

# SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY  
Number 517 December 2015



## MILLIONS OF BOOKS - A NEW WEST COAST MUSHROOM GUIDE INCLUDED - ARE 'FAIR USE'

### A case of David vs. Googliath

10 years since lawsuit filed - it may not be over

The editor, news services

The U.S. Second Circuit Court of Appeals in October ruled Google Books could publish significant sections of millions of books and make the texts available for online searching without infringement of copyrights.

A Google search of "California Mushrooms: A Comprehensive Guide" revealed that 118 complete pages of the 580-page tome are easily accessible for free. This book features hundreds of photographs by one of the nation's leading mushroom photographers and was published by Timber Press in 2014. It is co-authored by Dennis Desjardin, Michael Wood and Frederick Stevens.

In deciding that Google's millions of scanned texts could be freely used (The Authors Guild Inc. et. al. v. Google Inc.) the federal court defined the capabilities and restrictions of the Google search tool as "fair use." Further, its interpretation of "fair use" under the Copyright Act means that no significant harm should accrue to copyright holders from such use, although, "We recognize that the snippet function can cause some loss of sales," the court said.

The original case brought in 2005 by the Authors Guild was in part defended by Google (now called Alphabet Inc.) based on its plan to use only "snippets" of texts in search results.

Desjardin, contacted at his San Francisco State University office where he is professor of biology, said he was not happy about

## Happy Holidays



the situation and he lamented the amount of material that was published in the free online version of the book, which was just released in print this year due to some delays. "We get nothing from it," he said, "other than some potential marketing."

Mary Rasenberger, Executive Director of the Authors Guild, called Google's practices "seizure of property" and a "serious threat to writers and their livelihoods" in an article published by the ezine, "Consumerist."

A Google spokesperson responded to an email by stating that authors can have their books or pages on Google Books "removed from the corpus."

In its decision, the appeals court rejected three arguments by the plaintiffs: that authors had a "derivative right" in the application of the snippet views of their works; that Google Books might expose the authors' books to hacking; and Google's distribution of the digital copies to libraries exposed the books to risk of loss. The Authors Guild plans to appeal the decision to the U.S. Supreme Court.



## PRESIDENT'S MESSAGE

### Kim Traverse

While committee chairs and volunteers were debriefing our fall show (we are always trying to improve!) I put up on the white board a schematic of the PSMS year.

There is a nice distribution and balance in a visible form like that. We do quite a lot and we spread both the hard work and the fun out over the year. These include:

Two public shows: a smaller MushroomMaynia and the larger, two-day fall show

Two seasons of Field Trips - spring and fall

Two seasons of ID Clinic - free and open to the public

Monthly meetings, usually with lectures

Beginner and intermediate mushroom identification classes

The Survivor's Banquet in March

The Holiday Extravaganza in December

Certain of those - like the ID Clinic, the field trips, and the identification classes - help frame and support MushroomMaynia and the annual fall Wild Mushroom Show.

But in the background are all the smaller things we do: answering dozens of queries per week, speaking to other groups, maintaining our office and library.

All this work takes lots of people and we have some of the best volunteers I've ever worked with. We are just about at the end of our 51st year and we accomplished a lot this year. We are financially stable and very experienced but perhaps more importantly, we are still as excited by the kingdom of fungi as ever.

Experience plus passion will always stand us well.

Happy holidays to all!



# Spore Prints

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PUGET SOUND MYCOLOGICAL SOCIETY  
Center for Urban Horticulture, Box 354115  
University of Washington, Seattle, Washington 98195  
(206) 522-6031 <http://www.psms.org>

OFFICERS: Kim Traverse, President<sup>2015-2017</sup>  
*president@psms.org* (206) 380-3222  
Daniel Winkler, Vice President<sup>2014-2016</sup>  
*me@danielwinkler.com* (425)-822-5080  
John Goldman, Treasurer<sup>2014-2016</sup>  
*treasurer@psms.org* (206) 933-0838  
Luise Asif, Secretary<sup>2015-2017</sup>  
*asiff.luise@yahoo.com* (206) 364-6741

TRUSTEES: 2014-2016:  
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James Ardena, Carlos Cruz,  
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ALTERNATE: Paul Hill, Gwen Heib

IM. PAST PRES: Marian Maxwell

SCI. ADVISOR: Dr. Steve Trudell

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



## CALENDAR

Dec. 8 Monthly meeting

Dec. 15 *Spore Prints* deadline (note early deadline)

## BOARD NEWS

### MARIAN MAXWELL

As is traditional, the board of trustees will be hosting the Holiday Extravaganza at our December 8 meeting. Plans are under way for the event. Work is continuing on developing a PSMS blog. President Kim Traverse will be requesting help for a storage shed cleanup. The next PSMS annual Wild Mushroom Show will be on Oct 22-23 in the fall of 2016. The board voted to approach the Kitsap Mycological Society and offer to host (or co-host) the All Sound Foray next year if they would like.

