



March 19  
General Meeting Speaker



Nhu Nguyen

*"Yeasts in the Gut of Beetles –Minute Fungi That Cheer and Fuel the World"*

Nhu Nguyen is a PhD candidate at UC Berkeley. He is studying a fungal-bacterial symbiosis system for his PhD dissertation in the Bruns Lab where lots of fun things happen.

He will be talking about his trips to Panama collecting beetles that live in mushrooms and then isolating and studying the yeasts that live in their guts. His talk will focus on yeasts, what they do in the wild, and their innate potential to make alcohol used in both food and biofuels.

Nhu really enjoys the outdoors, nature, and related activities like hiking, camping, and roadtrips. While in outdoor settings, he always has a camera on hand for photographing plants and landscapes.

He likes a good mix of indoors stuff as well, including cooking, guitar, and painting.

He also really enjoys collecting insects and has been working on a collection since his sophomore year in high school.

## Mycodigest:

### *Clitocybe Sclerotoidea*

#### A Most Wonderful Parasite of *Helvella Vespertina*

Nhu Nguyen

I love parasites. They are just some of the neatest things; except when I'm forced to play host. Parasites come in all sorts of shapes and sizes and it is thought that every species on earth has a parasite of some sort. Animals have parasites, plants have parasites, and fungi too have parasites. I can talk about parasites all day (yes, that parasitology class in college right before lunch three times a week left quite the impression), but I will focus on just one this time.

Mycoparasites are fungi that parasitize other fungi and they commonly occur in the mushroom world. Typically the more colorful or pronounced ones get more noticed. Examples of colorful parasites would be *Hypomyces chrysosporium*, a common parasite on boletes on the west coast with golden spores. Another one known amongst mushroom hunters is *Hypomyces lactifluorum* that covers a *Russula*, turning it beautifully orange and delicious. Then you have those that are tiny, but still beautiful like *Dendrocollybia racemosa* with its strange side branches on the stipe and *Spinellus fulviger* that turns a *Mycena* into a fuzzball on a stem.



A closeup of a large cap of *Clitocybe sclerotoidea* with smaller mushrooms coming out of the sclerotoid mass.

*Clitocybe sclerotoidea* is another one of these fascinating mycoparasites. It was first described as *Tricholoma sclerotoideum* by E. E. Morse in 1943 and moved into the genus *Clitocybe* in 1945. Careful examination of the mushroom (see photos) shows characters that are *Clitocybe*-like, such as the pallid gray color of the gills, which makes the move seem correct. However, recently one of our specimens was sequenced and the DNA says that it may be better as a *Tricholoma*. It seems that the original description may have been correct. We need to sequence more specimens to make sure that this is indeed the correct identification, so for



The way these mushrooms look in habitat. In this photo, they were found under some pine trees. Notice that the sclerotoid mass is buried just below the needles.

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## PRESIDENT'S POST

### Greetings MSSF Members!

Alan Rockefeller was our guest speaker at the February general meeting at the Randall Museum. Alan gave a great talk on the Mushrooms of Mexico to a nearly full house which was enjoyed by all. The MSSF invites guest speakers to give presentations to our membership eight months out of the year. The MSSF Program Chairperson, with help from the Council, seeks these speakers out for your enjoyment. I would also like to solicit input from the general membership—*that's you!* If you have a suggestion as to whom you would like to see give a presentation at a future general meeting, please contact our Program Chairperson, Tyler Taunton, at: [tyler.taunton@yahoo.com](mailto:tyler.taunton@yahoo.com). Or (415)-571-8096 and leave him a message. Tyler is always seeking out new speaker suggestions for the council's consideration.

In my post last month, I asked for a volunteer to step forward and organize this year's Holiday Dinner. I did not receive a response, so the council has decided that we will have a pot-luck dinner. It will most likely be held at the Hall of Flowers in Golden Gate Park. We plan to have the punch and the desert supplied and members will be able to sign up to bring a specific dish and pay a nominal fee in advance to cover the cost of renting the space, etc. More specific information and complete details will be made available in September. It will be called: "The "MSSF" First Annual Survivor's Dinner".

Check out the MSSF website at: [WWW.MSSF.ORG](http://WWW.MSSF.ORG) Dave Bell, our webmaster and I have been making improvements and updates to it. On the home page you can now "like us" on Facebook or "follow us" on Twitter. There is also a new "donate button" on the home page so anyone can donate to the MSSF scholarship fund by mailing a check, (the preferred method) or a payment through Pay-Pal. Dave and I are also working on adding a mushroom identification page to the website that will contain information and links to various mushroom information websites that will assist everyone who visits our site. Also on our website, in the members only section, is the "file archives section". You can go to this area of our website and access the latest member's roster, minutes from past council meetings, past issues of Mycena News, the MSSF library catalog, the MSSF by-laws, etc.

