

MYCENA NEWS

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Submissions for the February newsletter are due by January 20th

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JANUARY GENERAL MEETING:

Tuesday, January 16th, 2018

7-10pm

Hall of Flowers / County Fair Building

Michael W. Beug: Hallucinogenic Mushrooms as Entheogens: The Use of Psilocybin Mushrooms in Recreation, Mental Health, and Spirituality

THIS PRESENTATION BEGINS with the 1957 Life Magazine article of R.Gordon Wasson, "The Discovery of Mushrooms that Cause Strange Visions." Wasson's article introduced Psilocybin mushrooms to North American readers and prompted pilgrimages to Mexico. You will learn how Timothy Leary and Richard Alpert (Ram Dass) became cultural icons of the 1960s with their message of "turn on, tune in, drop out." Ken Kesey, a participant in CIA and military experiments on use of hallucinogens, obtained the keys to the drug cabinets and gave birth to the Merry

Pranksters and the "Kool Aid Acid Bus." In 1968, the US Federal prohibition of psilocybin and psilocin was passed, largely to get at anti Viet Nam war protestors. At this time, The Evergreen State College was coming into existence. In 1975, Paul Stamets, Jeremy Bigwood and Jonathan Ott simultaneously arrived at my door and a series of international hallucinogenic mushroom conferences begins, bringing R. Gordon Wasson, Albert Hoffman (the discoverer of LSD) and many others to Olympia. Learn how, working with Paul and Jeremy, I determined which North American

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mushrooms contained psilocybin and psilocin and how potent each species was.

I will describe how my one use of the mushrooms at Breitenbush Hot Springs in the early 1980s permanently changed my life for the better. Starting in the 1990s, research on psilocybin and psilocin resumed. Since 2010, a series of papers from researchers like Roald Griffiths at Johns Hopkins and Charles Grob at UCLA have revealed many important roles for these compounds in psychotherapy. I have read of no drugs more effective in dealing with PTSD and depression – where a single well-prepared session can lead to significant, permanent changes for the better. The compounds also produce mystical experiences, generally increasing empathy. Thus in closing, I will discuss how religious use has the potential to make the world a more caring place.

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Michael Beug completed his Ph.D. in Chemistry at the University of Washington in 1971. After one year teaching at Harvey Mudd College, he spent 32 years at The Evergreen State College in Olympia, Washington where he taught chemistry, mycology and organic farming and served for 7 years as Senior Academic Dean and for many years as head of the Environmental Studies Division.

Michael started mushrooming after an adult education class taught by Dr. Daniel Stuntz in 1969. He met Kit Scates and Dr. Alexander Smith and began photographing fungi in 1973. His photographs now have appeared in roughly 50 books and articles on mushrooms. In 1975, he joined the North American Mycological Association (NAMA) and the Pacific Northwest Key Council, a group dedicated to writing macroscopic keys for the identification of fungi. He has served four terms as president of the Pacific Northwest Key Council.

In NAMA, he serves on the Education Commit-

tee, is chair of the Toxicology Committee, chair of the Editorial Committee, and editor of the *Journal of the Mycological Society of America*. He won the 2006 NAMA Award for Contributions to Amateur Mycology. He regularly writes about mushrooms in *Fungi Magazine*, *McIlvainea*, *The Mycophile*, and *Mushroom: The Journal of Wild Mushrooming*. Michael has prepared over two dozen PowerPoint presentations about mushrooms (available through NAMA as a two DVD set). He is a coauthor of *MatchMaker*, a free mushroom identification program covering 4,092 taxa with over 5,000 images of 1,984 illustrated taxa (www.matchmakermushrooms.com). With coauthors Alan and Arleen Bessette, he wrote *Ascomycete Fungi of North America: A Mushroom Reference Guide*. Michael loves to teach beginners workshops and lead forays. He also remains active as an identifier and speaker at regional mushroom club forays. His specialties are Ascomycetes, the genus *Ramaria*, and all toxic and hallucinogenic mushrooms. He is researching oak-associated fungi of the Columbia River Gorge, especially *Cortinarius* species, and has discovered more than 50 new mushroom species. His hobby is organic farming and winemaking. •

President's Post

Tyler Taunton

I MUST SAY thank you to everyone who helped and all that continue to help make the Fungus Fair such a successful event. So much goes into this event that without such a dedicated group of volunteers MSSF wouldn't be able to have a fair at all. We are all so lucky to have such an amazing collective of volunteers that get involved in MSSF and our events. The MSSF 48th Annual Fungus Fair was an excellent way to close out 2017.

