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OCTOBER 18

General Meeting Speaker

Denis Benjamin

Mushroom Mischief 2016: An Expanding Spectrum

Two decades have passed since the publication of *Mushrooms: Poisons and Panaceas*. This presentation is a critical review of more recently described toxic mushrooms and various ways that mushrooms potentially harm us. This includes the ‘little white mushroom of Yunnan’, the stories behind angel wings and Man-on-horseback, the neurological effects of morel gluttony, the inherent dangers of foraging and others. These are told from a perspective of a pathologist, sometimes with a wry sense of humor.



Denis Benjamin, born in South Africa, emigrated to the USA in 1970. He completed his residency in Pathology and Laboratory Medicine at the University of Washington in Seattle and was on the faculty until 2000. He practiced pediatric pathology at the children’s hospital in Seattle and later at Cook Children’s in Fort Worth. He became a hiker and mushroom enthusiast, spending much of his leisure time on the eastern slopes of the Cascades. Now retired from medical practice he devotes his energy to natural history and documenting the wildflowers and mushrooms with photography and watercolors. The latter was inspired by a workshop with the noted Russian botanical artist (Alexander - Sasha - Viazmensky). He has attended botanical illustration at the Gage Academy of Art in Seattle. A past board member of the Puget Sound Mycological Society, he recently helped establish the Yakima Valley Mushroom Club. He was Chairman of the Toxicology Committee of NAMA for a number of years and a consultant for the regional Poison Control Center. He is author of *Mushrooms: Poisons and Panaceas* (1995, WH Freeman and Co. NY, NY) and *Musings of a Mushroom Hunter: A Natural History of Foraging* (2010 Tembe Press, Cle Elum, WA) He now lives in Fort Worth and is a Research Associate at the Botanical Research Institute of Texas.

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PRESIDENT’S POST

by Brennan Wenck

Hello Fellow Mycophiles!

Monday September 12th was the first Culinary Dinner of the season. If you would like to learn more about the culinary group contact culinary@mssf.org. Typically the dinners are held on the first Monday of each month. The next dinner will be on Monday, October 3rd at the County Fair Building. This is a great way to meet other fungal cooks, and chefs.

On September 20th we had our first general meeting of the 2016-17 season. It was really great to get to see a lot of old faces and even quite a few new faces. The room was literally packed and we ended up having to bring in quite a few more chairs to accommodate the crowd. Noah’s is always such a pleasure to have around. His fungal knowledge and sense of humor never fail to light up a room. Noah co-authored the book *Mushrooms of the Redwood Coast*, and his new book is available on Amazon. The next meeting will be on Tuesday October 18th where Denis Benjamin will be talking about the toxicity of some of the more poisonous mushrooms.

As for upcoming events, we are looking forward to Mendocino Camp on November 11th-13th. I hope that many of you will be in attendance at this event. This year’s speakers include Larry Evans, Daniel Winkler, and Britt Bunyard. Every

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year we seem to get a fantastic amount of mushrooms up along the foggy Mendocino coast... Let's pray for rain so this year will be just as bountiful as the last.

The Annual Fungus Fair will be a one-day fair this year, to be held on Sunday December 4th. That being said, there is much to be done on Saturday December 3th! There are several mushroom forays that will go out on Friday and Saturday as well as the entire set-up of the fair. Stephanie Wright will be sending out information on how to volunteer for the forays and for the fair very shortly. Free admission to the fair is granted to any and all who sign up to work at least one shift/foray for the fair.

I hope to see all of you at the up coming meeting on the 18th of October.

See you in the woods,

Brennan - president@mssf.org

HOSPITALITY

Hospitality Co-Chair Eric Multhaup made appetizers for the September 20 meeting, mushroom sliders with a mint-dill yogurt sauce. He made a batch of the mushroom and ground lamb mix and baked it in a large cookie sheet with raised edges, and then put a spoonful of it on a toasted baguette round with some yogurt topping for bite-sized servings.

If you are interested in trying this at home, you can make hamburger-sized patties from the mix, and then fry or grill as you would a regular hamburger. The key to this recipe is having the twice volume of cooked mushrooms compared to the volume of ground lamb, which is why we're calling it a mushroom slider, rather than mushroom-flavored ground lamb slider.

My cooking approach is to roast the shiitake by themselves on a cookie sheet with just a brush of olive oil and a sprinkling of herbes de provence for about 20 minutes, turning over once. They dry out and concentrate their flavor. Saute the shallots and crimini separately as they have different cooking times. Chop the shiitake and mix everything in a large bowl. Churn up two eggs and add for binding. Salt, pepper. If you cook these on a grill, you get good flavor, but the patties are not as tightly bound as regular hamburgers, so flipping them requires two spatulas and some finesse.

Slider ingredients - Herb roasted shiitake, crimini, ground lamb, shallots, thyme, rosemary, and two eggs. Add panko bread crumbs for binding if you don't mind gluten. Suggestion - start with at least four times the volume of fresh mushrooms as meat.

Yogurt sauce - a pint of plain yogurt, options include adding a soft goat cheese, up to 1/2 volume of the yogurt. Then add minced dill and mint, and blend/food process until smooth.