Last but not least, I want to thank the council members and all of the other members who contribute so much in assisting me with my duties and helping to make the MSSF a great organization.

By the way, here in San Francisco it has been quite dry since the holidays and there has been very little fruiting action in the form of choice edibles. We definitely need some good, heavy rain action, soon, in order to generate new flushes. This is one of those times when I'm glad I dried those excess mushrooms!

I hope to see many of you in the forest soon, or at a future MSSF event!

--Curt Haney, [President@MSSF.org](mailto:President@MSSF.org)

## CULINARY CORNER

### CULINARY CORNER LOOKS TOWARD SPRING

Late winter mushrooms haven't been prolific so far in 2013. Reports are of only occasional scattered finds of black trumpets (*Craterellus cornucopioides*) and of yellowfeet (*Craterellus tubaeformis*). Chanterelles, often fruiting well into February, have been rather scarce this season. The few I found were rather disreputable-muddy and a bit shabby. Even the ones for sale were less than inspiring. However, hedgehogs (*Hydnum repandum*) have shown up. The cold, dry weather so far this year has undoubtedly influenced the variety and amount of fungi out but have faith, things are sure to get better. The last shrooms of winter remind us that spring's morels are on the way.

If you can't find your own fresh black trumpets, dig into your stash of dried ones or buy them at a high price, another indication of their scarcity this season. Then make Mike Wood's sublime recipe I lifted from his website, Mykoweb. Warning: not for the diet conscious!

#### CRATERELLUS AND GORGONZOLA FETTUCINE SAUCE

½ oz. dried *Craterellus cornucopioides* (or 4 oz. fresh)  
4 oz. gorgonzola cheese  
3 TB butter  
½ cup heavy cream  
1 lb. fresh fettucine

Clean and chop the *Craterellus* (if you are using dried fungus, soak them in ½ cup hot chicken stock or water and drain, reserve the liquid).

Saute the *Craterellus* in the butter over medium low heat for 3 minutes (if you have reserved liquid from soaking the dried fungus, add it to the pan, turn up the heat and boil off the liquid).

Crumble the gorgonzola into the butter and fungus mixture and melt the cheese over medium low heat.

Bring a large pot of salted water to a boil. Add the fettucine and cook al dente. This should take 60 to 90 seconds, stirring constantly. Mix the sauce and pasta and serve immediately.

"Any blue cheese will work for this dish, but the creamier the better," says Mike. "A substitution for the gorgonzola is cambazola or blue Costello. These very creamy cheeses make an even smoother sauce...I use black pepper fettucine, but plain or garlic pasta also works very well. And of course you can substitute any good dried pasta."

So easy, so delicious!

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## Mycodigest continued

now, we'll call it a *Clitocybe*.

This is an even more specific case in mycoparasitism where a mushroom parasitizes another mushroom. The host mushroom in this case is *Helvella vespertina* (the western North American conifer associate previously known as *Helvella lacunosa*).



A nice and large mass that had been cut half. The left half shows the convoluted remains of a *Helvella* stipe.

to a potato. If you ever find one of these *Helvella* sclerotoid masses, cut it in half, and you will find the lacunose remains of a *Helvella* stipe covered in white fuzz. Trappe (1972) wrote a nice little microscopy study of these sterile sclerotoid masses.

At the right time, a dense cluster of little mushrooms will sprout out of the sclerotoid mass and the spores released from these mushrooms will continue to infect other developing *Helvella* specimens. At this time, we don't really know how the spores are able to infect new *Helvella* hosts. The timing seems wrong. *Helvella vespertina* fruits in late autumn to spring in northern California. The masses of sclerotia appear in late winter, around December, and the mushrooms appear in January. This means that if the *Clitocybe* spores were to continue the infection cycle, they would either have to infect the *Helvella* hyphae right away or the spores will have to sit around for another year before the *Helvellas* fruit again. Sitting around doesn't seem likely for these light-colored spores.

Parasites do many things to their hosts, but one of the most harmful things that they do is cause the host to go sterile. In the case of our *Clitocybe*, it causes the *Hevella* to cease mushroom production and all that is left is just a mass of sterile stipe without the ability to produce spores for the next generation. Yes, despite the drama, I still love parasites but loving mycoparasites means that I won't ever have to worry about being forced to play host.

To find these mushrooms, look for a place where *Helvella vespertina* fruit abundantly under conifers and you should be able to find them. In northern California, they start appearing around late December.

## References:

- Morse EE. 1943. Study of a new *Tricholoma*. *Mycologia* 35:573–581.  
 Trappe JM. 1972. Parasitism of *Helvella lacunosa* by *Clitocybe sclerotioidea*. *Mycologia* 64:1337–1340.  
 1945. Some western discomycetes. *Gyromitra esculenta*, *Helvella lacunosa*. *Mycologia* 37:414–424.