Ring in the New Year right is our Culinary group. They will be hosting a dinner January 8th with the theme "Bright Spot in Winter." The

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MSSF Culinary Group hosts a proper mushroom-themed dinner every month. The Culinary Group is a huge part of MSSF and continues to be an excellent resource to all our members. If you are interested in participating in the next Culinary event check on line at MSSF.org get involved, meet some friends and try something new.

Dr. Micheal Beug will be our speaker this

month. He will be giving a presentation on Hallucinogenic Mushrooms as Entheogens: The Use of Psilocybin Mushrooms in Recreation, Mental Health and Spirituality. I'm sure this will be a very well-attended presentation. Be sure and continue to check our calendar on MSSF.org for all our upcoming events. •

Culinary Corner

Morgan Evans

Candy Caps!

IF YOU GREW up in America, chances are you have eaten fake maple syrup. When polled, >70% of people, when given the option, chose one of the many brands of 'artificially' flavored syrups that grace our supermarket shelves. This is a good thing! If all our maple syrup needs had to be filled from a limited number of sugar maple trees, the resulting price would be bitter indeed. Reading a fungus newsletter, you are probably asking yourself, but what does Aunt Jemima and Log Cabin have in connection with the fabulous Kingdom of Fungi?? Well, it all comes down to a small and somewhat non-descript mushroom in the *Lactarius* group. The highly sought after Candy Cap!



Lactarius rubidus

Like the common name suggests, the mushrooms themselves are sweet. They can be used either fresh or dried. An outstanding feature of these mushrooms is the texture; brittle and easily breaking apart. Another common feature is the bleeding of a 'milky' liquid when cut or bruised. And lastly is the aroma. In this respect, these mushrooms have confounded people for many years. Not just because they smell like maple syrup, but only when they are dried. It took William Wood, a Humboldt State University researcher, 27 years to discover what exactly was happening in regards to the smell of these fungi. Turns out, the secret behind the smell is a chemical compound called Sotolons. When the Candy Cap mushroom dries out, the amino acids in the mushroom combine to create another chemical called Quabalactone III. Quabalactone III, when it reacts with water, creates the Sotolons. When the mushrooms are fresh, there is a high concentration of Sotolons and the mushrooms smell like fenugreek. When the mushrooms are dried, they have a lower concentration of Sotolons and the mushroom has a smell like maple syrup. And it turns out that Sotolons are what commercial food companies add to products like Aunt Jemima and Log Cabin to give them that maple aroma. Hence the connection. Ah, the never-ending and fascinating world of fungus

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strikes again!

Associating with Tanbark Oaks, *Notholithocarpus densiflorus*,



Tanbark Oak Leaves Photo Credit M.Evans

Coast Live Oaks, and various firs, Jan is a great time to go in search of these intriguing mushrooms. Note that there are many lookalikes. Also, older specimens may not exude the milky liquid. One recommended test is to run your finger over the cap. If it feels rough like a cats tongue, chances are good you have found one of these magical mushrooms. Enjoy it dried or fresh! A little goes a long way....