YOU TOO can be a guest chef for a hospitality hour. Just e-mail George at george_willis@sbcglobal.net, or Eric at mullew@comcast.net. You will have an \$80 food budget from the MSSF, and Hospitality Committee members available for advice and support.

FUNGUS FAIR 2016

by Jackie Shay

10am-5pm, Sunday, December 4th, 2016, Hall of Flowers SF Golden Gate Park

As summer subsides, the anticipation rises for the most attended event hosted by the Mycological Society of San Francisco. Yes, it is time to mark your calendars for the 2016 MSSF Fungus Fair! Every year we get together to share in our love of fungi from every corner of appreciation. We host exciting cooking demonstrations by well-respected local chefs, informative and updated talks on science and technological use of fungi, fun and interactive areas for kids and adults of all ages, and people coming together for the love of this glorious kingdom.

Please join us on Sunday, December 4th 2016 for the San Francisco fungal event of the year! Meet new mycophile friends, learn more about your local mushrooms, and taste our timeless and best-selling mushroom soup! We know you will have the time of your life!

Get ready, get excited, and get involved! We need your help making this wonderful event come alive! Please contact Jackie Shay at jackie.shay@gmail.com and she will be happy to include you in the planning process. **It will be magical!**

MSSF FUNGUS FAIR ARTWORK COMPETITION!



Calling all ARTISTS!!!!

Join a *legacy* of artwork and become a part of our 2016 Fungus Fair!

Requirements:

- High resolution
- Design suitable for shirts and flyers
 - Original work
- Mushrooms a must!

Please send all questions and submissions to jackie.shay@gmail.com by **November 1st!**

Culinary Dinner

(The season is still kicking in for the Culinary Group so the regular Culinary Corner will appear next issue)

The MSSF Culinary Group had their season kickoff dinner with a delicious potluck and is ready for the 2016-2017 year.

The October Dinner is October 3 with a Fall Harvest theme and captained by Carol Reed and Karen Motlow.

The following dinner is November 7 and all MSSF members are welcome.

Go to the website calendar for registration information. For more information, contact Peggy Manuel, 415-453-0548.

ACADEMIC QUADRANT – “There is more to Kingdom Fungi than mushrooms”
SPOTLIGHT LAB : Dr. Elizabeth Arnold, University of Arizona
by Jackie Shay

This month we will feature the wonderful world of ecology, evolution and systematics of symbiotic fungi and their diverse roles as secondary metabolites. Dr. Elizabeth Arnold has been working in this field for over 17 years. Dr. Arnold, known by most as Betsy, has championed this work in the School of Plant Sciences and Department of Ecology and Evolutionary Biology at the University of Arizona. She received her PhD in Ecology and Evolutionary Biology from the same institution in 2002.

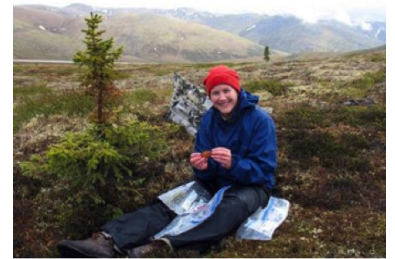
In addition to her impressive body of work on fungal endophytes, she is currently and an Executive Editor for *Mycologia*, and Associate Editor for the *American Journal of Botany*, a symposia coordinator for the Mycological Society of America (MSA), along with a plethora of other engagements. She is a model academic who has successfully shed light on a rather unknown world of fungal interactions. Here we examine some of her current work and highlight the team members associated with each featured project.



Dr. Betsy Arnold

Taxonomic, genetic, and functional diversity of endophytes in boreal forests:

Currently, her lab is focusing on a number of fascinating subjects. Dr. Jana U'Ren, a post-doctoral student in her lab is conducting research on the taxonomic, genetic, and functional diversity of endophytes in boreal forests. This work, in collaboration with Duke University, NC State University, and the University of Minnesota, aims to characterize the diversity of culturable and unculturable fungi associated with iconic lichens and plants. This work directly contributes to new understandings of the level of diversity and function of these endophytes in threatened forests on three continents.



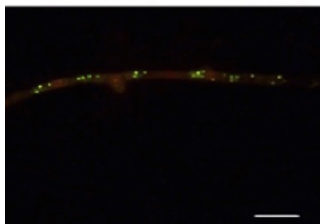
Jana U'Ren in the field in central Alaska – Photo: B. Arnold

Diversity and demographic effects of seed-infecting fungi in tropical forests:

Recently, a more positive role of fungal pathogens has emerged. They are now recognized as an important source of adult-plant and seedling mortality in tropical forest ecosystems. Arnold's lab has uncovered their influence on tree demography, distribution, and diversity. Her work with Drs. Jim Dalling (University of Arizona) and Adam Davis (USDA) aims to characterize seed fate in soil through large-scale common garden experiment at Barro Colorado Island in Panama. PhD student Justin Shaffer is exploring the effects of demography with molecular analysis of fungal communities, providing novel spatial structure of ecological diversity and function.

Diversity and phenotypic effects of bacterial endosymbionts of fungi:

This ground breaking and illuminating work has uncovered the persistent presence of endohyphal bacteria, bacterial endosymbionts living inside the hyphae of fungal endophytes of plant tissue. This work was first uncovered by Dr. Michele Hoffman who showed that pure genomic DNA from fungal endophytes cultures often contains bacterial DNA. This work continues through PhD students Justin Shaffer and Sarah Araldi, as well as Drs. Dave Baltrus and Rachel Gallery (University of Arizona), as they uncover the influence of these bacteria on fungal phenotype, genomic architecture and overall plant-fungus interactions.



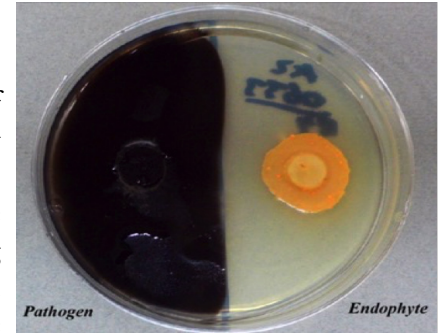
Endohyphal bacteria
Photo: M. Hoffman

Genetic mechanisms shaping interactions between foliar fungi and plants:

It is well understood that plants and fungi have an ancient coexistence that dates back to the colonization of land, however, it is not well understood that these interactions can change over ecologically relevant timescales. Fungal endophytes are a perfect model to observe these transitions. This research examines how environmental factors shift fungal/host interactions from beneficial to pathogenic models and is led by Dr. Naupaka Zimmerman. Using pathogenic and endophytic *Mycosphaerella*, which affects the model tree *Populus trichocarpa* (black cottonwood), this lab is able to understand the dynamic relationship between plants and their associated microbiomes. This important implication can help shape our management of plants in both natural and agricultural systems.

Secondary metabolites of endophytic and endolichenic fungi:

The recent advancements in endophyte research have uncovered a surplus of biochemical richness, yielding new compounds and pharmaceutically or industrially important metabolites. The Arnold lab is currently collaborating on four projects with focus on the natural chemistry of bioactive fungi in deserts, diverse temperate and boreal environments, and tropical forests. Through this work they are evaluating ecological distributions of endophytes and other fungal associated plants parts, such as cactus spines and tree thorns. This work aims to uncover metabolites that can be applied to breast cancer, prostate cancer, antibiotic-resistant bacteria, and the causal agents of malaria, leishmaniasis, and Chagas' disease.



Endophyte-pathogen interactions
Photo: M del Olmo Ruiz

Dr. Arnold and her lab is an embodiment of passion for organizational biology, interdisciplinary study, and a commitment to outreach and training future generations of researchers. She understands that fungi have an essential role in our world, and one that we barely have scratched the surface of. Her dedication to the field and to mycology is evident in the success of her students, who are paving the evolution of mycology.



Faces of the Arnold Lab – 2015

HONORARY MSSF LIFETIME MEMBERS FOR 2016/7

THE GARRONE FAMILY

by Ken Litchfield

The MSSF Council is pleased to announce that **John** and **Toby Garrone** are the recipients of this season's Honorary Lifetime Membership. They have been the founders, owners, and operators of Far West Fungi, with a shop in the Ferry Building at the SF Embarcadero, a farm in Moss Landing, another new farm in Gilroy to expand operations, a professional kitchen, and other associated facilities. They have a fully family run business and with labor intensive, organic processes. For many years they have been generous sponsors of MSSF events and projects particularly with the Cultivation Committee and Culinary Group. They often sponsor MSSF speakers and provide their mushrooms for events like Mendocino Woodlands and the Fungus Fair. The MSSF is honored to continue our relationship with the Garrones.

Please bring your potluck and join us on October the 30th for our award ceremony at the 25th Anniversary of our Far West Fungi Farm Field Trip Pot Luck BBQ, one of the longest running "farm to fork" style farm tours in the Bay Area, still free for the price of your potluck. Please utilize your invite below.

FAR WEST FUNGI FARM FIELD TRIP POT LUCK BBQ
Sunday October 30th 12-3ish Moss Landing, CA
By Ken Litchfield

Here's the MSSF member invite for our annual Fall Far West Fungi Farm Field Trip Potluck Barbecue on Sunday October 30th, 2016 in Moss Landing near Watsonville, the kickoff event for the start of the fall mushroom foraging season and gardening season and opportunity to socialize with mushroom, fermentation, rare fruit, organic gardening&farming, culinary, and permaculture folk.

This is our 25th anniversary FWFFFTPLBBQ event, now a tradition.

Please read all the details in the below. Information is included about:

1. The Farm Tour
2. The Potluck Barbecue and Fermentation Tasting
3. Recycle Rummage of the Farm's mushroom block recycle pile - (due to logistical situations with the farm please do not try to rummage the recycle pile before the tour)
4. Carpool and Farm Directions
5. Mushroom Garden Instructions - for making mushroom beds from the blocks you get from the farm, so you know what to expect from the Recycle Rummage.

