, and fencing off reservations to protect its habitat.

**2013 NORTH AMERICAN TRUFFLING SOCIETY
HENRY PAVELEK MEMORIAL SCHOLARSHIP**

Jim Trappe

Henry Pavelek Sr. joined NATS in 1982 and soon was elected president. His energy and enthusiasm for truffles and truffling provided much of the driving force that established NATS as a sustainable organization.

A scholarship fund has been established by NATS in his memory. Applicants should be graduate students or outstanding undergraduates conducting research on physiology, taxonomy, phylogeny, ecology, animal interactions, commercial harvest, or culinary attributes and uses of hypogeous fungi.

The scholarship for 2013 is for \$1500. The recipient will be announced at the NATS meeting and potluck in Corvallis on December 7. The application form can be accessed by clicking on its link at www.natruffling.org. The application deadline has been extended to October 31.



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