If you have kept abreast of upscale restaurant trends in the past 10 years or so, you may have noticed a steady increase of candy cap mushrooms finding their way onto dessert menus. Candy Caps, or *Lactarius rubidis*, has found an audience in the culinary world. Menu items such as Candy Cap ice cream, cup cakes, cookies, and my favorite, Candy Cap crême brulee, are gracing the dessert menus of fine dining establishments in the Bay Area. You may even come across a Candy Cap cocktail at places with a high end cocktail program. A place like Alembic in the Haight, “a cool San Francisco spot that serves outstanding

cocktails and excellent, upscale American food.” Executive Chef, Rachel Aronow “was raised on the West Coast where she was exposed to a style of cooking that fused unique Latin, Eastern European, Asian, and Middle Eastern cultures and cherished traditional American influences as well as her Ashkanazi roots.” Below is a recipe for her very own mushroom consommé utilizing candy caps. Just the thing for a cold winters night!

Mushroom Consommé

1000g of mixed mushrooms
(preferably beech, king oyster, maitake)
200g candy cap mushrooms
(this flavor blooms in an incredible way)
4L veg stock
500g of shallots, finely chopped
50g ginger
5g white peppercorns
¼ c + 1T tomato purée
¼ c + 1T red wine
20 egg whites
rice oil

To make the consommé, heat a film of rice oil in a large pan, then add the shallots and sweat until soft. Add the purée, demi, mushrooms, and red wine. Simmer for 1 hour and then pass through a fine sieve and chill. Reserve contents of consommé and spread on sheet pan to chill. Once cool, place consommé veg in a food processor and pulse until veg is minced. Whip egg whites to stiff peaks and fold in minced veg to create a raft. Place chilled stock into a medium stock pot and gently spread raft over the surface of the stock. Allow stock to simmer gently for 1 hour. Once raft begins to puff, use a small ladle to create a small hole in the center of the raft. Gently ladle several scoops of stock over raft every few minutes to leach stock

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of impurities. When the one hour timer is done, remove consommé from heat. Using a slotted spoon, gently remove raft from surface of consommé and discard. Run consommé through a fine sieve with cone filter to finish the clarification process.

Crisped Candy Caps

2oz Candy Caps, cleaned
1T corn starch

Gently toss candy caps and cornstarch together to coat. Fry in clarified butter until golden and crisp. Remove from fat and place on sheet pan with towel. Salt to taste.

In other culinary news, I will be hosting an MSSF table at the upcoming Tilden Nature Area Fungus Fair along with a cooking demo of one of my beloved *Craterelles cornucopioides* recipes. This East Bay Regional Park District program is open and free to the public. Hope to see you there! Details as follows:

Tilden Nature Area Fungus Fair!
10am–4:30pm, Sun, Feb 4
Environmental Education Center

Join us for our third annual Tilden Fungal Fair! Spend the day perusing hundreds of local mushroom specimens, or bring a specimen (or photo) from home and have it identified by experts. Help churn and sample homemade candy cap mushroom ice cream. Purchase the latest guidebooks, mingle with members of the mycological community, make a mushroom craft, and much more during this day-long event. Guest speakers include Christian Schwarz, author of “Mushrooms of the Redwood Coast,” Morgan Evans, naturalist & culinary professional, and Dr. Tom Bruns, mycologist at UC Berkeley. Info: 510-544-2233. •

— *Ethnomycology Culture Cusp* — Rivkah Khanin

An excerpt from Italo Calvino’s *The Baron in the Trees*, translated by Archibald Colquhoun. Reproduced with permission from Houghton Mifflin Harcourt Publishing Company.

The story goes that a mature and noble lady whose name I will not give, as she was from Ombrosa (her sons and grandsons still live here and might be offended, but at the time it was a well-known story), always used to go about in a coach, alone, with an old coachman on the box, and had herself driven over a part of the main road which passed through the wood. At a certain point she would say to the coachman: “Giovita, the wood is simply chockful of mushrooms. Get down, will you. Fill this and then come back,” and she would hand him a big basket. The poor man, racked with rheumatism, got down from the box, loaded the basket on his shoulders, went off the road and began searching among the ferns in the dew, and got deeper and deeper into the beechwood, bowing down under every leaf to find a parasol mushroom or a puffball. Meanwhile, the noble lady would vanish from the coach, as if swept up to heaven, into the thick boughs overhanging the road. No more is known, except that often people passing by would find the coach standing there empty in the wood. Then, as mysteriously as she had vanished, there was the noble lady sitting in the coach again, looking languid. Giovita would return, soaking, with a few mushrooms at the bottom of the basket, and they would set off again. •

Salt Point Foray

Pascal Pelous

December 10th, 2017

20 MEMBERS MADE an early start on Sunday 12/10 to join this foray at Salt Point SP. The weather was exceptionally sunny and warm for the season, but I am sure nobody complained about this. The group collected along the trail up to 750 ft. Many participants new to mushrooms learned a lot in one day from Council-members Alan D'Souza and Enrique Sanchez, who supported this foray.

