

Mycena News



The Mycological Society of San Francisco • September, 2012, vol. 64:01

September 18
General Meeting Speaker



Curt Haney
“Urban Foraging in
San Francisco & Beyond”

Curt will be giving an in-depth, 90 minute presentation on where, when, and how to collect choice edibles, and other mushrooms in urban locations. The talk also covers topics like foraging etiquette, collecting hazards, weather factors, competition, and picking regulations.

Curt joined MSSF in 2000 and has served on the MSSF council for the past seven years in several positions including councilor, merchandising chair, Vice President and now, President of the Society.

He initiated a monthly article for Mycena News called “What’s Bookin’”: a series of book reviews on existing and new mycology related books available to members. He has led numerous forays for the Society and has served as Camp Director at the Mendocino Woodlands Foray, and the spring morel foray at Camp Mather.

Curt is an avid mushroom collector and gathers as far as Oregon, Washington, and Colorado. When not traveling for his business, JustmushroomStuff.com, he’s searching for new, choice edible mushroom locations in San Francisco and other nearby urban locations. Curt and his urban foraging buddy Mickey Zeif have discovered many choice edibles in San Francisco, including porcini, shaggy parasols, hedgehogs, oysters, chicken of the woods, honeys, and the prince.

Mycodigest:

Let It Rot (Or Not)

By Else C. Vellinga

The wooden gate beside our house is slowly disintegrating into square bits and pieces. It’s definitely a sign of fungi at work, though they are invisible, and do their job without making fruitbodies. The kind of rot the fungi in my gate produce is called brown-rot, in which the lignin in the wood is left behind in brown chunks, and the cellulose is attacked by the fungus’ enzymes and broken down for food. A walk in the California woods will give you lots of examples of brown-rot, as brown-rot fungi love conifer trees. The red-belted conk, *Fomitopsis pinicola*, is a good example of a very common brown-rotter; *Serpula* the dry-rot fungus is another well-known, and feared, example.



Brown Rot



White Rot

There is a second type of common rot, white-rot, so called because of the white cellulose that is left behind, after the fungi have attacked the lignin. The material left behind is white and stringy and can be torn as if it were a cooked chicken breast. Degrading lignin is a difficult job, and a specific set of enzymes is needed for it. Nevertheless, there are many different white-rot fungi, *Pluteus* and the turkey tail *Trametes versicolor* are just two of many examples.

Brown-rot fungi differ from white-rot fungi in their toolkit – they have a different set of tools (enzymes) to break down the wood components. Not only are the enzymes different, but also the genes regulating the enzyme production. That is the area of research that has received much attention lately. It is easier nowadays to look at the genes than at the various enzymes!

The few examples I just mentioned belong to very different systematic groups: *Fomitopsis* and *Trametes* are polypores, but *Pluteus* is a gilled mushroom, and *Serpula* is a relative of the boletes. Species are assigned to a certain genus based on the kind of rot they produce. The brown-rotting *Neolentinus* species, such as *N. ponderosus* of the Sierra Nevada, were removed from the genus *Lentinus* and put in their own genus, leaving the white-rot causing *Lentinus* species behind. The phylogenetic tree of the basidiomycetes shows a mosaic of brown-rot and white-rot fungi. At the base of the tree are brown-rotters such as *Dacrymyces*, followed later by the *Agaricomycetes* which are thought to be the first white-rot fungi. The rise of the white-rot, lignin and wood decomposing fungi coincides with the end of the big coal deposits. Coal is of course a form of fossil wood, and wood comes from trees. Could it be, that with the explosion of white-rotters, all the dead trees were decomposed leaving no wood behind to form coal?

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PRESIDENT'S POST

Greetings MSSF Members!

I hope many of you had a fruitful spring and summer hunting morels, spring kings, the prince and other fabulous fungi. I personally missed out on the morel forays this year since I was traveling in Indonesia. However, Norm Andresen and Don Hughes organized and conducted two successful morel forays near Yosemite in May that were well attended by MSSF members.