This is a mycelial "grapevine" event - not an internet event. You may invite your real world friends personally to attend with you with their potlucks and ferments, but this invite is NOT for sending out to other lists or otherwise publicly.

Admission is free for each person with a potluck and items for the barbecue and harvest ferments you have made to share with your fellow tasters.

You may invite your personal friends - with their potlucks, BBQ grillables, and ferments.

You may bring your cameras for pix and vids.

You may buy fresh organically grown mushrooms at the farm.

You are welcome to bring your musical instruments like didgeridoos, juice harps, drums, etc. and have a jam session during the BBQ and Recycle Rummage.

And being as this the day before Halloween you are welcome to come dressed as your scariest mushroom or politico, or both. We should be able to have some appropriate prizes.

Thanks, Ken litchfield.ken@gmail.com

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Fall Free Far West Fungi Farm Field Trip Potluck Barbecue - Halloween Sunday

October 30th 12-3ish in Moss Landing near Watsonville

The Cultivation Committee of the Mycological Society of San Francisco is having our annual Fall Free Far West Fungi Farm Field Trip Potluck BBQ to the organic Far West Fungi Farm in Moss Landing on Sunday October 30th from noon to 3ish. The Fermentation Club will be meeting there at the same time, too.

Arrival

There will be a greeter at the gate welcoming arrivals and directing them to the best locations for parking.

After parking please gather at the front yard of the house with your potluck dish and/or items for the BBQ grill. In the front yard will be tables with cards and pens to label your contributions with your name and the name of your dish and any special particulars about its preparation. There will be folks transferring the potluck items to the side yard picnic area, and categorizing and arranging them for easiest access during the potluck, after the tours.

Please be sure to join one of the tours or remain in the front yard socializing area so as not to get underfoot with the food prep folks in the side yard.

Farm Tour

John and Toby Garrone, and their sons Ian and Kyle, who have their Far West Fungi shop at the Embarcadero Ferry Building in SF, grow white, gray, brown, pink, gold, and trumpet oysters, shiitake, nameko, pioppino, lion's mane, maitake, and reishi in several large warehouses along with some acreage of traditional crop plants that their employees grow organically for their own use. They have biologically active runoff ponds taking the overflow runoff from the farm and turning it back into

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frog habitat. The Garrones grow all their mushrooms certified organic on recycled materials. We will tour the farm to see the sawdust composting process, the mixing hall, autoclaves, sterile lab, growing halls, fruiting halls, etc.

Because the event has grown so popular there are usually over 150 people attending so we divide the attendees into several more manageable groups that each see the whole farm. If you arrive a little late there are usually one or more tours that you may join.

Please stay with your tour and we'll end them together at the front yard of the farm house so that all folks will be sharing the potluck in the picnic area together. If your tour finishes there before the other tours, then hang out and socialize in the front yard and, if the food coordinators need help, please make yourself useful for the duties they may need.

Please wait for the potluck serving time call after all the tours have returned before trying to enter the potluck area.

Please arrive promptly at noon or a little before. This trip we'll have several concurrent options for tours. We would expect the Beginning and Intermediate tours to be the most populous:

- **Beginner Tour** - for those who haven't been to the farm before, or would like the general introduction tour of the farm about the growing, harvesting, distribution, and selling of Far West Fungi's organically raised farm mushrooms.
- **Intermediate Tour** - For folks who have been to the farm before or are generally familiar with the operations and would like to know more about the farm's tricks and secrets for mushroom cultivation, wild and cultivated mushroom lore, and mushroom gardening with the free mushroom spawn blocks from Far West.
- **Advanced Technical** - for specialist folks who would like the nuanced art and science details of how Far West organically grows their mushrooms for greatest efficiency and productivity and dealing with the inevitable problems that arise with such a major operation.
- **Straggler's Tour** - Please try to arrive on time but if you are late and can't catch up to one of the regular tours we do have a spur of the moment "Stragglers Tour" so you can still see the main aspects of the farm. Gather up all the late comers and see one of the tour coordinators about that after potluck time.

We would like to keep the tours coordinated so they all begin in different locations and don't coincide at any one point into crowd convergence. We expect to have them mapped out with this in mind.

This is a biennial event and if you miss something this time we will have another trip in October or March.

Potluck Barbecue

After the farm tour we will gather at the farm house for the big potluck BBQ. There we can socialize for a bit while each of the tours finishes and all folks can join the potluck meal together. The Garrones will have their big grill out for grilling and sampling their 12 kinds of organic farm fresh mushrooms and whatever grillables you bring.

Everything is free with admission of each attendee's pot luck item and/or slabs of something for the grill. You may invite your friends with their potlucks and ferments, too.

This is a true potluck; we don't make a list of who is bringing desserts or entrees, or salads, but it all works out. Please bring what you would like to share of your own making. It's a great place and event for mycelial networking.

Please deliver your potlucks, grillables, and ferments at the garden gate to the farm house when you arrive at the farm. If you have included a label about your dish or the recipe please bring it to the attention of the folks accepting the potlucks. There are always folks who want to know who made a particular dish and how, so please be prepared to share. It is a good idea to pre-slice or pre-cut larger portions of your offerings into smaller portions so more folks can sample them. And when serving yourself during the potluck please try to sample a little of everything and then go back for more after others have also been served. There is always plenty of food.

