

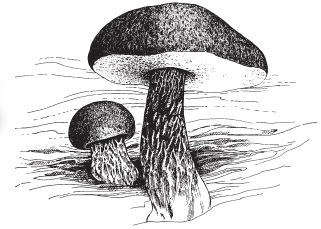
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# Mycena News

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The Mycological Society of San Francisco May 2010, vol. 61:05

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May 18<sup>th</sup> MSSF  
Meeting Speaker



**Todd Osmundson**

*Conservation of Fungi: Issues,  
Tools, and a Call for an Amateur  
Mycological Renaissance*

Mushrooms and other fungi not only provide food, medicines, and industrial products, but also drive nutrient cycles, shape the composition of plant communities, and structure soils. Are fungal populations disappearing? What are the major threats, what are the primary scientific and policy instruments used in fungal conservation, and what can amateur mycology societies do to help?

Todd Osmundson is an MSSF member and a postdoctoral researcher in the Forest Pathology & Mycology Laboratory – University of California, Berkeley. His research interests are in the systematics, evolution, ecology, and conservation biology of microbial organisms — current and recent research systems include ectomycorrhizal fungi, microfungi and bacteria. Knowledge about the evolution, dispersal, and interactions of these organisms is critical for understanding ecosystem function and predicting how diversity will be impacted by threats like climate change and habitat loss and fragmentation. Dr. Osmundson's research therefore involves multiple lines of investigation,

Continued on page 7

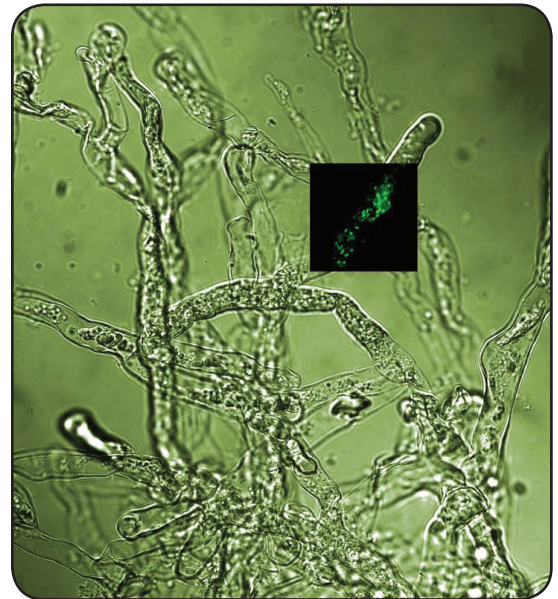
## **Mycodigest: Biology in 3D: our growing appreciation of tripartite symbioses in nature**

Kabir Peay

In recent years, biologists have had a growing appreciation for symbiosis. This comes from increased recognition of the importance of commonly known forms of symbiosis (e.g., mycorrhizas, legume-rhizobia), but also the discovery of many new symbioses in places we never thought to look before. Advances in microscopy, isotopic labeling and DNA sequencing have facilitated many of these discoveries, but most important has been the curiosity of scientists willing to look in new places. While mycologists have been at the forefront of symbiosis research, the focus has traditionally been on two way plant-fungal or animal-fungal interactions. However, recent research has unearthed evidence that three-way (tripartite) or even multipartite symbioses may in fact be the norm.

Perhaps the most commonly known tripartite symbiosis in the mycological world is that between trees, mycorrhizal fungi and non-photosynthetic plants. In this case the nonphotosynthetic plant parasitizes the fungus and use it like a straw to draw sugars from the tree. However, in recent years we've also learned about ectomycorrhizal fungi that parasitize nematodes as a source of nitrogen for their host trees, ectomycorrhizal fungi that may cultivate nitrogen-fixing bacteria, and an intricate four-way interaction between leafcutter ants that cultivate fungal gardens and actinobacteria carried on the ants' bodies that produce antibiotics to ward off other fungal parasites that might attack these gardens.

However, two tripartite symbiotic interactions were recently described that caught my attention and point towards an underlying complexity in the natural world that is at times hard to fathom. One of the most interesting things about these particular examples is that both involve endosymbionts (i.e., internal symbionts) living inside fungal hyphae.



Hyphae of *Rhizopus microporus* containing endosymbiotic *Burkholderia* bacteria. The inset shows *Burkholderia* cells within the hyphae made visible using a green fluorescent stain. Photo courtesy Prof. Christian Hertweck.

Continued on page 5

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Mycodigest is dedicated to the scientific review of mycological information.

## CULINARY CORNER

### A Magic Spring Menu for April -

When I heard at March's dinner that Pat George and Kathleen Madsen planned on preparing rabbit in mustard sauce I had been anticipating all month long for the evening to arrive. Well, it did arrive, with great success and with something more. Although I've been to several culinary dinners before, I must say there was something unexpectedly special, almost magical about this one.

As usual, our members were already on site by 6:00 pm, setting up chairs and clothing the tables, while the volunteer cooks rolled into the kitchen with their dishes for 44. When I arrived George Willis had just placed his delicious Vegetable Root Medley in the oven, and it was already filling up the kitchen with a sweet aroma of slow-baked parsnips, turnips, sweet potato. That medley turned out just as sweet, creamy and delicious as it smelled. I quickly started preparing my dessert for the evening but with great difficulty. I blame Pat and Kathleen on this because, little did I know, that they managed to slip the rabbit into the oven and every time the oven door opened, I was stunned and consumed by the exquisitely intense meat and mustard sauce that filled the kitchen. Shame on you for making a dish too seductively stunning to the senses!

I made a concerted effort to continue focusing on the task at hand, as our kitchen slowly populated itself. As usual, members showed up with delectable appetizers such as these that appeared - mushroom-filled mini quiches and mini-turnovers, cheeses, vegetable concoctions, etc. Some appetizers needed just a bit of reheating before serving, like Dave Campbell's porcini polenta with morels, with which I came face to face, as we simultaneously swung around both of us heading toward the kitchen door. Coming up with a side view of his glass dish, I'm convinced that the sight of those giant morels hiding behind a semi-opaque layer of polenta stopped me in my tracks before causing a "kitchen crash". The sample also stopped me in my tracks. I didn't mind being distracted by all these appetizers, but time flies during sweet torture.

My task at hand had to continue: placing strawberries on top of the cake. But, out of the corner of my eye I caught something bright orange and then yellow. It was Norm (not him, but his punch, which for me is synonymous). I couldn't help appreciating his three-bowl technique. The punch seemed to take on a life of its own and kept changing hue, until it settled into a salmon color when it went out onto the table - Pat George's term last month for that punch was "lurid". This month I'll say it was capricious. Norm, you keep us on our toes, what next?

Finally the moment arrived for our members' efforts to come together at the table. And oh, la, la, did it ever. What an unexpected creation of a meal! Each dish so well complimented the other. Stephanie's grain pilaf which included cranberries, dried mushroom and quinoa as well as other grains was not only a texture delight, but complimented the meaty richness of the rabbit and sauce. Toni's bright green fresh asparagus topped with her homemade mayonnaise and hollandaise sauce brightened our plates, and Phil and Carol's crunchy Caesar salad with croutons satisfied us garlic and anchovy lovers without overpowering our palates. For dessert I served a "fraisier" (fraise is strawberry in French). My choice was based on an irrational fixation on recreating a delicious dessert I tasted in France several years ago. My attempt fell short, especially in portion size, as I know that the portions were fit for amazons (my apologies). But, I learned a lot

as a volunteer cook and got a kick out of amusingly trying to dress up strawberry tops as *Amanita muscarias*. All this served with good coffee made by Remo.

The meal was complimented by the usual camaraderie that makes the dinners worthy in and of themselves. But, there was the extra special element of all the right foods being aligned and coming together. Whether they're stars or foods, when they're aligned, it's magic.

- by Lisa Gorman

### A Recipe for May

As May is our most successful month for collecting morels, I looked for a recipe that brings out the best in the mushroom, one that is simple yet rich and elegant. This month's recipe is from the long out of print MSSF cookbook, "Kitchen Magic with Mushrooms, 1963 Contest Edition", edited by the MSSF's late legendary chef and gourmet, Charles Sharp. The recipe is one of Charles's own in the collection. My copy, falling apart, purchased when I was just starting to get interested in mushrooming, resides in a ziplock bag.

### Chicken and Morels in Cream

Cut a fine frying chicken into serving pieces. Saute the pieces slowly in hot butter until lightly browned on all sides. Set 1/2 cup warmed brandy aflame and pour over the chicken. Cover and simmer slowly for 10 minutes, or until done. Add 2 cups of morels which have been simmered in butter with a little lemon juice until almost dry. Add 1/4 teaspoon MSG (well, this is a recipe from the 60's, a time when MSG was not reviled) a pinch of nutmeg, salt and pepper to taste. Remove chicken and mushrooms to serving dish. Stir one cup whipping cream into the juices, heat just under boiling and spoon over chicken and mushrooms. (Creme fraiche is a good substitute for the whipping cream; that's not a 60's ingredient)

If you have a favorite wild mushroom recipe consider sharing it with MSSF members. Just e-mail it to me at [plgeorge33@yahoo.com](mailto:plgeorge33@yahoo.com).

The Culinary Group, like the general group, does not have monthly meetings during June, July and August. We will resume our dinners in September with another one of our unforgettable potlucks. As Labor Day is the first Monday of the month, our usual night for dinners, we will gather on Tuesday, September 7th.

Now get out there and go mushrooming.

The morels are getting away! -Pat



## ANNOUNCEMENTS

### MSSF Spring Foray - May 7th - 9th - Yosemite NP

Join us in our hunt for morels and stay at Camp Mather near Yosemite. \$200 includes rustic cabin accommodations and all meals from Friday dinner to Sunday lunch. For more information and registration, go to: <http://mssf.org/forays/mather-2010> or return the form on page 6.

### MSSF Summer Picnic - Sunday August 22<sup>d</sup> - Joaquin Miller Park

Noon to 4 pm, Redwood Glen Picnic area (Rain date: August 29<sup>th</sup>). Bring something to grill, a dish and beverages to share (excluding hard liquor per our permit) and other picnic items including your place settings. MSSF will provide charcoal (please do not leave anything in your cars!) <http://www.oaklandnet.com/JoaquinMillerPark> (see map on page 7).

### GUIDED FORAYS AND WORKSHOPS

#### Yuba Watershed Institute Spring Fungus Field Seminar - Sat. May 22<sup>d</sup>

Join local mycologist Daniel Nicholson investigating Sierra spring fungi. We will visit somewhat predetermined fungal hot spots through the midelevations to snowline. Identification, foraging skills, edible fungi (morels and spring kings mostly), and snowmelt fungi will be the focus of discussions. \$25 (\$20 YWI members) Space is limited, registration is required; go to: <http://yubawatershedinstitute.org/events.cfm>. For more information for this event only contact Daniel Nicholson at danmadrone@gmail.com.

#### MushRoaming Tours in Tibet

Daniel Winkler offers two MushRoaming Eco-tours in Tibet in 2010:

- *Cordyceps* & morel expedition (E. Tibet) May 24<sup>th</sup> to June 6<sup>th</sup>
- Fungal & Floral Foray in Tibet, July 14<sup>th</sup> to 27<sup>th</sup>

More details at: [www.MushRoaming.com](http://www.MushRoaming.com).

#### NAMA 2010 - 50<sup>th</sup> Anniversary Foray

August 12<sup>th</sup>-15<sup>th</sup>, 2010, at the YMCA Snow Mountain Ranch, Winter Park, Colorado

For registration and more information visit the websites at NAMA <http://www.namyco.org/events/index2010.html> and the Colorado Mycological Society <http://www.cmsweb.org/NAMA2010.htm>

#### Italian Truffles, Mushrooms & Wines – October in Piedmont

David Campbell and MycoVentures lead a pair of gourmet adventure tours designed especially for the mycophile, featuring truffle festivals in Montiglio and Alba. Each tour includes truffle and mushroom-hunting forays, classic regional cuisine, select wine tasting, all meals, ground transport, select hotel and villa lodging. For info and reservations, go to [www.mycoventures.com](http://www.mycoventures.com) or contact David at: 415-457-7662 / [dc@mycoventures.com](mailto:dc@mycoventures.com).



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

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## Mushroom of the Month: *Boletus rex-veris* Arora & Simonini

By Buck McAdoo

(Note: This article originally appeared in *MushRumours* (Mar. 2009, Volume 19 Issue 4), the newsletter of the Northwest Mushroomers Association, and is reprinted here by permission. -Ed.)

For several decades our club has been crossing the Cascades to the eastern side every spring to search for the elusive morel. If we happen to go in late spring we usually reap the benefit of running into a large, brick-capped bolete with mustard-yellow pores. Many of our club members find it just as tasty as our local *Boletus edulis*, and therefore it helps diminish the pain of finding no morels. The odd thing is that until now, this very showy bolete that stretches from British Columbia down to the Sierra Nevada never had a correct name. Roger Phillips probably came closer than most. We collected it together in the Cle Elum area back in 1989. He photographed a collection, then took the specimens back

Photo by Buck McAdoo



A bolete by any other name would still taste as sweet!

to Kew Gardens for identification. They must have had a devil of a time finding a name for it. I can picture the research team becoming more incredulous by the minute. They finally settled on the name *Boletus edulis* var. *aurantioruber* and published the photo on page 232 of his *Mushrooms of North America*. Despite the lyrical flow of the specific epithet, this name never really caught on. We kept referring to it as 'that eastern Cascade *edulis*', or eventually, trying to appear a little more erudite, *Boletus pinophilus*. Neither, it turns out, was correct.

The idea that it might be *Boletus pinophilus* may have originated with Dr. Ernst Both, an esteemed boletologist from Buffalo, NY. In his book, *The Boletes of North America*, he wrote under his description of *Boletus edulis* subsp. *aurantioruber*, "This taxon appears to be very close to, if not identical with, the European *Boletus pinophilus*. The overall color scheme and the dimensions of spores and cystidia are nearly identical.' Notice that he didn't come right out and say they were the same. But he did make the suggestion. It was just enough. My hunch is that professionals who shied away from the name '*aurantioruber*' latched onto *B. pinophilus* with a sense of relief.

Frankly, I've always had problems with that concept. I had collected *Boletus pinophilus* with Dr. Roy Watling in Scotland years before. The caps were dark maroon-brown and the stems were tan to brown. I decided to send Roy specimens and photos from our foray last spring. I received an immediate e-mail stating that 'one thing it is not is *B. pinophilus*'. Couple days later I received a second e-mail declaring that our species did not occur in Europe, but that it was definitely part of the *edulis* group. *Boletus aurantioruber*, on the other hand, has been reported from Europe. Henning Knudsen listed it as *Boletus edulis* form *aurantioruber* in *Nordic Macromycetes*, Vol. 2.

Meanwhile, not everyone was shying away from '*aurantioruber*'. In *Mushrooms of Cape Cod and the National Seashore*, authors Bessette, Both, and Neill raised it to species status. Here at last was the first full macroscopic description of *Boletus aurantioruber*, by far the closest look-alike to our *Boletus rex-veris*. Photos of the two species look the same. Although Arora did not compare species in his introductory publication, the differences appear to be as follows: 1.) *Boletus rex-veris* occurs in most mountain ranges west of the Rockies while *Boletus aurantioruber* can be found from Michigan east to Cape Cod. 2.) *Boletus aurantioruber* has a smaller stature. Caps run up to 12 cm wide with stems up to 2 ½ cm thick and 12 cm long. *Boletus rex-veris* has massive caps up to 35 cm wide and stems up to 10 cm thick! 3.) *Boletus aurantioruber* fruits above ground while *B. rex-veris* is almost hypogeous, fruiting often below ground with only the top of the cap poking through the duff. 4.) *Boletus rex-veris* often does not have reticulations on the stem, but if it does, the reticulations do not change color when bruised. *Boletus aurantioruber* has reticulations that bruise dark brown to black when handled. 5.) Rolf Singer discovered that hynenophoral tissue dabbed with Melzer's had a fleeting amyloid reaction with *Boletus edulis* var. *aurantioruber*. This remains to be seen with *Boletus rex-veris*. 6.) The stem base of *Boletus aurantioruber* can be either bulbous or narrowed to a point while the stem base of *Boletus rex-veris* usually has a distinct root-like extension. Arora writes that a more detailed treatment of the *Boletus rex-veris* is in preparation. Perhaps even more differences will emerge.

Photo by Jack Waytz



The best *B. rex-veris* buttons out of the Great Boletus Outbreak of 2006.  
My haul was nearly 100 pounds!

The above photo depicts specimens found by the Kuhn brothers near Fish Lake in the Lake Wenatchee area last spring. The GPS is not provided here. Suffice it to say that they can be found with lodgepole pine and ponderosa pine mostly from June to July in the eastern Cascades. We have also found them near river banks among vine maple. Caps run from 5 ½ -30 cm. wide and are broadly convex to plane. At first they are rusty brick to a sort of rosy cinnamon color eventually becoming more ochre in age where exposed to sunlight. They are viscid only when

wet, glabrous except for an irregular whitish bloom when young. The pore surface is white at first, soon becoming lemon yellow, and then a sordid mustard color in age. The pores are more rounded than angular, about two per mm. They darken slightly when bruised or turn an olive-brown. The tubes are olive-ochre in maturity and run up to 2 ½ cm long. Stems range from 2 ½-10 cm thick and 5-20 cm long. They are equal to slightly clavate, almost always with a short radicate root at the base. They are a pale brick color at the apex fading to cream towards the base. Five out of every six specimens last spring had no surface reticulation. Those with reticulation had a pallid buff network on a brick ground at the apex, the reticulations becoming brick color over a pallid ground further down the stem. The form of these reticulations varies from rounded to angular. The context of cap and stem is white and does not change when bruised. Spores are olive-brown in deposit. They are ellipsoid to subfusiform with a prominent suprahilar depression, and measure 15-17 x 4.5-5 microns. Odor and taste are mild.

*Boletus rex-veris* is usually associated with conifers, and as Arora emphasizes, it is a semi-hypogeous species, often revealing itself by just a hump in the duff. Arora wrote that caps run up to 30 cm wide, and occasionally larger. Last spring Erin Moore lugged one into camp that measured 35 cm wide. Whether this is a regional record or a world record, we may never know. The range is just too far. Besides *Boletus aurantioruber*, other look-alikes include *Boletus mottiae*, *Boletus subcaerulescens*, and *Boletus chippawaensis*. *Boletus mottiae* differs by having a distinctly wrinkled or nodulose cap surface. *Boletus subcaerulescens* has a pinkish-brown cap and an olive-yellow pore surface that bruises gray-blue, and *Boletus chippawaensis* has caps with a pale lemon-yellow ground color and pores that bruise pinkish-cinnamon.

*Boletus rex-veris* is an excellent edible. The type specimen is from the former mill town of McCloud in northern California. Italian immigrants who settled there were the first to discover the bounty. For over 65 years they would collect it for family consumption. Then in 1985, a commercial market for it sprang up. The first commercial buyer on the scene was horrified to discover the locals raking up the duff to find specimens. "But we've been doing it this way for 60 years," one of them explained. The buyer figured they must have survived the raking because the locals only raked gently along the surface, not disturbing the mycelium below. Today, the Spring King is an important commercial species. According to Arora, 25,000 – 60,000 pounds are harvested each spring from the Mt. Shasta area alone. Besides the commercial center in McCloud, others can be found in La Grande, Keno, and Sisters in Oregon, and at Trout Lake in southern Washington.

Photo by Jack Waytz



Doug went out to the same area two days after my foray  
- and found a hundred pounds of his own!

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Photo by Vince Biciunas



Erin's now fabled *B. rex-veris*.

Almost every year that I can remember, Fien Hulscher has been our foray chef at Morel Madness. She probably brings her own butter and olive oil, but besides from that, pretty much relies on whatever herbs and spices others might bring. She graciously sautées whatever edibles we might find, and life might not be complete until you have sampled her sautéed squares of *Boletus rex-veris*. She carefully removes the tubes from the older specimens before cooking. But she does not throw them away, as I have always done. Instead she will take them home, dehydrate them, and then grind them up to use as a stew thickener or even a spice with other meals.

We finally end this article with the perspective of Bryn Dentinger, a Canadian mycologist whose work on the same species independently corroborated Arora's findings. He states, "Phylogenetically, *B. rex-veris* is most closely related to *B. fibrillosus* (unpublished data), another western species. They are both part of the 'pine-loving' clade most often represented by the European *Boletus pinophilus*". According to Nancy Weber, the Russian mycologist B.P. Vassilkov published many varieties of *Boletus edulis* in 1948 and then again in 1966. As far as she knows, they were all published legally, and if any one of them turns out to be the same as *Boletus rex-veris*, that name would have priority. Until then, we can thank both of our mycologists for working on the species concept and bringing this magnificent bolete out of the nomenclatural obscurity it has long been mired in.

Mycological Society of San Francisco  
**Yosemite Camp "Morel Foray" Registration Form**  
May 7 – 9, 2010

Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
Phone: (\_\_\_\_) \_\_\_\_\_ E-mail: \_\_\_\_\_

**MSSF Member registration:**

Adult (on site lodging) # \_\_\_\_\_ @ \$200.00 ea.  
Children (on site lodging) # \_\_\_\_\_ (Ages 5-12) @ \$ 150.00 ea.

**MSSF Non-member Registration:**

Adult (on site lodging) # \_\_\_\_\_ @ \$220.00 ea.  
Children (on site lodging) # \_\_\_\_\_ (Ages 5-12) @ \$ 165.00 ea.

**Total:** \_\_\_\_\_

**Payment Options**

**Check (preferred):** Please mail check with printed form to:

**Curt Haney, (MSSF) 150 Sadowa St. San Francisco, CA 94112**

**Credit card:** Enter details below and mail in:

VISA  MasterCard  Card# \_\_\_\_\_ Exp. \_\_\_\_\_  
3 Digit code from back \_\_\_\_\_

**PayPal:** Payment may be made sending money to the PayPal account [paypal@mssf.org](mailto:paypal@mssf.org). In this case send the form via mail or complete in Adobe Acrobat then email to [mssf@prestia.com](mailto:mssf@prestia.com)

**Please list all attendee's names and Mycological Club affiliations for badges:**

Name	Club	Name	Club
#1 _____	_____	#2 _____	_____
#3 _____	_____	#4 _____	_____

\_\_\_\_ **Please check if you are an elder or handicapped** for lodging preference.

\_\_\_\_ **Please note number of vegetarians**, if any, in your party.

**Please list any food allergies or special requests for the registrar:**

For more information and online registration go to: <http://mssf.org/forays/mather-2010>

For directions and camp information: <http://www.campmather.com> (see map on page 7)

## MycoDigest continued

The first example involves a tropical panic grass (*Dichanthelium lanuginosum*) that is able to grow under extremely high temperatures, such as those found at the shores of thermal hot springs at Yellowstone National Park. Earlier work showed that the presence of a fungal endosymbiont (*Curvularia protuberata*) was necessary for the plants to obtain this high-temperature phenotype. In the laboratory, *Curvularia*-infected plants were able to grow at soil temperatures of 65 °C (149 °F)! Interestingly, neither fungus nor plant could grow alone at temperatures above 38 °C. As if this story was not interesting enough, the most recent work by Marquez and colleagues (2007) has shown that the ability of the fungus to confer heat resistance is in turn dependent on the presence of a naturally occurring virus inside the fungal hyphae. Fungi cured of this virus were unable to confer heat resistance to their host plant, while fungi re-infected with the virus performed as per normal.

The second example comes from a plant-pathogen interaction between fungal species in the genus *Rhizopus* that can infect and kill rice seedlings. The ability of the fungus to successfully parasitize its host depends on the synthesis of a substance called rhizoxin, which helps in the fungal attack by inhibiting mitosis of host plant cells. Partida-Martinez and Hertweck (2005) were initially interested in the production of rhizoxin but were puzzled when they were unable to find genes related to its production in the genome of the fungus. Surprisingly though, they did find candidate genes for rhizoxin biosynthesis, but these genes appeared to be bacterial in origin. Closer inspection revealed the presence of live bacterial cells living within the fungal hyphae (see accompanying photograph). In a series of elegant experiments, Hertweck and colleagues demonstrated conclusively that rhizoxin is actually synthesized by endosymbiotic bacteria in the genus *Burkholderia* and that fungal strains without these bacteria are unable to synthesize rhizoxin. Further research by the same group has shown that this symbiosis has become so central to the fungus that it will not sporulate in the absence of its bacterial symbiont (Partida-Martinez et al. 2007). Intriguingly, evolutionary evidence suggests that the symbiosis between *Rhizopus* and *Burkholderia* was possible only after the fungus itself evolved resistance to rhizoxin, and raises the possibility that this is a case of old enemies turned to cooperation (Schmitt et al. 2008).

We are just beginning to look for these types of interactions, yet the evidence so far suggests that they may be fairly common. For example, endosymbiotic bacteria have also been observed in the hyphae of arbuscular mycorrhizal fungi, although their function is still not known. Unraveling these complex interactions will require good science, but as these two studies have shown, the rewards are well worth the trouble.

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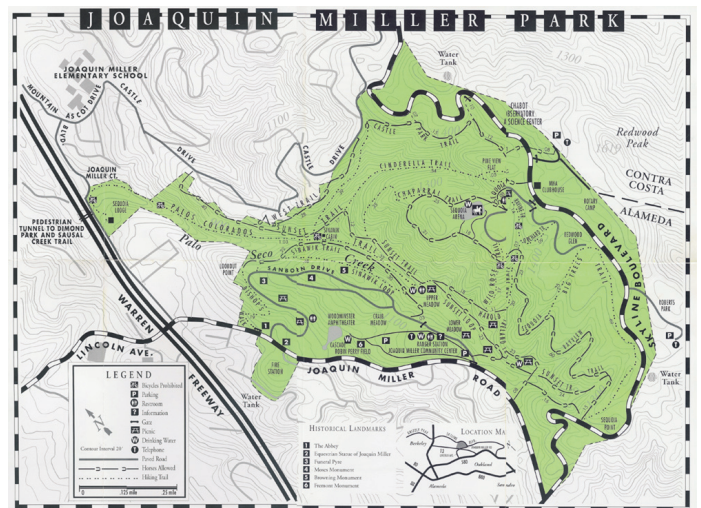
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Kabir Peay, Ph.D., is an ecologist and recently completed his doctoral degree at UC Berkeley. His research is focused on the ecology of ectomycorrhizal fungi and their host plants, with an emphasis on the spatial ecology of EM assemblages and the effects of environmental variation on cooperation between EM fungi and their plant hosts. For more of his work, see his web pages at <http://mollie.berkeley.edu/~bruns/people/kp.html> and <http://nature.berkeley.edu/~kpeay/index.html>.



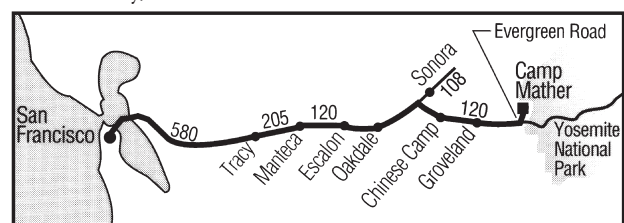
## Speaker continued

from species discovery and description to examining the historical and environmental factors responsible for present species distributions, the functions of microbes in ecosystems, and the response of different microbial species to ecological perturbations. His past and current research experience includes fieldwork in Australia, China, Costa Rica, French Polynesia, Guatemala, Mexico, Svalbard, Thailand, and the United States, in tropical, temperate, arctic, and alpine biomes.



download at: [http://www.oaklandnet.com/parks/0/joaquinmiller\\_map.pdf](http://www.oaklandnet.com/parks/0/joaquinmiller_map.pdf)

Camp Mather is just north of the Big Oak Flat gate, on the road to Hetch Hetchy, situated on the banks of the Tuolumne River.



[http://www.sfgov.org/site/uploadedfiles/recpark/camp\\_mather\\_brochure.pdf](http://www.sfgov.org/site/uploadedfiles/recpark/camp_mather_brochure.pdf)

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

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## MSSF Calendar May 2010

**Monday, May 3<sup>rd</sup>, 7 pm - Culinary Group Dinner**  
(last of this mushrooming season!)

San Francisco County Fair Building, Golden Gate Park, 9<sup>th</sup> and Lincoln, SF. Expect to find morels on the menu. