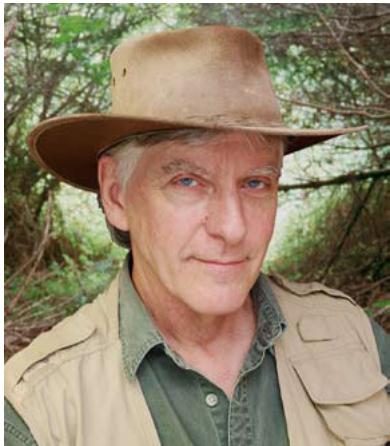


Mycena News



The Mycological Society of San Francisco • December 2013, vol. 65:04

January 21
General Meeting Speaker



Taylor Lockwood

"The Greatest Show on Earth:
Sticks, Leaves and Logs"

Taylor Lockwood grew up near Seattle in an art-aware environment and took to music at an early age. When he was 21 he moved to California to start a band.

After three bands and seven years of L.A.'s heat and smog, he set out looking for a cooler and greener place to live.

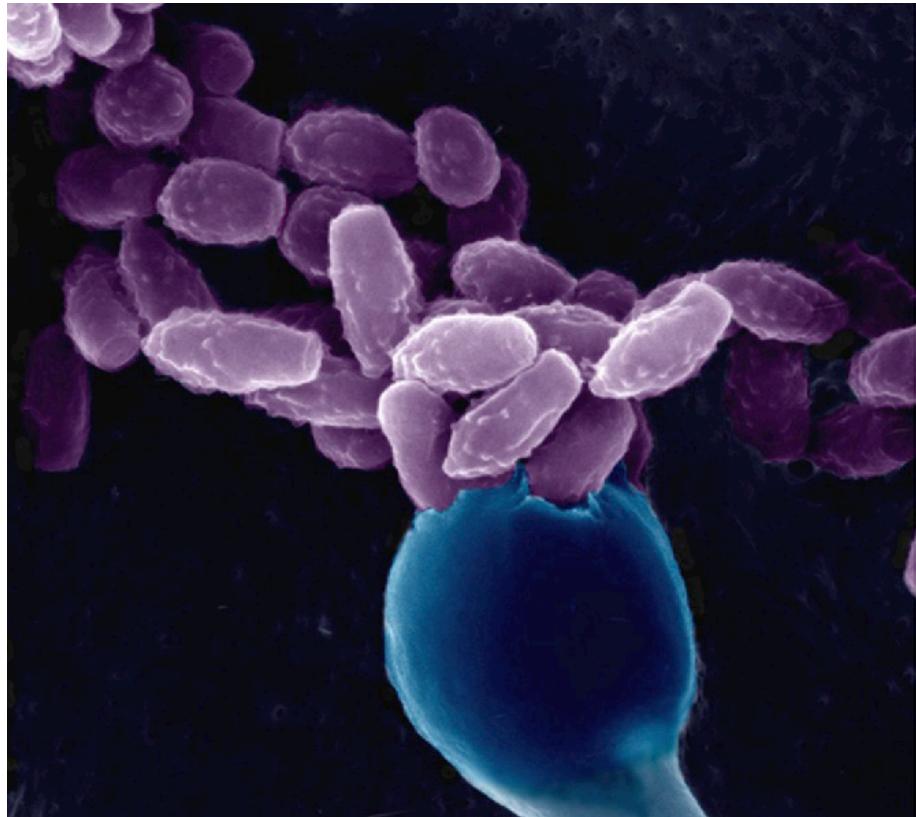
He moved to Mendocino, where he "discovered" mushrooms, bought a camera, and started taking photos.

Praise for his work and vision to promote the beauty of mushrooms has gained him acclaim with mycologists, mushroom enthusiasts, photography critics, and nature lovers around the world.

His work has appeared in the New York Times, the Washington Post, and many other publications. Like many other amateur and professional mycologists, Taylor is a pioneer on the frontier of discovery and appreciation of mushrooms and other fungi.

MycoDigest: Deadly Fungus Mates with Clones of Itself

Tanya Lewis, Lifescience staff writer



Scanning electron micrograph of infectious yeast spores (purple) on the surface of the structure where they are produced following sexual reproduction (in blue, the basidium).