You can sit at one of the picnic tables or on the grassy lawn. If you bring your own folding chairs or stools you'll have the type of seating you are most comfortable with.

Most everyone cleans up after themselves, but please do clean up your own and others areas, and please volunteer with the potluck coordinators to offer your assistance with any cleanup tasks.

Fermentation Club

The Fermentation Club joins the field trip potluck for their regular fermentation meeting/ taste testing/ ferment comparisons. Ferments include but aren't limited to, wine, beer, mead, kombucha, kimchee, sauerkraut, yeast rising bread, tempeh, yogurt, cheese, etc. If you would like to check out the club and try the brews, and contribute yours, bring them to share with your potluck or during the post tour pre potluck social period.

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You may also come to the Counter Culture Labs Fermentation Station in the Omni Commons at 4799 Shattuck in Oakland most any Wednesday eve 7 til whenever for the Herbal Meadmaking class to learn all the basics and advanced fermentation techniques for any ferment. Check meetups.com for Counter Culture Labs.

For details about the Fermentation Club please check with:

David Gardella <dagardella@gmail.com> or <david_gardella@hotmail.com>

Recycle Pile Rummage

After the tour and potluck we can rummage the recycle pile for mushroom compost and bring back as many once-harvested mushroom blocks as we can carry. We try to take as big of vehicles as possible to pick up as many mushroom blocks as you like. Bring big tough plastic garbage bags to sort and carry the various types. Andor plastic trash cans. Andor cardboard boxes. The pile is huge, like usually an eighteen wheeler or two or three, and the blocks have plenty of life left in them. They can be used to make organic mushroom beds in your back yard, school garden, or community garden that can continue fruiting for months with no watering during the rainy winter or a little watering, misting, and TLC in your spring and summer garden. Typically they may leap off and eat into other organic matter to grow more robust, and eventually decay into compost. We describe that process to you there, and on the Cultivation Blog of the mssf.org site, and below.

For safety's sake, please be respectful of other people and vehicles while rummaging, dodging mudholes, ducking flying blocks, and similar freegan behaviors. Some folks may be able to climb the pile better than others so when you find something you heard someone else was looking for, and you can share it, please do so.

This is a sharing, educational, social event.

Periodically, we have requests from attendees, or others that just show up, that only want to rummage the recycle pile, but not participate in the other activities. If this describes you, please chose a different day to make an appointment to visit the farm and pick up as many blocks as you like then, without interfering with this event.

Farm Fresh Mushroom Purchases

You may also purchase fresh-from-the-farm organically grown mushrooms from the Garrones in the packing and shipping room at the farm.

Bring your cameras for pix and vids and lots of photo ops.

We're ON - Rain or Shine

We are mushroom people, among other characteristics, and this mushroom event is ON - rain or shine - so bring your rain gear if needed to get from warehouse to warehouse. Everything else is outside if the weather is good or under shelter if it is wet.

CARPOOL with each other please. Generally passengers pay driver \$5 for gas

DIRECTIONS

(Please print them out to take with you - please look up the address on google maps also to see where you'll be going as there may be some road construction in the vicinity):

Far West Fungi Farm

1186 Trafton Road

Moss Landing, CA 95039

(831) 728-5469

The farm is off of Highway 1 south of Watsonville (2 routes available):

1. South 280 to Hwy 85, follow to Hwy 17 (towards Santa Cruz) Hwy 1 South towards Watsonville, turn right on Jensen Road (at the old Dominic's Fruit Stand - now demolished for the widening of the road - there is much road construction in the vicinity of the Jensen Rd turnoff so be on the lookout) Right on Bluff Rd., right on Bluff, right on Trafton Rd. First driveway on the left.

2. 101 South past Gilroy, 129 west to Watsonville, South on Hwy 1 Right on Jensen Road (at the old Dominic's Fruit Stand - now demolished for the widening of the road - there is much road construction in the vicinity of the Jensen Rd turnoff so be on the lookout) Right on Bluff Road, Right on Trafton Road. First driveway on the left.

CULTIVATION CORNER

by Ken Litchfield

Mushroom Garden Beds for Back Yards, School Gardens, or Community Gardens

If you join us on the Far West Fungi Field Trip and bring back some of the mushroom sawdust blocks or loaves to use in your garden, here's some info on how to turn them into your own mushroom garden.:

There are generally 12 different kinds of mushroom blocks you will find in the Far West Fungi Farm recycle pile, their prevalence in the recycle pile based upon the types of mushrooms the farm grows the most.

The loaves with the leathery chocolate colored skin are Shiitakes. The rest that are white are most likely White, Brown, or Gray Oysters. Less commonly, Trumpet Oysters form white sheets of mycelium on the top of the block that often retain the thick cut bases of the Trumpet Oysters.

Less commonly, the loaves of Golden or Pink oysters should have some remnants of those colors on them. In addition, you may, by chance, have some of the less common Reishi, Maitake/Hen-of-the-woods, Lion's Mane/Crabalone, Pioppino, or Nameko perhaps recognizable by the remnants of fruiting bodies on the loaves.

These loaves have been harvested once at the first big flush of fruiting and then are removed from the fruiting halls to make room for more fresh blocks coming through. They are unpredictable for their next several fruitings, and not commercially useful, but they have much life left in them and are perfect for mushroom garden beds in your back yard, school garden, or community garden.

Using these blocks is similar to growing amaryllis flowers from predeveloped flower buds in the dormant amaryllis bulbs. If you know how to grow the amaryllis you can have continuing blooms in your garden or windowsill for years afterward rather than just one holiday season. Similarly, you can provide the right garden conditions and get the mushrooms to continue to grow for years. This method is an easy way to introduce you to growing mushrooms like regular garden plants.

Mushroom Block Garden Instructions

First, cut any mushroom stems remaining on the loaves down to the surface of the sawdust so they don't continue decaying.

Next, to rehydrate them soak the loaves in water, preferably rainwater or de-chloraminated water (to the water add a tea/table spoon of powdered garden clay, baked to sterilize in a cake pan at 300 degrees in the oven for 2 hours or so to deactivate the chloramine) in a wheel barrow, tub, or barrel with a weighted board on top to keep them submerged for 12-24 hours (not longer at one time as they may drown or go anaerobic). Some folks like to soak them in hydrogen peroxide water as it kills off the mold some, though this is an extra overhead step that isn't necessary. This should be no more than 0.3% (point three percent) concentration. That would be two, 1 quart bottles of 3% (three percent) H₂O₂ from the drug store poured into a 5 gallon bucket and filled with tap water. After 24 hrs the H₂O₂ decays to water and can be poured off into the garden. The water that is added to the hydrogen peroxide is pre-de-chloraminated.

In a shady, wind protected place, put the soaked loaves of sawdust bottom side down on a bed of chippy wood chips 6-12" deep and 3x3' or 4x4', or longer in length if you have more blocks. You want chippy wood chips from logs and branches as they are the better food for these wood eating mushrooms than leafy or twiggy stuff that doesn't last very long and contains more mold and bacteria. On top of the wood chips can be placed one layer of unwaxed cardboard as the bottom of the blocks may be more likely to leap off and grow into the chips if they are in contact with the layer of cellulose cardboard against the surface of the bottom of the loaf. The blocks should be placed side by side butted up against each other and they will often grow back together sideways, especially if they are all of one kind like shiitakes or oysters.

On top of the loaves of sawdust you should place fluffed up straw, excelsior, or draped burlap as a humidity layer for the mushrooms to sprout up into and not dry out. Excelsior is the stringy, spaghetti like, aspen wood fibers sometimes used in packaging material instead of styrofoam peanuts. If you use burlap, preferably in multiple layers, you can place stakes in and around the bed to tent it above the mushrooms.

A simple way of taking care of the cardboard layer under the blocks and the humidity layer above the blocks is to place the loaves in unwaxed cardboard boxes on top of the wood chips. The blocks can be placed one layer deep in a cardboard box side by side in contact with each other filling the bottom surface of the box. The box should be the depth of the block height plus that much more to allow the mushrooms room to grow unimpeded above the loaves. The flaps on the top of the box can provide the humidity layer when the box is folded closed.

When the loaves are installed in your mushroom beds in a shady, non windy part of the garden, the rains will keep the blocks and humidity layer damp all winter long during the November to May rainy season with very little work on

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your part, except to harvest mushrooms. If the weather goes through a dry spell, or during summer, you may have to water periodically.

Ideally, the mushroom loaves will send out mycelial tentacles down into and through the cardboard to the wood chips to pick up more nutrients to add to the blocks. If they don't "leap off" they will at least continue producing mushrooms out of the sawdust remaining in the loaves until they are used up in a few months to a year, perhaps longer.

Your success may vary depending upon how fresh the blocks are and the type of mushroom and how regular the rains are in the season as extra watering maybe needed. Check through the straw/excelsior/burlap once a week or so for fruiting mushrooms and keep the humidity layer damp and fluffed so it doesn't get compacted down on the blocks.

Besides using them to make mushroom garden beds, you can break up the blocks fresh from the recycle pile and roll up the spawn sawdust into damp cardboard and burlap and tie them with twine to grow into hanging mushroom pinatas. Or break them up and add them to bags of damp straw that has been pasteurized with 0.3% hydrogen peroxide solution. Or break them up and add them to soaked wood chips in burlap bags or cardboard boxes to grow into larger quantities of mushroom spawn that can be fruited in greater amounts or used to inoculate even large quantities of substrate.

All these mushrooms that Far West grows on oak heartwood sawdust blocks normally grow in the wild in the dead heartwood of hardwood trees. That is the raw cellulose that they are accustomed to devouring. Other typical organic garden materials that they particularly could feed upon and work well for mushrooms-in-your-garden-mulch are straw bale straw, burlap, unwaxed cardboard, wood chips, egg cartons, animal bedding, etc.