The MSSF summer picnic in July, amongst the redwoods in the east bay hills was a great opportunity for members to stay connected during the driest part of the year. There was a lot of delicious food, including grilled shiitakes! Many tales of spring forays were told, some taller than others. Thanks to George Willis, Norm Andresen, and Ginny Garret for their help with the event.

This new season kicks off with several new volunteers filling important positions on the MSSF council. I want to welcome Jason Kapzynski and Toni Kiely as the new Councilors, Tyler Taunton as the new Programs Coordinator, Jessica Ahmedia as the new Librarian, and Brother Mark Folger as the new Mycena News Editor. Two positions still remain vacant: Education, and the revised Social Media Coordinator. This revised position includes being the Yahoo Groups Moderator, and maintaining the MSSF social media portal presence on the internet. Please consider volunteering for one of these important positions. I am also looking for someone to step forward and coordinate the holiday dinner in December. This is a good chance for someone in the East bay or North of the Golden Gate to suggest and coordinate a location and date for this event. Volunteer organizations cease to exist in the absence of volunteers.

It promises to be another great season for the MSSF. Upcoming events include the Mendocino Foray Camp 9-11 November, and the 43rd annual Fungus Fair 1-2 December, plus other fall camping forays. More details to follow soon in the October Mycena News and on our website www.mssf.org.

I want to thank those members who donated 50 mushroom themed vintage t-shirts for the purpose of making two beautiful mushroom design queen size t-shirt quilts. One quilt is made almost entirely from vintage MSSF t-shirts, which will be kept for display at future fungus fairs and events. The other quilt, which is made from a variety of mushroom themed t-shirts, will be raffled off at the end of this year's fungus fair. Both quilts will be on display at the September general meeting, where we will be selling tickets for the variety t-shirt quilt: 1 for \$5.00, 3 for \$10.00, and 7 for \$20.00 (quilt value is \$500.00).

I also want to give a sincere thank you to many outgoing council members: Max Garrone, Alice Sunshine, Monique Carment, and President, Lou Prestia, for his two years of selfless dedicated service to the MSSF. In addition to Lou being the society's number one volunteer, he was instrumental in initiating many technological and innovative changes that benefited the society as a whole. Thank you all for your volunteer service to the MSSF. I hope to see many of you in the forest soon or at a future MSSF event.

-Curt Haney
president@msmf.org

CULINARY CORNER

It's almost that time again! September starts the Culinary Group's new cooking and dining season with our annual potluck. This is your chance to fix a favorite dish and impress us all, or to try something new and impress us even more. As for most potlucks, participants bring enough to serve 8 to 12 people. Naturally, we love to eat mushrooms at the dinners, but we love good food in general so dishes without mushrooms are welcome also.

This will also be the first chance to buy tickets for the mushroom quilt raffle, described elsewhere in the newsletter.

SEPTEMBER POTLUCK

Date: Monday, September 10 (because of Labor Day)
Time: Business meeting at 7 p.m., with the potluck to follow immediately after.

Location: San Francisco County Fair Building, Golden Gate Park, 9th and Lincoln.

Unlike our other dinners, reservations are not required this time. We will collect \$8.00 from each person to pay for the use of the facility.

We need to be out of the building by 10 p.m. Since there are no dedicated cleanup volunteers this month, we ask that everyone pitch in to help get the room cleaned up and furniture rearranged or put away as needed.

If you have questions or need more information about the Culinary Group, email us: bc.hellums@gmail.com
Or phone (415) 347-7444.

NOTES FOR FIRST-TIMERS

Be sure to bring your own tableware and table covering, as the venue does not provide linens, dishes, utensils, glassware, etc. Also, bring your favorite dinner beverage.

All members of MSSF are welcome! However, if you plan to come regularly, we ask that you join the group and pay the \$10 membership fee. This can best be done on-line when you renew your membership in January.

AND A RECIPE

While we're waiting for the rains to begin, here's a tasty treat to try with shiitake, or even regular supermarket mushrooms, courtesy of Carol Reed.