The key points from the 2015 show debriefing on Nov 12 were discussed and we will be following up with further discussion. Danny announced the closure of the 2015 Hildegard Hendrickson ID clinics for the fall; they will resume in the spring. Board members Marian and Donna volunteered to be on the Nominating Committee for the 2016 elections in February. The board is seeking a non-board member from the general membership to round out the team.

## MEMBERSHIP MEETING

The members-only Holiday Extravaganza (aka Cookie Bash) is Tuesday, December 8 at 7:30 p.m. in the Center for Urban Horticulture, 3501 N.E. 41<sup>st</sup> Street, Seattle. It is hosted by the PSMS Board of Trustees. Sign-ups are online under Event Registration. We encourage you to wear your most festive fungal-themed attire (jewelry, hats, etc.).

**Food:** We will have the main course provided for this meeting. We ask that everyone else bring a contribution (potluck style) for hors d'oeuvres, salads, side dishes, baked goods, desserts or other treats! You can sign up for the category of food when you register for the meeting!

**Door Prizes and Edible Art contest:** In keeping with our tradition there will be an edible art contest with winning prizes for the top three entries determined by popular vote! Potluck entries that look most like mushrooms or have a mushroom theme can be entered into this contest. Entries will be consumed after the votes are in! This year's theme is "Colorful fungi." You can arrive at 6:30 p.m. to set up your entries in the contest. As always in consideration of our members who have allergies, please list your ingredients in your potluck or edible art contribution on a small card. Those over 21 may bring their favorite wine or beer (we will have a banquet permit).

**Reserved seating:** Members will be able to register online for this meeting on our website at [www.psms.org](http://www.psms.org) under the "Events" heading. Just click on "Events Registration." Doors open at 6:30 p.m. for socializing and the appetizer table will be open at 7 p.m. Reserved seats will be held till 7:45 p.m. Empty seats remaining at 7:45 p.m. will be given to any PSMS members waiting at the door who did not register. Space is very limited so sign up early. People who do not have reservations may not be seated.

**Photos for the program:** We need your photo submissions! We want to see your photos! We have no presenter invited for our annual holiday extravaganza and will rely on our members for entertainment! We love to hear new and familiar voices and see your favorite mushroom-related pictures. You are invited to contribute up to 10 digital photos you would like to share and narrate.

The photos will be inserted into a Power Point presentation before the meeting. Short video presentations on DVD format are also welcome. Please email your photos to our speaker chair, Daniel Winkler <[me@danielwinkler.com](mailto:me@danielwinkler.com)> by December 4 to be included in the program. If you miss the deadline please inquire if belated submissions are possible. See you at the Cookie Bash!

## NOMINATING COMMITTEE FOR ELECTIONS

### Marian Maxwell

At the end of every year the PSMS board asks some members to serve on the Nominating Committee to help us find new candidates for the Board of Trustees for the following year. Donna Naruo and I are the board members on this year's Election Committee.

Our bylaws also require a member from the general membership to serve on the committee. Please consider serving either on the Nominating Committee or on the board itself. We ask people to serve for a two-year period as a trustee. The next board term will be April 2016 – March 2018. Board meetings are held once a month but there is no meeting in July. These board meetings are from 7:30 p.m. until 9 p.m. on the third Monday of each month.

*continued on page 4*

## October 24 Field Trip Report

Brian S. Luther

Ninety-nine members signed in for this annual event on Hood Canal. Our hosts were new members Julie and Dan Little and everybody was happy to have such a nice spread of morning breakfast snacks and hot coffee. Thank you Julie and Dan! We had no fire restrictions, so I was able to bring down three large loads of firewood and keep a big fire going in the fireplace all day. This was a popular place to stand or sit throughout the day. I got help moving and rearranging several of the heavy picnic tables outside for mushroom specimens, which also made more room for us inside the shelter, with so many members attending.