We gathered back at the parking lot to display and discuss all the findings.

Considering that this State Park is heavily used by mushroom hunters and the lack of recent rain, the group collected an incredible variety of fungi, many of them edible!



Keep an eye on the online MSSF calendar (<http://www.mssf.org/calendar/index.php>) for the next forays!



Species list:

Amanitas

Amanita calyptroderma (Coccora)

Amanita vaginata (Grisette)

Amanita muscaria (Fly Agaric)

Agaricus

Boletus edulis (King Bolete)

Boletus regineus (Queen Bolete)

Cantharellus subalbidus (White Chanterelle)

Cantharellus formosus (Golden Chanterelle)

Gomphus clavatus (Pig's Ears)

Turbinellus floccosus (Scaly Chanterelle)

Cortinarius

Entoloma medianox (Midnight Entoloma)

Fistulina hepatica (Beefsteak Mushroom)

Hydnum umbilicatum (Hedgehog)

Lactarius rubrilacteus

Lactarius rubidus (Candy Cap)

Lactarius alnicola

Pluteus cervinus

Pseudohydnum gelatinosum (Cat's Tongue)

Pleurotus osteratus (Oyster Mushroom)

Ramarias

Russulas

Russula cyanoxhanta

Sparassis crispa (Cauliflower Mushroom)

Suillus

Tricholoma magnivelare (Matsutake) •

Myco-Remediation in Action

Mino de Angelis

THE CATASTROPHIC WILDFIRES we witnessed this past October changed lives and left an altered landscape for the foreseeable future. We see the visible destruction to home and vegetation, but what's occurring now is the more invisible damage as environmental pollutants—in the form of ash, freed heavy metals, solvents and plastics—potentially enter the watershed and contaminate far beyond the points of origin.

One positive in all this is the community response—a coming together in volunteerism to deter and counteract these threats before they overwhelm environmental safeguards. Eric Ohlsen, of Permaculture Skills Center, organized an effort to forestall these dangers by partnering with Clean River Alliance, Russian Riverkeepers, Sonoma Compost, West Marin Compost, Gourmet Mushrooms and others to form the Fire Remediation Action Coalition. One solution now utilized is to place wattles (straw barriers) in vulnerable areas. For the most part this is not just diversionary, although they use that technique as well, but in the most crucial regions the wattles are made with a combined preparation of straw, Oyster (*Pleurotus ostreatus*) and Turkey Tail (*Trametes versicolor*) mycelia in substrate, compost and manure—Myco-remediation. It is hoped that this combination can transform the toxins through absorption of the heavy metals, chelation to make them less volatile, and microbes to aid in biodegradation and enzymic degeneration. The resulting mushrooms and substrate can then be harvested and removed to a proper disposal location. Reviewable data from this project will be evaluated and made available as processed.

A project of this scale (1000 bales of straw for the myceliated wattles) takes an enormous amount

of people power. It may be the largest of its kind for this purpose. There are many opportunities to volunteer should you wish to become involved. Of prime importance is the stuffing of wattles. This is mostly mechanized but some physical labor is needed. It takes place at the West Marin Compost facility in Nicasio. There is also the installation of the wattles in the Fire zone. Please check the Fire Remediation Action Coalition Facebook page for signup information: <https://www.facebook.com/groups/125252661524817/>



Myceliated Straw Wattles



Not all the straw wattles are myceliated. Over time it is hoped that the myceliated ones will transfer to the straw only ones.