Stuffed Shiitake

Ingredients: Mashed potatoes, shiitakes, cheese, green onions (chopped), olive oil, salt, pepper

Brush the tops of fresh large shiitakes with olive oil and place on cookie sheet, gills up in 400 degree oven for 20 min. Sprinkle with salt and pepper. Remove and put a little cheese in the center of each mushroom. Cream cheese or brie works well. Put back in oven for 10 min. or so till cheese melts a bit. Remove from oven.

Next put mashed potatoes on top of each cap and push in
Continued on page 4

RAFFLE! RAFFLE! RAFFLE!**MUSHROOM-THEMED, QUEEN SIZE, VINTAGE, T-SHIRT QUILT**

MSSF will raffle this quilt at the 43rd annual MSSF Fungus Fair, December 1-2, 2012, at the Lawrence Hall of Science in Berkeley. It's assembled from 25 vintage mushroom t-shirts donated by society members and is backed with comfy cotton flannel and stitched with mushroom patterns throughout. It will be on display now through November at general meetings and culinary dinners where tickets will be sold. The quilt is valued at \$500.00, and tickets will be 1 for \$5.00, 3 for \$10.00, or 7 for \$20.00. The raffle pays for another quilt crafted from only vintage MSSF t-shirts for display at future society events. The raffle concludes at the end of the fungus fair on Sunday 2 December. See Curt Haney for tickets at the general meetings and the culinary dinners, and also at the special display at this year's fungus fair. (You will not need to be present to win!)

ANNOUNCEMENTS**MSSF MENDOCINO WOODLANDS FORAY****November 9-11, 2012**

Featuring Taylor Lockwood, one of the best mushroom photographers in the world, and author of several books and videos on exotic fungi of the world.

Deep in the Mendocino woods, MSSF members, fellow mushroom enthusiasts, friends and family, gather once again for our annual north coast fungal rite of autumn. This weekend-long spectacular mycological event includes mushroom themed dinners, guided forays, fun informative presentations and of course plenty of mushrooms!

All on-site meals and lodging (Friday night through Sunday lunch) are included in the basic \$200 per person member rate; \$150 for children aged 5-12 years (accompanied by a paid adult). This foray is for MSSF members and their guests only – you will not be able to sign up unless you are a member.

Event schedule details, online registration, and a printable registration form that can be mailed are on the website at: www.mssf.org/mendo/

For registration questions, email alvarocarvajal@yahoo.com

MSSF FUNGUS FAIR**Saturday-Sunday, 1-2 December,**

Mushroom quilt raffle concludes.
Lawrence Hall of Science, Berkeley.

OAKRIDGE, OREGON FORAY: "FOR THE LOVE OF MUSHROOMS"**October 19-20-21 and November 2-3-4.**

www.oakridgehostel.com/index.php/events/mushroom-forays/

52nd ANNUAL NAMA FORAY**Thursday-Sunday, 13-16 December,**

Mission Springs Conference Center, Scotts Valley, CA., near Santa Cruz.

If you're not aware of what's happening at the North American Mycological Association, take a look! You can find out more about NAMA, even join online, at www.namyco.org and don't miss the newest feature of the site, the recently revived Registry of Mushrooms in Works of Art. This year's NAMA Foray will feature chief mycologist Else Vellinga and special guest David Arora. PSMS is scheduled to host the 2014 annual NAMA foray in Port Townsend. Planning for that event has already begun!

**September 2012, vol. 64:01****Contributors:**

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Reed and Else C. Vellinga.

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Brother Mark Folger

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

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

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MycoDigest continued

After that first flurry of white-rotting species, brown-rotters evolved again and again.

The fungal phylogenetic tree also harbours species that are not decomposing wood to satisfy their energy needs: parasitic fungi living off live trees are scattered throughout and so are mutualistic ectomycorrhizal fungi – those that get their carbon directly from the tree in exchange for nitrogen and other nutrients. The latter also occur on various branches of the phylogenetic tree: chanterelles, boletes, coccors and shrimp russulas to name a few. They often are close relatives to saprotrophic species and again often placed in their own genus – *Paxillus involutus* is ectomycorrhizal, but *P. atrotomentosus* is now placed in the genus *Tapinella* as it is a wood-rotter. There is always the question how these different modes came about, did the wood-decayers gain the enzymes to tackle the various components of wood, or did the ectomycorrhizal species lose the ability to degrade plant material?