My regularly scheduled 10 a.m. meeting at this location coincided with a downpour, so rather than have this outside, we were packed in the shelter. This was followed by members signing up with Field Trip Guides and then everybody dispersed to go out collecting for a few hours. By early afternoon we had several picnic tables covered with fungi and I was especially glad to get Josh Powell and Wren Hudgins to help with ID, making sure all data slips from the park were correctly documented. I did a rough count of approximately 120 different species collected and displayed.

Several members found choice Matsutake (*Tricholoma magnivelare*) right in the park as well as both yellow and white chanterelles (*Cantharellus formosus* and *C. subalbidus*) and other miscellaneous edibles. One of the prettiest species found had to be the bright yellow and slightly viscid *Hygrocybe chlorophana*. Two small collections of the very interesting *Aphroditeola olida* were separately found; it's a small orangish clitocyboid-looking fungus with a distinctive odor of gumdrops or bubblegum, and it used to be called *Hygrophoropsis olida*.

Only about 12 members stayed for the potluck, but as always it was enjoyable. As we were just finishing potluck and getting ready to clean up, I was really pleased to have new members Marcus Sarracino and Christina Cox come forward to volunteer to host at our last field trip, because we didn't have any other hosts lined up. Refer to my report on that event.

## Field Trip Report for Oct. 31

Brian S. Luther

Wren Hudgins and I were the first to get to the gate before 6:30 a.m. and don raingear, and man did we need it. Our Pilchuck Recreation Assoc. contact then arrived to unlock the gate for us, followed by Kim Traverse, Marian Maxwell and Denise Banaszewski. This was the crew that checked registered members in. It basically rained all day, with a few brief periods when it wasn't. So, we were very glad being prepared with appropriate rain-shedding clothing. Even so, many members came back pretty wet.

We had 70 members show up and sign in, so many never came at all (we had a full registration limit of 125). Our hosts were Christina Cox and Marcus Sarracino, who arrived shortly after 6:30 a.m. I took them up to the shelter from the gate in the dark, showed them where to set up, then got a fire going in the woodstove, as they were setting up, then I went back to the gate to help check in members. Marcus and Christina were prepared with lanterns because setting up all the hosting stuff was quite a challenge in this

old horse shelter and in the dark without any electricity. They set up a wonderful spread of very welcome snacks, fruit and hot coffee and we all needed and appreciated it. Special thanks Christina and Marcus - a job well done!

Also, during the day Joyce Budisana, Jo Ann Henderson and Marian Maxwell made big pots of delicious hot soups that were enjoyed and especially appreciated because of the damp conditions. Joyce had set a tray out asking for donations of good edibles to put into the soup and she got a very good response from members. So, we had an abundance of tasty, wholesome and warm foods. Our five field trip guides included Wren Hudgins, Bill Buck, Jamie Ardena, Erin O'Dell and Dave Weber. As with last year, the two-way radios proved very useful for communication between guides' groups, helping direct those who had not yet found any good edibles to more favorable spots in the woods.

I counted around 80 different species on display and many members found at least some yellow chanterelles (*Cantharellus formosus*) mostly in good condition, as well as a few choice boletes (*Boletus edulis*, *B. pinophilus* and *Suillus luteus*) and some oyster mushrooms also, including *Pleurotus ostreatus* and *P. pulmonarius*. One of the more colorful fungi found included *Hygrocybe singeri*, a viscid close relative to *H. conica*, with a bright red or red-orange cap and a lemon yellow stem which stains black where handled or bruised.

Because it was Halloween, the majority of members left early, but those who stayed had a fantastic potluck.

A special note of thanks to all members who contributed to the field trips throughout 2015 - we couldn't do it without you. I'm actively working on the spring 2016 field trip agenda, so I look forward to seeing many of you next year. Please consider volunteering, because we always need help. Let's also hope for a good winter snowpack, unlike what we got early this year. This would not only decrease the risk of the terrible forest fires we've had to endure, but help with runoff for the environment overall and also be good for our mushroom field trips. Have a wonderful holiday season and a happy new year.



A cream of mushroom medley soup (see recipe on back page) is being attended to by chefs Jo Ann Henderson and Joyce Budisana at the Oct. 31 field trip. Other PSMS members are gathered by a fire in the background.



## ON THE TRAIL OF A DEADLY FUNGUS

Jonathan Morales, **PHYS.ORG**

New research from two San Francisco State University biologists is filling in pieces of the puzzle about how a deadly fungus arrived in California and is wiping out amphibian populations. The disease chytridiomycosis, caused by the fungus *Batrachochytrium dendrobatidis* or Bd, has caused the extinction of more than 200 amphibian species and has driven several California species to near-extinction.

Together, two studies from San Francisco State professors Vance Vredenburg and Andy Zink help paint a clearer picture for biologists and conservationists working to track Bd and prevent more amphibian extinctions. "A big part of being able to understand what happens today is being able to describe what happened in the past," Vredenburg said.

In the first study, published in the journal *EcoHealth*, Vredenburg and his colleagues found that Bd invaded California's islands the same way it invaded the mainland. These findings indicate that the fungus invaded both areas at the same time and that there were likely multiple pathways of invasion.

The path taken by the fungus contrasts with places like Illinois, where Vredenburg's past research has shown that Bd coexisted with amphibians for nearly a century. "There are modes of invasion we haven't yet figured out," Vredenburg said.

In the second study, co-authored by Vredenburg and Zink and led by then-graduate student Carla Sette, the researchers tested both current and museum samples of California slender salamanders. They found that as more time elapsed since initial exposure to Bd, the less likely that population was to carry the disease in the field. "Just because the disease is moving through a particular population, it doesn't necessarily mean that population is doomed," Zink said. "Populations of certain species may be able to sustain an invasion." The study was also the first to look at how sociality - the level to which animals in a specific population physically interacted with each other - may be influenced by rates of chytridiomycosis infection.

"Disease theory in general says that when you have hosts that are highly concentrated, you get a much more rapid spread of the disease," said Sette, now a Ph.D. student at the University of California, Santa Cruz. And if a deadly disease is spreading quickly, the host population is likely to adapt its behavior. "We were predicting that the populations that had been exposed longer would form smaller groups, and that's basically what we found."

Vredenburg is part of a group of researchers who issued a warning earlier this year that another deadly infection could devastate salamander populations in North America. Researchers are hoping to learn more about how these deadly pathogens behave and the role that humans play in their spread.

"We need to be smarter in the future about the animals and plants that we're moving around the world, because we're not just moving them, we're moving microbes, including pathogens, and that's not a good idea," Vredenburg said.

## BOOK REVIEW

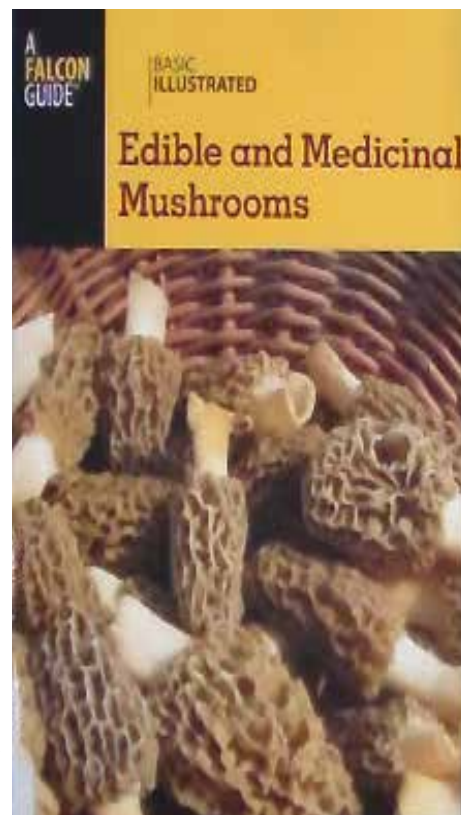
Ron Post

I served as PSMS book sales chair for four years, and I used to recommend two books for beginning mushroomers: the familiar "New Savory Wild Mushroom" and "All that the Rain Promises and More." I'll be adding to that list (with a caveat or two) the Falcon Guide Basic Illustrated series' "Edible and Medicinal Mushrooms" by Jim Meuninck.

The text is organized into logical categories and intelligently written. The many cautions about lookalikes as well as the free use of common names will appeal to beginners. The photos are acceptable and recognizable. The introductory paragraphs about microscopy are really a bit special for such a small book (hardly 50 or so species and just 80 pages). Most authors cover that subject for advanced or intermediate-level mycology, so it's unusual in a beginner's field guide.

Mr. Meuninck lives in another part of the country, and he lists all *Russula*, *Lactarius* and *Pholiota* under the section, "Inedible, Toxic ...." That's a bit laughable and it leaves us in the Northwest high and dry, as some of our first wild-mushroom tastes were undoubtedly *Russula xerampalina*, *Lactarius deliciosus* and *Pholiota terrestris*. Another gaffe is the inclusion of our club in an appendix as "Pugent Sound Mycological Society."

Well, regional and copy-editing quibbles aside, I found the price of this book most agreeable: many copies seem to be available under \$10, which could make it an immediate hit among beginning mushroomers.



## NOMINATING COMMITTEE

cont. from page 2

The trustees work to ensure that all of the club's activities, programs, and classes are supported and that our club is adhering to our society's mission. This year we will be electing a vice-president, a treasurer, five trustees at-large and hopefully several people as alternates in the event someone has to step down for any reason.

You may nominate yourself, or someone else with their permission. If you have any ideas for someone you think would be a good candidate but would prefer someone else ask them, please contact Donna or me. We would be happy to ask them. My email is <pastpsmspres@yahoo.com> or you can call me at 425-235-8557.

## BEAUTIFUL NEW MUSHROOM STAMPS FROM SWEDEN

Brian S. Luther

The Swedish post office (Postnord) recently released two sets of colorful mushroom stamps. I'm showing them here to bring you up to date since I previously documented mycophilatelic items from Sweden (Luther, 2014).

These sets were issued August 20, 2015, and thus are too new for me to have Scott Catalogue numbers for. It's rare for a country to issue two different sets of stamps with the same theme (no matter what the subject) within the same year, so we just got a bonus of lovely mushroom stamps.

All of these stamps show mushrooms as the main illustration: FDC = first day cover, an envelope (cover) with the stamps affixed and canceled on the first day the stamps were issued, usually with a colorful illustration (cachet) of the same theme; maxi-card = a postcard with the stamp illustration(s) and also with the set of stamps canceled on the first day of issue.

These are all first class stamps, but are not marked with a denomination. Postnord told me their values are all SEK 7 (i.e., 7 Swedish Krona). They're labeled with both Swedish common names and scientific names.

All are self-stick, but have marginal perforations, as well as security die-cut marks on the stamps to prevent, or at least discourage, duplicate use (because they would tear along these marks if someone attempted to peel and re-use them).

### Set One

The first set consists of five different stamps and comes in a booklet of 10 that gives additional information about the stamps. These are lovely, mycologically accurate paintings of the following species:

*Lactarius volemus*, *Boletus edulis*, *Ramaria flava*, *Hygrocybe punicea*, *Craterellus tubaeformis*.



### Set Two

The second set has two stamps that were issued as a continuous coil. Unlike the first set, there is no supplemental information about the stamps because they're not in a booklet form.

Both of these stamps are stylized renditions and not entirely morphologically accurate. Nonetheless, they're really cute (see above right).

*Cantharellus cibarius*, *Coprinus comatus*



Also issued with these stamps is a gorgeous FDC and maxi-cards. The FDC actually has both of these sets together and the cancel is a side view of a chanterelle (see below).



Brian S. Luther photos

Sweden 2015 FDC

### Collector's Sheet

There's also a collector's sheet showing a very large *Macrolepiota procera* at the top, even though this species is not on any of the stamps, and all the stamps in both sets are on the bottom.



Sweden 2015 collector's sheet

### References

Luther, Brian S. 2014. Fungus-Illustrated Stamps from Sweden. *Spore Prints* 504 (September), pp. 4-5. Online and in color at [www.psms.org](http://www.psms.org).

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*Coming next year*

from the

North American Mycological Association

17th International Fungi & Fibre Symposium

October 17-22, 2016

Madeira Park, BC Sunshine Coast

Forays in coastal rainforests, workshops, dye pots, and more (see [www.namyc.org](http://www.namyc.org))



## ***Marasmiellus filopes* - a tiny garlic-scented mushroom that you'll smell before you see**

**Brian S. Luther**

At this time of year you can be walking in our conifer woods in the Entiat Mountains (Chelan County outside Leavenworth, WA) and suddenly smell a strong aroma of garlic. But where's it coming from? Lo and behold, you're actually stepping on extensive mats of *Marasmiellus filopes*. This minuscule mushroom, if growing singly would be totally unseen (and unsmelled), but fortunately it grows in such dense patches that it actually carpets areas of deep conifer duff with hundreds of basidiocarps close together.

I find it abundantly in the conifer duff of pure stands of Douglas Fir (*Pseudotsuga menziesii*) or with Grand Fir (*Abies grandis*) and/or Ponderosa Pine (*Pinus ponderosa*) or Western Red Cedar (*Thuja plicata*) mixed in. It's always in very deep needle duff that's several inches thick and quite fluffy - not compact at all, and is most abundant in November, just a few weeks before the forest floor gets covered with snow or everything freezes.