About the author: Nhu Nguyen is a PhD candidate at UC Berkeley studying under Tom Bruns. He enjoys collecting and eating mushrooms (the edible ones of course), describing new fungal species, and photography of plants and fungi. His research interest is in symbiotic interactions between fungi and other organisms. For more of his work, see his web page at <http://www.flickr.com/photos/xeranthem/>



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## Contributors:

Curt Haney  
 Patricia George  
 Ken Litchfield  
 Nhu Nguyen

## Editing and Layout:

Brother Mark Folger

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Please e-mail photos, comments, corrections, and correspondence to [mycenanews@mssf.org](mailto:mycenanews@mssf.org)

To subscribe, renew, or make address changes, please contact Nathan Heilman: [Membership@MSSF.org](mailto:Membership@MSSF.org) or (415) 320-4237.

Past issues of *Mycena News* can be read online at [www.mssf.org](http://www.mssf.org)

## MSSF Officers 2012-2013

President: Curt Haney  
 (415) 333-8820  
[President@MSSF.org](mailto:President@MSSF.org)

Vice-President: David Gardella  
 (602) 617-0150  
[VicePresident@MSSF.org](mailto:VicePresident@MSSF.org)

Secretary: Donald Hughes  
 (510) 919-8866  
[Secretary@MSSF.org](mailto:Secretary@MSSF.org)

Treasurer: Henry Shaw  
 (925) 551-8243  
[Treasurer@MSSF.org](mailto:Treasurer@MSSF.org)

## FAR WEST FUNGI FARM FIELD TRIP POTLUCK BBQ

### Sunday, March 24th, 12-3 p.m., in Moss Landing

The Cultivation Committee of the Mycological Society of San Francisco and the Merritt Community College Beneficial Beasts in the Garden class are having their annual Spring Free Far West Fungi Farm Field Trip Potluck BBQ at the organic Far West Fungi Farm in Moss Landing on Sunday March 24th from noon to 3ish. The Fermentation Club will be meeting there at the same time, too.

MSSF members are hereby invited to join us to kick off the mushroom season with a big shebang.

**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, lion's mane, maitake, and reishi in several large warehouses. They also have some acreage of traditional crop plants which their employees grow organically for their own use. 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, and fruiting halls.

**Potluck Barbecue**—After the farm tour the Garrones will have their big grill out for grilling their organic farm fresh mushrooms and whatever grillables you bring. Everything is free with admission of a pot luck item and/or slabs of something for the grill. You may invite your friends with their potlucks, too. It's a great place and event for springtime mycelial networking.

**Fermentation Club**—The Fermentation Club is joining the field trip potluck for their monthly 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. Check with David Gardella at [VicePresident@MSSF.org](mailto:VicePresident@MSSF.org) for details about the Fermentation Club.

**Recycle Pile Raid**—After the tour and potluck we can raid the recycle pile for mushroom compost and bring back as many once-harvested mushroom blocks as we can carry. We try to take the largest vehicles possible in order to pick up as many mushroom blocks as we like. Bring big, tough garbage bags, plastic trash cans or cardboard boxes to sort and carry the various types. 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](http://mssf.org) site.

**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.

\*\*\* We are mushroom people 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.

**Directions**—Please print them out to take with you. Look up the address on Google Maps, too, to see where you'll be going as there's a lot of road construction in the area. **Far West Fungi Farm • 1186 Trafton Road • Moss Landing, CA 95039 • (831) 728-5469.** The farm is off Highway 1 south of Watsonville (2 routes available).

1. Take 280 south to Hwy 85, follow to Hwy 17 (toward Santa Cruz), Hwy 1 south toward Watsonville, turn right on Jensen Rd. at Dominic's Fruit Stand - now demolished for road-widening. There's a lot of road construction around the Jensen Rd. turnoff so be on the lookout. Right on Bluff Rd., right on Trafton Rd. First driveway on the left.
2. Take 101 south past Gilroy, 129 west to Watsonville, south on Hwy 1, turn right on Jensen Road at Dominic's Fruit Stand - now demolished for road-widening. There's a lot of road construction around the Jensen Rd. turnoff so be on the look out.) Right on Bluff Rd., right on Trafton Rd. First driveway on the left.

## Culinary Corner continued

The Culinary Group partook of an American blue-plate special in February. The menu: mint julep punch, a plethora of appetizers, chanterelle, yellowfoot and hedgehog soup, mushroom-carrot loaf, truffled mashed potatoes with gravy, iceberg lettuce wedges with blue cheese dressing, and persimmon cupcakes with candy cap mushroom sauce. Not your average café blue-plate offering!