Credit: Chaoyang Xue, Kasey Carroll and Joseph Heitman, Duke University

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

(Reprinted with permission. Copyrighted 2013. TechMedia Network. 105909:1113PF)

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

Continued on page 3

MycoDigest is dedicated to the scientific review of mycological information.

PRESIDENT'S POST

Greetings MSSF Members!

As our past governor always said; "I'll be back"—and I am! I had a fabulous time for a month in Washington and Oregon. It was a little dry but there were plenty of good edibles to collect including porcini, chanterelles, hericium, cauliflower and lobster mushrooms. There was no rain during my entire month-long time in the north and as I write this post for the newsletter we are still in desperate need of rain. According to the National Weather Service, this is the eighth driest year in California since they started keeping records.

The MSSF Fungus Fair—scheduled for December 8 at the San Francisco County Fair building, "Hall of Flowers" in Golden Gate Park—is still on schedule and almost upon us! We are still in need of volunteers to make this year's fair a success. A sign-up page has been established on the MSSF website for members to volunteer to assist at the fair this year. This is your last chance to get involved and make a substantial contribution to the fair and the society. Go to the MSSF website and sign up. Go to: www.MSSF.org (then go to: fungus fair/info).

Social media is a great way to get the word out about the MSSF Fungus Fair. I attached two great ways of doing that to my recent email announcement about the Fair. If you use Facebook or Twitter, post the information I provided and share it with your many friends. Ask them to do the same. Also attached was this year's fair poster which can be reproduced and distributed manually or electronically.

The annual MSSF Holiday Dinner this year will be held on December 16 at the Hall of Flowers in Golden Gate Park starting at 7 p.m. It will be a mushroom-infused potluck dinner with culinary contributions from many long time society members and their guests. There will be a fabulous eggnog punch provided, as well as a great raffle. We are also hoping to have live music like we did last year. Go to the MSSF website www.mssf.org, event registration to sign-up and participate in this great annual event.

Additionally, as soon as things calm down after the holidays, the MSSF council and I are going to become proactive and start working on obtaining access to the burn zones in the Sierra from the National Forest Service so we can hopefully collect morels in the spring. At present, the Forest Service has ordered the closing of all public access to the recent burn zones until September 2014, except for logging. I will keep you all up to date on the progress we make, but we may also need your help in the form of a petition and/or a letter writing campaign, etc.

I hope to see many of you in the forest soon, getting more involved with the society as a volunteer, or at a future MSSF event!

--Curt Haney, President@mssf.org

CULINARY CORNER

This dry year is a challenge for the culinary corner. Writing cheerfully about mushrooms in a time of drought is daunting. Week after week of depressingly lovely blue skies and struggling vegetation with no rain in the forecast brings a subtle but pervasive sense of dread—let alone disappointment at the sorry state of fungal growth. It seems like Oregon and Washington have usurped our rain! The various mushroom forums have been replete with nauseatingly upbeat descriptions of grand days of foraging north of us for boletes, chanterelles and other edibles.

The presence of lower than usual prices for wild mushrooms, especially chanterelles, also tells a tale. Usually priced at about \$12.00 or more a pound, they have been selling for as low as \$8.00 a pound at local greengrocers. Such a shame for us locavores to be reduced to relying on places so far away from home to supply us with culinary mushrooms. Many people I know will not buy what they love to forage; if they can't find it, they live without it.

With the dearth of fresh fungi I went to my jars of dried porcini to use in an elegant preparation that is worthy of a holiday feast.

PORCINI PANNA COTTA

½ oz. dried porcini

Peanut or vegetable oil for ramekins or custard cups

1 Tbsp. butter

1 clove garlic minced

1 shallot, minced

1 tsp. tamari or soy sauce

1 Tbsp. agar-agar flakes (Found in Asian or natural foods stores, even in some big grocery stores—look in the seaweed section as agar-agar is a gelatinous substance made from seaweed. Unlike gelatin, it will thicken at room temperature and hold up even during reheating.)