The set of questions raised above was tackled in a neat research project for the genus *Amanita*. A small number of *Amanita* species is found in grasslands or in forests without ectomycorrhizal tree hosts; these species are decomposers. The majority of *Amanita* species, however, lives in a mutualistic relationship with trees. The saprotrophic *Amanita* species form a small group at the base of the *Amanita* phylogenetic tree, with the rest of the species forming a single-stemmed huge branching tree with many many species. In other words, a single event caused the change from saprotrophism to ectomycorrhizal nutrition, and this was followed by the rise of many different ectomycorrhizal species. They took off and formed many species as soon as they discovered that living trees, rather than dead trees, are a really good source for carbs.

So what was this single event that caused the fungi to switch from eating dead trees to living happily with live ones? The switch, as it turned out, was the loss of two important genes active in cellulose degradation: none of the ectomycorrhizal *Amanita* species has these two genes, but the genes are in the DNA of the saprotrophic species. Of course now we know the differences, we can investigate what came first, the discovery of living tree roots as a source of food, or the loss of enzymes and the forced change in nutritional mode (or lifestyle if you like).

Other fungal groups might show a different approach, with the loss of different enzymes, or the gain of others. Nature is inventive, and the same path is not necessarily taken twice. Time will show, and in the meantime, our garden gate is slowly but surely consumed, by fungi.

Further reading:

Eastwood DE et al., 2011. The plant cell wall-decomposing machinery underlies the functional diversity of forest fungi. *Science* 333: 762-765.

Floudas D et al., 2012. The Paleozoic origin of enzymatic lignin decomposition reconstructed from 31 fungal genomes. *Science* 336: 1715-1719.

Skrede I, Engh IB, Binder M, Carlsen T, Kauserud H, Bendiksby M, 2011. Evolutionary history of *Serpulaceae* (Basidiomycota): molecular phylogeny, historical biogeography and evidence for a single transition of nutritional mode. *BMC Evolutionary Biology* 11: 230 [open access]

Wolfe BE, Tulloss RE, Pringle A, 2012. The irreversible loss of a decomposition pathway marks the single origin of an ectomycorrhizal symbiosis. *PLOS one* 7 (7) e39597 [open access]



Else Vellinga, Ph.D., is interested in mushroom taxonomy and has been studying mushrooms in California and beyond for years. A frequent contributor to *Mycena News*, she is also fascinated by interactions between fungi and other organisms. In her free time she knits, and knits, and knits!

Culinary Corner continued

the onions. Place back in oven for 20 more minutes or until heated and slightly browned.

And finally, a huge thank-you to Lisa Bacon, who did a fantastic job of writing the Culinary Corner last year but will be stepping down this year if we can't talk her out of it. I'll let her have the last word, with her mouth-watering write-up of last May's dinner.

-Carol Hellums

MAY'S ITALIAN DINNER – HAPPY MEMORIES!

The May 7th dinner, “La Cena Piemontese” (Piedmont style dinner), was the last of the previous season, and what a magnificent feast it was. Many thanks to all who contributed first rate appetizers!

Capitano Davide Campbell and his crew topped off our culinary year with the following:

- Punch: Norm Andresen (never for sure what's in it) but always delicious!
- Antipasto: Peperanata Ripiene di Tonno (peppers with tuna) – Ivan Buljan and assemblers
- Primo: Polenta di Porcini (bolete-infused cornmeal) – Davide (OK, I threw in some black truffle butter as a finishing touch)
- Secondi: Osso Buco di Spugnole (veal shank with morels) – Davide and Alvaro Carvajal
- Asperagi Arrostiti (roasted asparagus) – Dave and Peggy Manuel
- Dolci: Torta di Mascarpone con Fragole Balsamico (cheesecake with balsamic strawberries) – Serena and Jeanne Campbell

And thanks to Remo for coming out of retirement to cover Carol Reed on the coffee while she was off diving in Indonesia, and to Tony for helping serve!