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The wattles reduce the flow on the creek, allowing for less turbidity and longer uptake of toxins

Photos Courtesy Fire Remediation Action Coalition

Mino de Angelis is a member of Bay Area Applied Mycology, a local Non-Profit using fungi as a resource to mitigate environmental problems. <http://bayareaappliedmycology.com> •

Cultivation Quadrant

Ken Litchfield

WE HAVE LOOKED at getting a handle on learning mushrooms by categorizing them according to their uses rather than their phylogenetic relationships.

Like whether their use is edible or not, so whether they can be categorized by the frying pan handle - what common edibles can go into the frying pan and what deadly ones should never go in. This can easily be 10 starter edible species for most beginners which they can quickly increase to 20 or 30 without much effort.

We have also looked at the categories for the cultivator based upon the mushroom lifestyle such as saprobic, parasitic, and symbiotic/mycorrhizal and the subcategories of raw cellulose feeders, dead heartwood feeders, stump feeders, mulch feeders, compost feeders, manure feeders, corn parasite feeders and caterpillar parasite feeders, and the fruit of the root of the pine or the fruit of the root of the oak. Once you add several representative species to each of these categories you

can easily add another 20–40 species to your list of familiar mushrooms.

There are other utilitarian categories of mushroom uses, like dye mushrooms that could easily add 20 or more mushrooms to your repertoire of known species just based upon their category of use for dyes. Or psychoactive mushrooms too.

There is also the category of polypores that is easily recognized as a category by their woodiness and their growth as a bracket style of mushroom on the sides of trees. These mushrooms are well known for many uses, primarily as herbal “immortalitea” mushrooms like reishi or turkey tail. But they are also used for grinding up and slurring into paper making projects. And for growing the mycelium into paper, fabric, or building materials. This could easily add another 10–20 or more species to your identified list.

One nice thing about using utilitarian categories to learn your mushrooms is that the various mushrooms also have multiple common categories

that they could fall under. For example, the most common and prolific dye mushrooms like Big Gym, Sulphur Tuft, and Jack O’Lantern are also stump feeders that are among the earliest to fruit at the beginning of the rainy season in California. Similarly the Honeys and Sulfur Shelf are edible stump feeders that are also early and prolific so you have a mini category of 5 early prolific stump-feeders that are easy to learn together.

So here’s an easy list of over 50 useful mushrooms, from a wide variation of phylogenetic relationships, that most any new person can quickly add to their understanding. If you are at all interested in applied mycology, as in using the useful mushrooms, then you’ll more likely have an easier time learning an inventory of useful mushrooms that might interest the herbalist, gardener, farmer, cultivator, dyer, chef, and mushroom artist.

FRYING PAN HANDLE:

- Chanterelle
- Porcini
- Morel
- Matsutake
- Oyster
- Lion’s Mane
- Pioppini
- Nameko
- Maitake
- Manzanita Bolete
- Birch Bolete
- Royal Velvet Chanterelle
- Scarlet Lace Chanterelle

NOT FRYING PAN HANDLE - DEADLY

- Death Cap
- Galerina autumnalis*

SAPROBIC RAW CELLULOSE FEEDERS DEAD HEARTWOOD FEEDERS:

- Oysters
- Lion’s Mane
- Maitake

STUMP FEEDERS:

- Big Gym
- Sulfur Tuft
- Jack O’Lantern
- Honeys
- Sulfur Shelf

MULCH FEEDERS

- Stropharia rugoso-annulata*
- Stropharia ambigua*
- Psilocybe cyanescens*
- Blewits
- Lattice Stinkhorn
- Leratiomyces ceres*

COMPOST + MANURE FEEDERS

- Shaggie Mane
- Shaggy Parasol
- Agaricus augustus*
- Agaricus bernardii*
- Agaricus californicus*
- Agaricus lilaceps*
- Agaricus xanthoderma*
- Psilocybe cubensis*