1 cup crème fraîche

½ cup freshly grated Parmigiano-Reggiano

Freshly ground black pepper to taste

1 ½ Tbsp. chopped chives (garnish, so optional)

Place porcini in a medium bowl and pour 1 ½ cups boiling water over them. Let them stand until completely softened, about 30 minutes. Oil 4 small ramekins or custard cups

Take the porcini out of the soaking water, reserving the water, transfer them to a sieve and rinse well under running water to remove any grit. Squeeze dry and mince. Line the sieve with a coffee filter and strain the soaking water into a small saucepan.

Melt butter in a sauté pan over medium-high heat. Add the garlic and shallot, sauté briefly and then add the minced porcini. Cook, stirring often, about 5 minutes. Stir in tamari. Transfer to a mixing bowl.

Add agar-agar flakes to the reserved porcini water and mix well. Let stand 10 minutes. Bring the water and flakes to a boil, stirring constantly, reduce the heat to low and simmer 10 minutes. Strain through a sieve into the porcini mixture,

Continued on page 5

MycoDigest continued

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

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

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

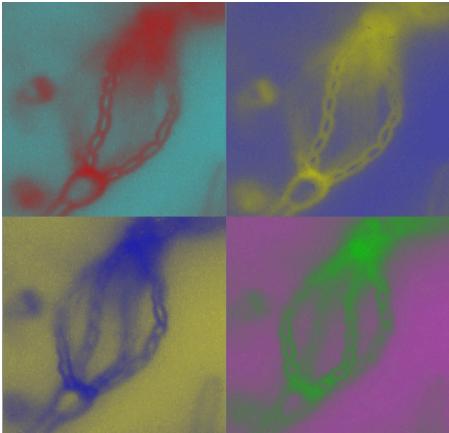
Yeast sexual pairings often result in offspring with multiple copies of a chromosome, known as aneuploidy. This condition is associated with several human disorders, particularly Down syndrome, which results from having an extra copy of chromosome

21. But in fungi, aneuploidy can confer advantages, such as resistance to anti-fungal treatment.

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

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

The yeast was reaping the benefits of sexual reproduction without some of the costs associated with sex, the researchers reported Sept. 10, 2013 in the journal PLOS Biology.

Light microscopy view showing the four chains of infectious spores that decorate the basidium where meiosis occurs and the spores are produced by budding from the apical surface.

Credit: Joseph Heitman and colleagues, Duke University

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

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

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



December 2013, vol. 65:04

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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 Nathan Heilman:

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Past issues of *Mycena News* can be read online at www.mssf.org

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MycoDigest continued

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Tanya Lewis

Tanya joined the LiveScience staff in 2013. She received a graduate certificate in science communication from the University of California, Santa Cruz in 2012. Before that, she earned a bachelor's degree in biomedical engineering from Brown University. She has interned previously at Wired.com, Science News, Stanford Medical School, and the radio program Big Picture Science. To find out what her latest project is, you can follow Tanya on Google+.

WHY YOUR E-MAIL IS IMPORTANT TO US—AND TO YOU!

Curt Haney, President, MSSF

Most MSSF announcements come through e-mail. With over 1000 members, we can't afford either the time or money to send much through the Post Office. And, given the current state of the PO, even though we're willing to supply a small number of members with mailed newsletters, by the time they are received, it may be too late. Plus, much of what we send out simply doesn't exist on paper.

This means that if you don't give us your e-mail, you will miss out on many interesting, beautiful or useful mailings and activities. And, even if you do give us your e-mail, it's not really helpful unless it's accurate. If you change your e-mail address, you need to log into the members only area of the MSSF website and update your profile and keep your contact information up to date. Of course, this also goes for your telephone number and mailing address as well. Many of the newsletters we mail out each month are returned to us undeliverable due to address changes by members. Also, quite a few E-member newsletters bounce back to us each month due to bad e-mail addresses.

In exchange, we promise to keep you supplied with the latest in society activity announcements and items of general mycological interest. And, of course, we promise never, never, ever to sell or give your information to anyone outside the society. Ever!

Every member's information is in the club roster, which is updated at least annually. You can access the roster on the MSSF website, members only area, in the archives section. The roster is also a valuable resource to use in making car-pooling easier.

DUES INCREASE & CHANGES

NOTE: This article is reprinted from the Feb., 2013 Mycena News. Since that time postage rates have increased once with a 3-cent increase requested by the USPS for 2014. The following dues increase and changes will take effect January 1, 2014.

Since its formation in 1950, the Mycological Society of San Francisco has tried to keep the cost of membership affordable. Over the years there has been pressure to raise the membership dues as the MSSF has grown. The cost of printing and mailing this newsletter has continued to increase annually, and the cost of postage is increasing again this month. The monthly printing and mailing costs of nearly 300 copies of the Mycena News accounts for almost 30% of our annual expenses.

In an effort to reduce costs, become a greener society and eventually a paperless organization, the council has approved the increase of membership rates for new and renewing members who request to receive the printed version of the Mycena News. (Remember, you can save yourself and the MSSF money by receiving your newsletter on-line!)

To achieve our future financial goals the following changes will be made:

- The elimination of all options for multi-year print memberships.
- The elimination of the *full-time student* membership category and all *multi-year and print options* for present and future student renewals.
- The elimination of all future life memberships that include print options.
- All future honorary (free) memberships will be "electronic" memberships.

Dues will only increase for those members who wish to continue receiving the printed version of the Mycena News. All other members' dues will remain the same or decrease. Here are the new plans and fees:

Adult/Family Memberships:

• 1-yr.....	\$20
• 1-yr with <i>printed</i> newsletter option.....	\$40
• 2-yr.....	\$35
• 3-yr.....	\$50
• 5-yr.....	\$83
• Life.....	\$350

Senior/Family Memberships (65 & over)

• 1-yr.....	\$15
• 1-yr with <i>printed</i> newsletter option.....	\$35
• 2-yr	\$28
• 3-yr.....	\$40
• 5-yr.....	\$65
• Life.....	\$200

All current memberships will remain unchanged until time of renewal. We encourage ALL current members who receive the printed version of the Mycena News to consider changing their membership status to "ELECTRONIC" if at all possible. Contact Nathan Heilman at: Membership@MSSF.org to switch now! We hope you will continue to be a member and grow with us. Spores!

Culinary Corner continued

2013 44th ANNUAL MSSF FUNGUS FAIR

S.F. County Fair Building next to the Botanical Gardens in Golden Gate Park

Sunday, December 8th
Open to the public 10 a.m. - 5 p.m.

WE NEED MEMBER HELP

If you are an MSSF member and you want to get in free, volunteer to participate on a foray, help with set-up the day before the fair, help with tear down after 5 p.m. the day of the fair, or help during the fair itself! Many volunteer positions are available, go to the MSSF website www.mssf.org and click on Fungus Fair, (info) for numerous volunteer opportunities.

Additional information is available in calendar section of this issue Mycena News and on the MSSF website.

Mushroom collection forays:

Saturday, Dec. 7, 10 a.m. to 3 p.m.
For more information, check the calendar
on the MSSF website: www.mssf.org

Set up: (small tasks for all levels of experience)

Saturday, December 7, 3 p.m. to 11:59 p.m.

Soup Making for the Fair:

Saturday, December 7, 3 p.m. to 10 p.m.

Volunteers during the Fair:

Sunday, December 8, 8 a.m. to 6:30 p.m.

Volunteers for take-down and clean-up:

Sunday, December 8, 5 p.m. to 6:30 p.m.

Dinner will be provided Saturday evening; lunch will be provided Sunday.

Shift obligation is a minimum of three hours for free admission to the fair.

If you have questions, email Stephanie Wright at:

FungusFair@ByteWright.com

mixing well. Add crème fraîche and Parmigiano and mix well. Season with pepper to taste (and salt, if needed). Ladle the mixture into the ramekins or cups and let stand until set.

Just before serving, warm the bottoms of the cups in hot water, then carefully unmold onto small serving plates. They can be reheated in a 350 degree oven for 5 minutes, either in the ramekins or after unmolding them). Garnish with the chopped chives and perhaps some nice greenery. Serves 4.

The October dinner found away from our usual venue as the kitchen there was being renovated. Our large group met instead at Richmond Recreation Center. Our dinner was perfect for the season.