One tiny mushroom of this species has only a very slight and barely noticeable alliaceous odor (=onion or garlic-like) if plucked and squeezed, but in mass and stepping on hundreds at once, even with one foot, the aroma definitely gets your attention right away.

All colors in quotes in my description of this collection below are from Ridgway (1912).

### **Collection description**

*Marasmiellus filopes* (Peck) Redhead

BSL coll. #2015-1113-1

In deep needle duff of Douglas Fir, Eagle Creek, Chelan County, WA. Elev. 1,800 ft. Nov. 13, 2015.

**Pileus** up to 3.5 mm wide, at first minutely campanulate then slightly umbonate, becoming shallowly convex to subplane or more often umbilicate or with a slightly depressed disc at maturity, striate with up to 12 radiating lines and furrows (based on size), as well as circumferential striae visible on some larger specimens under magnification; bicolored with the disc a pale tan or a pinkish buff as "Cream Buff" to "Chamois" with the majority of the pileus and margin distinctly paler as "Cartridge Buff," entire surface minutely tuberculate under higher magnification; margin itself finely wavy or scalloped.

**Lamellae** - up to 7 full lamellae (extending to the cap margin) and 2-7 lamellulae (partial lamellae not reaching the stipe), only infrequently slightly intervenose, widely spaced and from 0.3-0.5 mm deep, with the edge from 0.050 to 0.10 mm thick and smooth in outline, appearing mostly slightly adnexed, concolorous with the pileal margin.

**Stipe** up to 3 cm long x 0.20 - 0.25 mm wide, terete (evenly cylindrical throughout length), slightly straight to more often bent or contorted, slightly wiry, concolorous with the disk, or somewhat darker downward, but drying "Honey Yellow" or darker, appearing mostly solid in cross section, surface smooth to very finely, but not uniformly farinose, insititious in attachment and with a very short, abrupt knob-like point on the substrate, visible only under higher magnification. Frequently sterile stems without caps will accompany the others.

**Odor** extremely mildly alliaceous for individual basidiocarps, but strong when crushing many altogether, especially under foot.

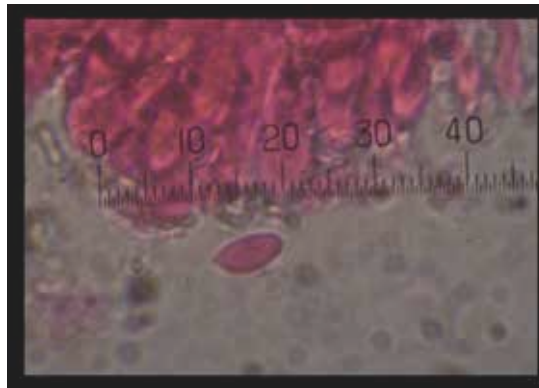
**Taste** very weakly alliaceous even chewing on several at a time.

**Microstructures:** **Hyphae** 2-3.5  $\mu\text{m}$  wide, hyaline, thin-walled with frequent clamp connections and some scattered larger hyphal segments seen up to 5-6  $\mu\text{m}$  wide. **Pileipellis** a compact layer of hyaline contorted and slightly thick-walled hyphae with mostly short irregular diverticulate extensions, also with distinct globular deposits of amorphous matter on the very surface which stain in phloxine. Lamellar trama composed of interwoven hyphae.



Above: *Marasmiellus filopes* in huge numbers growing from needles on the forest floor. Below: Basidiospore at 1000X in ammonium hydroxide and phloxine. Below right: Close-up of same.

**Pleurocystidia** not seen, but some infrequent fusiform-ventricose hymenial cells resembling cystidioles were observed. **Cheilocystidia** uncommon, with one or more narrow short or elongate diverticulate projections. **Basidia** 25-32 x 5.5-7  $\mu\text{m}$ , clavate, sometimes centrally constricted, with a basal clamp connection, 4-sterigmate. **Basidiospores** 7-9 x 4-4.5  $\mu\text{m}$ , elliptical to slightly amygdaliform (almond-shaped), with a prominent apiculus, thin-walled, smooth (unornamented) and inamyloid in Melzer's



Brian S. Luther photos

reagent. **Stipe tissue** composed of long parallel hyphae 3-5 (7)  $\mu\text{m}$  wide, hyaline, smooth, septa with or without clamp connections. Exterior stipe cells slightly thick-walled, parallel and with short uneven diverticulae (irregular hyphal cell wall projections) primarily on the exterior facing sides of these cells.

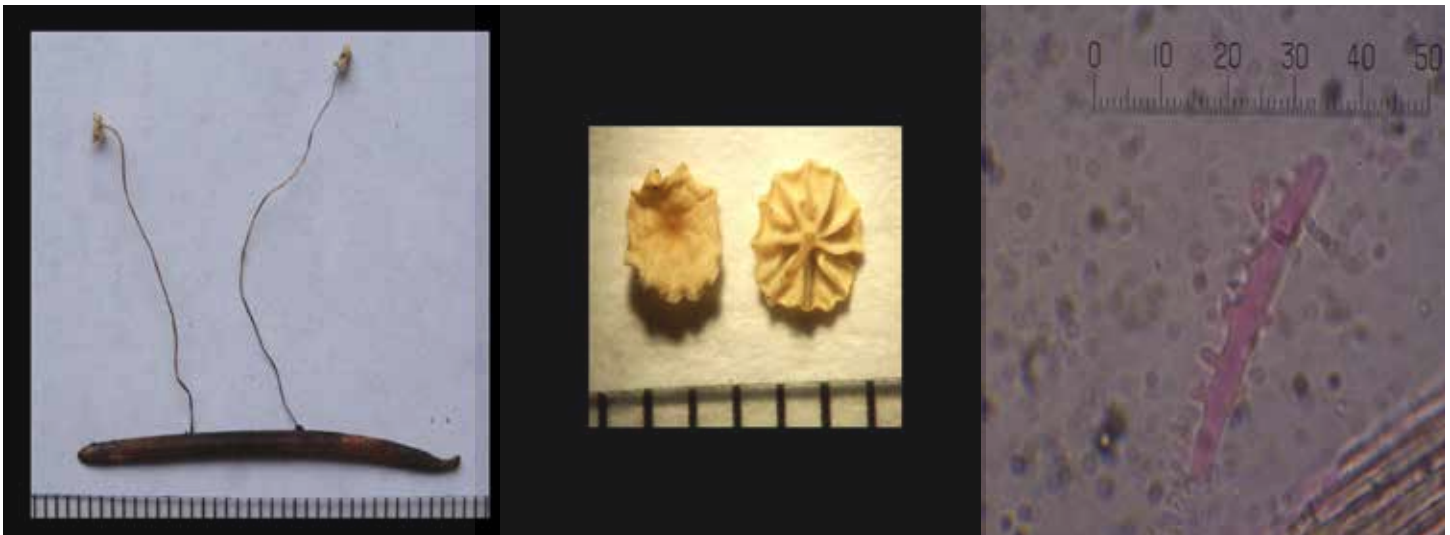
**Habit and habitat:** Occurring singly or with up to three mushrooms growing on a single dead, fallen Douglas Fir needle, in deep needle duff in dense conifer forest. Abundant, forming extensive intermittent patches of thousands growing in a close gregarious fashion, carpeting the forest floor.

### **Discussion**

This species was originally described by Charles Horton Peck in 1872 as *Marasmius filopes*, but curiously he makes no mention of this mushroom having any odor at all. It's interesting that references to common farm animals and rural living at the time creep into descriptions



*continued on next page*



Above, left to right: two carpophores of *M. filopes*, with stipes "scarcely thicker than hog bristles," growing on a single Douglas Fir needle; a 10X dissecting microscope view of cap and lamellae; exterior stipe cells with diverticulate cell projections and parallel stipe hyphae in corner below (1,000X in ammonium hydroxide and phloxine).

during this period. While very briefly discussing this new species he says "stem scarcely thicker than hog bristles." Today, most people would wonder what a hog bristle even is. In Peck's description (p. 77) he gives no microscopic features at all, which was quite typical at the time during this formative stage of mycological progress. Some infrequent microscopic dimensions of spores are given by him for other species over the years, but they're always expressed in awkward fractions of an inch, not in the metric system.

Thirty-one years later, in 1903, Peck described another new species *Marasmius thujinus*, somehow not realizing it was exactly the same as his *M. filopes*. Again, with this description in 1903 he says nothing of the mushroom having an odor, making me wonder if he wasn't a bit olfactorily challenged? Also, Peck (1903, p. 26) describes the dimensions of *M. thujinus* in "lines." A "line" was equal to between 1/12 to 1/10 inch, so it's not well defined as a precise measurement. According to my copy of Stearn (1966, p. 113) the old increment "Linea" (line) is equal to 2.25 mm, but this was known to vary slightly, from place to place.