On behalf of the entire Culinary Group, I would like to extend special thank yous to:

Alvaro Carvajal for generously housing/dispensing all of the MSSF Culinary Group pots, pans and paraphernalia!

Carol Hellums for her UBER patience in getting us all registered and tagged for each dinner!

Bill Hellums for keeping us all in line each evening – his skill with the horn is inspirational!

David Bell for keeping us fiscally together each month!

My special thanks to Max Garrone, MSSF newsletter Editor Extraordinaire for his patience and accommodation!

And last but not least, thank you to ALL of you for being part of this wonderful group of people who enjoy our culinary explorations and endeavors each month.

-Lisa Bacon

Welcome: New Officers and Councilors of The Mycological Society of San Francisco

The election results are in. Here are the newly elected officers and newly appointed councilors serving in the 2012-2013 term.

President:	Curtis Haney
Vice-President:	David Gardella
Secretary:	Don Hughes
Treasurer:	Henry Shaw
Programs Coordinator:	Tyler Taunton
Librarian:	Jessica Ahmedia
Councilor:	Toni Kiely
Councilor:	Jason Kapzynski
Mycena News Editor:	Brother Mark Folger

(All MSSF members are encouraged to attend the annual meeting of the society, scheduled for 8PM on 15 September 2012 at the Randall Museum.)

MSSF SUMMER PICNIC

The MSSF Summer picnic and potluck was held on July 15, at the Redwood Glen Picnic area, Joaquin Miller Park, Oakland. The weather was perfect, the surroundings were gorgeous, and the company was great. There were even mushrooms in the woods – a new member, Daniele, found a *Pluteus* on the trail in. And the food, as always, was fabulous. To name just a few dishes: Morel and porcini pastas, at least two kinds of deviled eggs, lentil shiitake spread, insalata di tonno e riso, and an Alice Waters recipe with fennel, raw porcini, lemon, olive oil and more.



And on the big grill were hot sausage from Elgin, Texas, leg of lamb, chicken, Curt's home-grown shiitakes, and much, much more.

~ Carol Hellums with Debbie Klein
~Photos by Debbie Klein

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MSSF Calendar September 2012

Friday-Sunday, September 7-9, - MSSF Council Retreat
Monthly meeting. Annual budget meeting. Donner Summit in the Sierra.

Monday, September 10, 7pm - Culinary Group Dinner (1st Monday is Labor Day - note the day and date change!)
San Francisco County Fair Building, Golden Gate Park, 9th and Lincoln, SF. As always, our first dinner of the mushrooming year is a potluck. Bring your favorite dish to share. Unlike our other dinners, no reservations are required. Expect to eat mushrooms. Be sure to bring your tableware and a beverage. The SFCFB does not provide dishes, etc. Future dinner dates for 2012 are October 1 and November 5. We have our annual Holiday Dinner in December. Details will be forthcoming.

Tuesday, September 18, 7 p.m. - MSSF General Meeting
Randall Museum, 199 Museum Way, San Francisco.
7 p.m. - Mushroom identification and refreshments.
8 p.m. - Speaker: Curt Haney

Tuesday, October 16, 7 p.m. - MSSF General Meeting

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

Call for Volunteers

Join the council leadership, learn the inner workings of the MSSF, and help make decisions that shape the future of the society.

Education Chair: Help co-chair this very important council position. This position does not require you to be a formal educator. This is an interesting and fun position and also has a presence at our annual fungus fair.

Social Media Coordinator: This revised position includes being the Yahoo Group Moderator, and maintaining the MSSF social media portal presence on the internet. This position is perfect for someone who is active on Facebook and Twitter, and would like to keep the MSSF up to date, "ON-LINE"!

To learn more about these and all council positions, go to: www.mssf.org, member's only area, file archives, council member position descriptions or e-mail: president@mssf.org

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

The submission deadline for the October, 2012, issue of Mycena News is September 12th.
Please send your articles, calendar items, and other information to: mycenanews@mssf.org