Appetizers were, as usual, plentiful and unique thanks to many of the diners.

Our main course was a mushroom rich "Dinner in a Pumpkin" prepared by **Curt Haney** and **Carol Reed** with **Paul Lufkin** doing the vegetarian version. It is reputed that Curt provided 5 or 6 different mushrooms for the filling (many from his foraging up north of California). The baby pumpkins were a charming presentation and delicious! **Stephanie Wright** brought us blanched kale with porcini powder and bacon. **Alvaro Carvajal** made 3 different versions of cornbread, moist and redolent with chilis, **Roy Coto** made a rich Caesar salad and **Polly Shaw** made our lovely dessert, persimmon cake with ginger frosting.

Carol's recipe is as follows:

DINNER IN A PUMPKIN

Filling:

1 ½ cups chopped celery
1 cup chopped onion
4 oz. or more of mixed chopped wild mushrooms sautéed in butter
1 Tbsp. butter
1 pound hamburger
½ cup of soy sauce
2 Tbsp. brown sugar
1 can cream of mushroom soup or an alternative like it
2 cups of cooked rice.
1 medium pumpkin (or several small ones)

Preheat oven to 350 degrees. Saute the celery and onion in butter until translucent. Add the mushrooms and sauté for a few minutes. Remove from the skillet and set aside. In the same skillet, brown the hamburger and drain it well. Combine the filling ingredients and mix well. Cut off the top of the pumpkin(s) and clean the inside(s) well. Spoon in the filling and replace the top. Bake for 1 hour. Serves 4 to 6 people.

Don't miss the grand MSSF Holiday Dinner! It's a potluck this year and will most certainly be the best potluck you have ever experienced. Go the MSSF website calendar and read all about it.

Here's to peace....and rain in 2014. --Pat



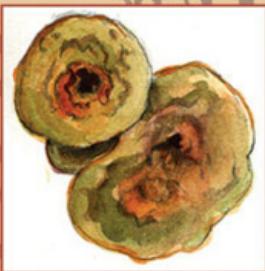
Fun for the whole family ...

A Celebration of *Wild* Mushrooms

The 44th Annual Fungus Fair

Join the festivities as Mushrooms take over the Hall of Flowers!

See and touch a variety of fresh, wild specimens. Enjoy cooking demonstrations, attend lectures, bring mushrooms to be identified, make mushroom-growing kits, and more!

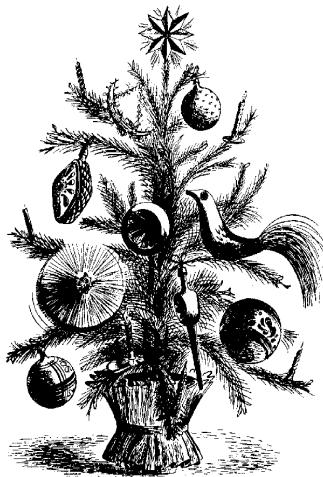


The Fungus Fair is presented by the Mycological Society of San Francisco.



Illustrations and Graphic Design by Kristin Meuser | www.themeuse.com

ENTRANCE FEE: Adults—\$10.00, Seniors 65 and over/Students with school id—\$8.00
Children 6 to 12—\$5.00 Children under 5—free.



To Celebrate the Holiday Season, the
Mycological Society of San Francisco

Invites you to the

Annual Holiday Dinner **POTLUCK**

Location: Hall of Flowers, Golden Gate Park, San Francisco

Time: Monday, December 16, 2013

7:00 p.m. Appetizers and eggnog punch.

7:30 p.m. Dinner

RAFFLE— There will be a raffle held and everyone attending will receive one free raffle ticket. Additional tickets will be available for sale. Plus, if you donate a nice item to the raffle you will receive 5 free tickets.

Cost: Members— \$10.00 (to help pay for renting the hall and making the punch)
Children 12 and under—free. The raffle will pay for itself.

MENU: A FABULOUS, MUSHROOM-INFUSED POTLUCK

The kitchen will be available beginning at 6:00 p.m. for those who wish to warm up hot dishes. Volunteers are also needed starting at 6:00 p.m. to help set up tables and chairs and assist in decorating.