PARASITIC

- Huilacoche
- Claviceps gigantea*
- Cordyceps sinensis*
- Cordyceps militaris*

FRUIT OF THE ROOT OF THE PINE

- Porcini
- Santa
- Slippery Jack
- Pine Spike
- Matsutake
- Amethystina

FRUIT OF THE ROOT OF THE OAK

- Black Truffle
- White Truffle
- Oregon White Truffle
- Chanterelle
- Candy Cap
- Amethystina
- Yellow Feet

DYERS

- Big Gym
- Jack O’Lantern
- Sulfur Tuft
- Dead Man’s Foot
- Dermocybe phoenicia*
- Dyer’s Polypore

POLYPORES

- Reishi
- Turkey Tails
- Ganoderma oregonense*
- Ganoderma tsugae*

Be sure to check [meetup.com](https://www.meetup.com) for Bay Area Applied Mycology and Counter Culture Labs for events and classes coming up in the New Year. •

Mushroom Sightings



Top left+right: King Boletes, *Boletus edulis*, Watsonville, Rivkah Khanin

Left: Matsutake, *Tricholoma magnivelare*, Fonda

Bottom left: Candy Caps, *Lactarius rubidus*, Fonda

Bottom Right: Butter Boletes, *Butyriboletus querciregius*, Sonoma County, Fonda



Mycena News Submissions

Please do send in your submissions for the December Mycena News pronto. The new monthly official deadline is now midnight the 20th of each month. (Any month that the 20th falls before or on the general meeting the deadline will be the Wednesday after the general meeting, ie Nov 22 2017, Feb 21 and Mar 21 2018)

This does not mean to wait until the 20th of each month to turn in your stuff; it means that is the deadline and you should shoot for getting it in starting by the first of the month.

If you have something that is dependent on the general meeting like photos of the mushroom ID table or the hospitality preparations, etc. you now can get that in before the deadline.

Please email your submissions to:

mycenanews@mssf.org

Please use this MN email address as, if you send it to newsletter individuals, it can get lost when we try to search down all the submissions if they aren't submitted to the official email address.

Best format is to "save as" a Microsoft Word Document, 97-2003, with a minimum of formatting in the doc. You may also use a "notepad" style document with only "plain text."

We ask that you please follow these conditions:

- Please DON'T use any ALL CAPS.
- Please DON'T use any indents, tabs, or bullets.
- Please DON'T use any bolding, underlining, or any other italics besides:
- Please DO include italics for scientific names or foreign words.
- Please DO use single spaces between words and ends of sentences.
- Please DO use ONLY left justification for all paragraphs, titles, signoffs, etc.
- Please DO use 11pt New Times Roman font if you have it, but NOT multiple fonts or unusual fonts or multiple sizes.

For bibliographies that often have special formatting included in your submitted doc, if you have lifted them from other docs, you may just leave all the original formatting, and we can see better what was intended and make modifications for the masterdoc, if needed.

Please follow these above conditions for your official submissions, however if you would like for us to see how you envision the formatting of your submission, you can also submit a second version formatted in that manner and we may be able to make use of that.

As we get submissions they are each incorporated into a MN masterdoc with certain in-house MN master formatting for the final design layout. The design layout software removes all previous formatting from the masterdoc, so any extra formatting you insert, beyond the above parameters, only complicates the prepping of the masterdoc, so please DON'T do that, and DO follow the above submission conditions. •



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MYCENA NEWS

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(click me!)

Mycena News is the members' newsletter of the Mycological Society of San Francisco, published monthly September–May.

Please e-mail photos, comments, corrections, and correspondence to mycenanews@mssf.org

To subscribe, renew, or make address changes, please contact Stephanie Wright:
membership@mssf.org

Past issues of Mycena News can be read online at <http://mssf.org/mycena-news/issues.html>

MSSF VOLUNTEER OPPORTUNITIES

Join the Council leadership, learn the inner workings of the MSSF and help make decisions that shape the future of the society. Do your part by contributing your time to this 100% volunteer organization!

To learn more about all council and committee positions, go to: www.mssf.org members-only area, file archives, council member position descriptions. Or email president@mssf.org.

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