The mushroom-carrot loaf was from the Moosewood Cookbook. Here's how to do it for 4 to 6 servings:

### MUSHROOM-CARROT LOAF

1 cup chopped onion  
 1 lb. chopped mushrooms (Carol and her crew used a mixture of wild and cultivated fungi)  
 4 ½ cups grated carrots  
 5 eggs  
 2 cloves of garlic  
 1 cup fresh whole wheat breadcrumbs  
 1 cup grated cheddar cheese  
 ¼ cup butter  
 Salt, pepper, basil, thyme

Crush garlic into melting butter. Add onions and mushrooms and sauté until soft. Combine all ingredients (saving half of the breadcrumbs and cheese for the top). Season to taste. Spread into buttered oblong baking pan. Sprinkle with remaining breadcrumbs and cheese. Dot with butter. Bake at 350 degrees for 30 minutes covered and then 5 minutes uncovered (or until browned).

Another delicious mushroom loaf, this time with meat, can be found in "Kitchen Magic with Mushrooms", our 1963 contest edition. Recently donated copies were sold at the last fungus fair and are still available for sale at general meetings. It uses blewits but other species can be substituted.

To join the Culinary Group, you must first be a member of the MSSF, plus pay your annual \$10.00 dues to belong to the "participatory cooking group". Reservations are required for each of the very special dinners. They fill up fast so it's best to make reservations early. Our next dinner, featuring a *zarazuela de mariscos* (a seafood stew from the Catalan coast of Northeast Spain), will be on March 4th. Information about the Culinary Group can be found at [www.mssf.org](http://www.mssf.org). See the calendar for upcoming dinners.

See you at the MSSF meetings, the Culinary Group, and, of course, out looking for mushrooms. --Pat

## JOIN MSSF YAHOO GROUP

As an MSSF member you can communicate with other members, be informed of MSSF events, forays, and mushroom info, and access 12 years of archival emails and other history through the MSSF Yahoo group. To join the group you must first have a Yahoo ID.

- If you don't already have one, go to [www.yahoo.com](http://www.yahoo.com) and sign up for a free Yahoo account, which includes an email address.
- From the Yahoo email address, send a subscribing email to [mssf-subscribe@yahoogroups.com](mailto:mssf-subscribe@yahoogroups.com). In the message, include your name and the email address you used to join MSSF.

OR

- After signing up for a Yahoo account go to [groups.yahoo.com](http://groups.yahoo.com) and enter MSSF in the search box. When the group listing displays, click "Join This Group" and follow the instructions. Be sure to give your name and the email address you used to join MSSF.
- Please allow a day or two for verification of your membership.

You can choose to receive individual emails of all postings or a single, daily email that includes all postings, or you can simply read the postings online.

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199 Museum Way  
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## MSSF Calendar March

### **Monday, March 4, 7 p.m. - Culinary Group Dinner**

S. F. County Fair Bldg, Golden Gate Pk, 9th & Lincoln, S.F.  
*Zarzuela de Mariscos* (Spanish seafood stew) Bring your tableware and a beverage. The SFCFB does not provide dishes, etc. The next dinner is April 1.

### **Tuesday, March 12, 7 p.m. - MSSF Council Meeting**

### **Sunday, March 17, 10 a.m. - Quick Start Foray**

Joaquin Miller Park, Redwood Glen Picnic area  
3450 Joaquin Miller Rd. Oakland, CA 94611  
Contact Paul Koski at [pkoski04@yahoo.com](mailto:pkoski04@yahoo.com) or 415-990-5358

### **Tuesday, March 19, 7 p.m. - MSSF General Meeting**

Randall Museum, 199 Museum Way, San Francisco.  
7 p.m. - Mushroom identification and refreshments.  
8 p.m. - Speaker: Nhu Nguyen

### **Sunday, March 24, 12 p.m. - Far West Fungi Farm Field Trip**

**Potluck BBQ** 1186 Trafton Rd., Moss Landing, CA 95039  
(831) 728-5469 . Full details inside this issue.

### **Tuesday, April 9, 7 p.m. - MSSF Council Meeting**

### **Tuesday, April 16, 7 p.m. - MSSF General Meeting**

Randall Museum, 199 Museum Way, San Francisco.

## Foraging

I get thank-you notes from those people  
I take out to hunt matsutake.

In the afternoons we see the sky  
Dripping into the shiros while we  
Don't get wet at all. On the stove top  
The earthy bounty just fries itself,  
We make gourmet soup without even  
Washing our hands or removing grit.  
Mountains seem to await our return,  
Keeping their fairy rings dewy, fresh.  
In spring, music of the spheres anoints  
the green path where we walk in mornings  
among puffballs, lemon-gold corals,  
Morels. It could be that way, it could.



-Anonymous

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 April 2013  
issue of Mycena News is March 15th.  
Send all articles, calendar items and other  
information to: [mycenanews@mssf.org](mailto:mycenanews@mssf.org).