Register at www.mssf.org. Holding a reservation requires advance payment, either through PayPal or by mailed check. When you register, you and any guest will be required to sign-up for the specific category of dish you would like to bring to the dinner. The dish should be enough to serve seven people. Each pot-luck course has a limited number of types of dishes being asked for. The sooner you sign up, the more selections you will have to choose from.

At the end of the evening everyone will be asked to help break down tables and chairs and assist with cleaning-up the auditorium and kitchen. We need to be out of the hall by 10 p.m.

Curt Haney is the coordinator and contact person for the dinner this year. If you are unable to register on the MSSF website, feel free to contact him for assistance. I look forward to enjoying the company of many MSSF members this year at this annual event. Curt Haney (415)-333-8820

-This is a BYOB event—if you want a *spiked* eggnog punch, *BYOB!*
Please bring your own dishes, silverware and beverages.

Mycological Society of San Francisco
c/o The Randall Museum
199 Museum Way
San Francisco, CA 94114

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"A World of Wonder at Your Feet"

December 2013, vol. 65:04

MSSF Calendar December 2013

4 FUNGUS FAIR FORAYS on Saturday, Dec. 7, 10 a.m.-3 p.m.
Gathering mushrooms for the Fungus Fair.

Memorial/Sam MacDonald Parks Fungus Fair Foray
10 a.m., just inside the entrance kiosk at Memorial park.
Memorial/Sam MacDonald Parks, Pescadero Creek Rd., La Honda, CA.
Contact Fred Stevens: 650-994-1374

Huddart Park Fungus Fair Foray
10 a.m., park entrance, 1100 Kings Mountain Rd., Woodside, CA
Contact Wade Leschyn: wade@belmateo.net

Wunderlich County Park Fungus Fair Foray
10 a.m., park entrance 4040 Kings Mountain Rd., Woodside, CA
Contact Chris Schoenstein: 408-674-3834

San Francisco Watershed Fungus Fair Foray
10 a.m., S.F. Watershed, Pulgas Temple entrance, Cañada Rd., Woodside, CA Contact Toby and Bill Freedman: toby@synapsissearch.com

Saturday, December 7, 3-11:59 p.m. - Fungus Fair Set Up
S.F. County Fair Building. Contact Stephanie Wright: 510-654-6279

Sunday, December 8, - 44th Annual MSSF Fungus Fair
S.F. County Fair Building. Open to the public 10 a.m.-5 p.m.

Mon., Dec. 16, 7 - 10 p.m. - MSSF Annual Holiday Dinner (potluck) Hall of Flowers - Golden Gate Park, 9th Ave. & Lincoln, S.F.
Contact Curt Haney: 415-333-8830

Sun., Jan. 12, 10 a.m. - Beginner's Foray at the S.F. Watershed
S.F. Watershed, Edgewood Rd. entrance, Cañada Rd., Woodside, CA
Contact J.R. Blair: 650-728-9405

Tuesday, January 14, 7 p.m. - MSSF Council Meeting

Tuesday, January 21, 7 p.m. - MSSF General Meeting
Randall Museum, 199 Museum Way, San Francisco.
7 p.m. - Mushroom identification and refreshments.
8 p.m. - Speaker: Taylor Lockwood

MSSF Volunteers Needed

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 a 100% volunteer organization!

Mycena News Editor: Let creativity be your guide. Bring out your inner artist. Knowledge of Adobe InDesign CS5.5 helpful. Current editor happy to coach. Email to: mycenaneWS@mssf.org

Librarian Co-Chair: Volunteer to assist the head librarian catalog and check library books in and out of the "Bill & Louise MSSF Library" during monthly general meetings at the Randall Museum.

To learn more about volunteering for these or other council and committee positions, go to: www.mssf.org members-only area, file archives, council member position descriptions. Or email: President@mssf.org

Remember, our great, ALL-VOLUNTEER organization would not survive without volunteers!

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

The submission deadline for the January 2014 issue of Mycena News is December 15th.
Send all articles, calendar items and other information to: mycenaneWS@mssf.org