So between hog bristles, lines and spores that are fractions of inches, some of this information might be a little confusing to track. Peck was the New York state botanist and from the late 1860s to 1913 he made a huge contribution by describing many new species of mushrooms from North America, many retaining his original species name, even though the genera may have changed. Now let's move forward to the recent present and in 1980 Scott Redhead transferred this fungus to the genus *Marasmiellus*.

These gilled mushrooms are so tiny that they actually grow from *single* conifer needles. One of Peck's illustrations of his new species (1872, Plate 4, No. 27) shows two of these diminutive mushrooms growing out of one dead Balsam Fir needle - now that's a small mushroom!

This mushroom has stems (stipes) that are referred to as *insittitious*, meaning they appear to grow directly from the substrate, with no

noticeable mycelium at the base.

In Washington state we have several other gilled mushrooms having a garlicky or onion-like odor that you might encounter, including species in *Gymnopus* and *Marasmius*. For a convenient key that covers these odoriferous species for the PNW (and others that are related, but with no odor), refer to Murphy (2005). We also have many truffles (Ascomycota) and False Truffles (Basidiomycota) with these odors.

If you're interested in reading about other fungi with an alliaceous aroma, please refer to Luther (2009). For a brief report on another species of *Marasmiellus* that we have here, consult Luther (2015).

## References

- Luther, Brian. 2009. Mushrooms that smell like garlic or onions. *Spore Prints* No. 457 (December), pp. 4-6. On-line and in color at [www.psms.org](http://www.psms.org)
- Luther, Brian S. 2015. Some Winter Mycology. *Spore Prints* No. 510 (March), pp. 6-7. On-line and in color at [www.psms.org](http://www.psms.org)
- Murphy, Jack. 2005. Trial key to the species of Marasmioid fungi in the Pacific Northwest. Pacific Northwest Key Council. On-line at <http://www.svims.ca/council/Marasmi.htm>
- Peck, Charles Horton. 1872. Report of the Botanist, in the 24th Report on the New York State Museum of Natural History, pp. 41-108, with Plates 1-4. Albany, The Argus Co. Printers.
- Peck, Charles Horton. 1903. Report of the State Botanist 1902. New York State Museum, *University of the State of New York, Bull.* 286, 194 pp., plus five plates.
- Redhead, Scott A. 1980. *Fungi Canadenses*, No. 179: 1-2.
- Stearn, William T. 1966. *Botanical Latin*. Hafner Publ. Co., New York. 566 p.



# MUSHROOM MEDLEY CHOWDER

**Joyce Budisana**

Although it was a bit damp and we were competing with a major holiday (Halloween) we had a great time at the Armstrong Tract field trip on October 31. Thanks to everyone who made generous donations of found edible mushrooms for our chowder and, especially to Marian Maxwell and Wuqi and Dave Weber who made significant contributions of boletes and chanterelles. And thanks to Brian Luther and Marian Maxwell for meticulously sorting the mushrooms. Here is the recipe for eight servings.

- 3 cups mixed mushrooms of your choice (about 12 oz., chopped)
- 2 tablespoons vegetable cooking oil
- 2 tablespoons butter
- 1 medium size yellow onion (chopped)
- 2 cloves garlic (minced)
- ½ cup white wine (such as sauvignon blanc)
- 2 cups chicken stock
- 1 medium size Yukon Gold potato (cubed ½ in. size)
- ½ stalk celery (chopped)
- 2 cups (about 3 ears) of sweet corn kernels
- 2 cups of half-and-half
- 1 tablespoon of fresh thyme
- Salt and pepper to taste
- 3 tblsp all purpose flour mixed with 5 tblsp cold water

In a large sauté pan, add 1 tablespoon oil and cook mushrooms (add some salt) until most of the moisture is released and then evaporates, about 5 minutes. Heat the remaining oil and butter in a medium pot over medium heat. Add the onion, and cook, stirring until softened and caramelized, about 8 minutes. Add garlic, cook 2 minutes, until fragrant. Add the potatoes, broth, wine, bring to boil, then simmer until the potatoes are almost fork-tender, about 8 to 10 minutes. Stir in the cooked mushroom, celery, corn, thyme, half-and-half and simmer 5 minutes to heat through. Add the flour mixture to slightly thicken the chowder, cook additional 5 minutes. Season to taste with salt and pepper. Serve. (Contains dairy, wheat, alcohol)



Cafe Karma photo

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