Agaricus button mushrooms typically are grown on manure compost, essentially broken down raw cellulose from the feeding of heartwood mushrooms. Shaggies and buttons can grow under your raw cellulose garden mulch materials at the bottom of the mulch where it is breaking down and being incorporated into the soil.

AROUND THE CAMPFIRE AT HOME OR IN THE WOODS

by Eric Multhaup

To all MSSF musicians and singers -

The Mycena News is publishing the lyrics of some of the mushroom songs that have won their way into our hearts over the past couple of years so that more members can join in at forays, picnics, and other events.

Here is October's song, to the tune of Blue Moon:

Verse #1

Blue Moon, you saw me standing alone,
Without a mushroom in my basket,
Without a morel of my own.

Verse #2

Blue Moon, I know you're not Houdini,
But please don't be a meanie,
JUST SHOW ME SOME PORCINI!



MSSF Picnic 2015

Verse #3

Blue Moon, I know you're not a magician,
But can't you see me down here wishin'
For some matsis in A-1 condition.

Bridge

And then there suddenly appeared before me
A psilocybe standing on its own.
I took a discrete little nibble,
And Bingo!, I was in the Zone.

Verse #4

Blue Moon, now I'm no longer alone.
I have hallucinogenic friends
and mushroom visions all night long.



MSSF Picnic 2016

BAY AREA APPLIED MYCOLOGY AND FUNGI ACADEMY

By Ken Litchfield

Bay Area Applied Mycology is our fellow local fraternal organization that specializes in the arts and sciences of mushroom cultivation. They have a number of projects that they work on, particularly in mycoremediation, with projects in the East Bay Parks and EBMUD. They have a mushroom lab in the Counter Culture Labs space at Omni Commons 4799 Shattuck in the Temescal of Oakland.

[Bay Area Applied Mycology Announcements](#) <bay-area-applied-mycology-announcements@googlegroups.com>

Recently, Oliver Merivee of Fungi Academy in Guatemala visited BAAM on a fun raising trip to the Bay Area. They are planning a traveling bus to teach practical home mushroom cultivation techniques internationally, mostly throughout Central and South America. Generally, it is free to locals and inexpensive to visiting travelers. They hope to setup local, ongoing, satellite learning centers all around. BAAM has generously donated several incubators, a sterile transfer flow hood, microscopes, and a number of other useful pieces of lab equipment and lab supplies to stock their traveling bus.

Oliver and his crew are expecting to be in and around the Bay Area until sometime in November when they expect to start their travels. Before they leave, they are planning to provide at least two local classes at the BAAM lab, one on liquid culture and another on how to make your own liquid culture magnetic stirrer from recycled computer parts, an indigenous Guatemalan pastime. If you would like to participate in either of these classes and other activities BAAM, Fungi Academy, or MSSF mushroom cultivation oriented, please do check the latest developments on the Omni Commons and Counter Culture Labs calendars, meetup.com for CCL, [bay-area-applied-mycology-announcements@googlegroups.com](#), or contact me at:

litchfield.ken@gmail.com litchfield dot ken at gmail dot com

In the meantime, please do check out Oliver’s message that follows here including the links to Fungi Academy’s sites and their Indiegogo campaign. They are worthy of your support.



Hello Friend,

As you may know I have traveled for the past 5 years around the world. I have been following a dream to find more meaning for my life. There have been many ups and downs and I believe I finally found this meaning in sharing my gifts with others while helping to build a better future for our planet.

In the beginning of this year I and a few other friends made this dream a reality by founding Fungi Academy in Guatemala. It’s a collective and a co-living space, that has empowered hundreds of people to discover how they can be part of the positive global shift by teaching them how to grow mushrooms. You can learn more about the project here:

<http://fungiacademy.com/>

Mushrooms as food are great for your health, but there is much bigger role the fungi kingdom is playing today. Fungi can clean oil spills, decompose plastic, filter polluted water, heal our bodies and even help to shift our consciousness.

I’m so grateful that we have been able to share our passion for fungi with so many amazing people on this journey. Right now we are working on setting up a Mobile Fungi Academy. It’s a traveling symbiosis between humans and fungi. We will journey from North to South-America, with a used school bus decked out for living on the road and teaching everyone who wants how to grow mushrooms and clean up some of the mess us humans have made here.

I reached out to you because I am inviting you to be a part of making the dreams of so many of us come alive! I know that our values are in alignment, and we both want to see a better, more just and sustainable world. Right now, you have the opportunity to join us in co-creating a better future. Please help to co-create this dream by supporting the Mobile Fungi Academy Indiegogo campaign here: <https://www.indiegogo.com/projects/mobile-fungi-academy#/>

Thank you from the bottom of my heart!

Oliver

<https://www.facebook.com/oliver.merivee>

Mycena News Contributions

In addition to our regular President's Post, Speaker announcement, Culinary Corner, Cultivation Quarter, Academic Quadrant, Announcements, Calendar, and Hospitality we would like to have, at least periodically, an author for a Mycodigest, and perhaps any other features someone would like to take it upon themselves to produce.

Coming up we would be interested in anyone who went to any mushroom related fairs and events, local or around the country to include a review of the event and photos too, plus impressions of speakers and presentation subject matter. Or perhaps a travelogue of your trips to other mushroom hunting lands close or far away. We are also interested in your opinions as expressed in book reviews for some of the new mycology texts that have been published lately.

Last season we had a Mushroom of the Month regular article that was often not announced with enough lead time to be conducive for other contributors to send in related articles, photos, collecting and processing techniques, recipes, and other content. This season we'll try something new by announcing a suggested monthly mushroom theme that is seasonally appropriate to the types of mushrooms likely to be encountered by mushrooms foragers locally and on their external travels.

For November we'll propose Porcinis and other pored Boletes and their relatives and lookalikes.

For December we'll propose Amanitas. This would include the Santa Mushroom, *Amanita muscaria* but others out at the same time like Panthers, Death Caps, and *Cocoracolis*, their relatives, and lookalikes.

For January we'll propose Chanterelles and their relatives and lookalikes.

For the new year and the season beyond we'll announce in the December issue. Your suggestions are welcome.

Of course, if you have any articles, photos, collecting and processing techniques, recipes, travelogues, reviews of books or mushroom events, jokes, cartoons, or other content we'll see about making room for it in each issue regardless of monthly themes or seasonal relevance.

Please note that the official deadline for submissions of content to each monthly issue of the MSSF Mycena News is the 15th of the month previous to the issue month.

Hence, the official deadline for our coming up:

November issue is Saturday, October 15th.

December issue is Tuesday, November 15th.

January issue is Thursday, December 15th.

The more closely you can meet that deadline the easier it is to get that issue compiled, proofed, formatted, double checked, and sent out to the membership on time for the first of the month.

If possible, we prefer that your written contributions be in Word format, or plain text, without formatting but already edited by you for content and spelling errors.

Please always submit your contributions to: mycenanews@mssf.org

Never fear, we do plan to send out gentle reminders, foot warmers, panty knotters, pants lighters, and other tweak-ers as the last chance to submit gets closer each month. Look for the reminders on the MSSF social media sites and yahoo group.

Thanks - The MycenaNews Crew

MUSHROOM SIGHTINGS IN SEPTEMBER 2016



Neolentinus ponderosus
Growing on a pinyon pine at 8500 ft
in the White Mountains, CA
Photo by Lynne Buckner

Polyporus sulfereus
Found on a lawn at Ft. Mason
Photo by Lynne Buckner



Thanks a lot Lynne for sharing these findings! Send yours to mycenanews@mssf.org to be published in the next newsletter.

MSSF Calendar October 2016

Monday, October 3, 7:00 p.m. - Culinary Group Dinner

Theme: Potluck - [details](#)

Hall of Flowers, County Fair Building
Golden Gate Pk., 9th & Lincoln, S.F.
Email culinary@mssf.org to volunteer.

Tuesday, October 18, 7:00pm - 10:00 pm - [General Meeting](#)

7pm - Mushroom Identification, mushroom appetizers...
8pm - General Meeting

Speaker: Denis Benjamin

Topic: *Mushroom Mischief 2016: An Expanding Spectrum*

Hall of Flowers, County Fair Building
Golden Gate Pk., 9th & Lincoln, S.F.

Check the MSSF online calendar at:

<http://www.mssf.org/calendar/index.php>
for full details, latest updates
and schedule changes.

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.

ANNOUNCEMENTS / EVENTS

Herbal Mead Making

7pm-10:30ish Every Wednesday Night
at Omni Commons Lab
[4799 Shattuck Ave, Oakland](#)

Contact Ken Kitchfield
(litchfield.ken@gmail.com) for more info

Dear Members,

It has come to my attention that some people from our meetings have been helping themselves to the food next door at the Succulent Society Meetings. They have expressed that the food they bring is only for their members, so unless you sign up to be a Succulent Society Member, please refrain from eating their food. If you would like to become a member of the Succulent Society you can do so here:

<http://www.sfsucculent.org/membership.html>

Brennan - president@mssf.org

Photo Credit: on the first page, *Pisolithus arhizus* AKA dead man's foot photographed by **Boleslaw Kuznik**



Mycena News

October 2016, vol. 68:2

Mycena News is the members' newsletter of the Mycological Society of San Francisco, published monthly from September to 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>

Mycological Society of San Francisco
The Randall Museum - 199 Museum Way, SF, CA 94114

Submit to *Mycena News*! The submission deadline for the November 2016 issue is October 15th. Send all articles, calendar items and other information to: mycenanews@mssf.org

MSSF Officers 2016-2017

President: Brennan Wenck
President@mssf.org

Vice-President: Tyler Taunton
VicePresident@mssf.org

Secretary: Eric Multhaupt
Secretary@mssf.org

Treasurer: Henry Shaw
Treasurer@mssf.org

Contributors:

Jackie Shay
Eric Multhaupt
Ken Litchfield
Brennan Wenck-Reilly
Enrique Sanchez
Lynne Buckner

Editing and Layout:

Ken Litchfield
Pascal Pelous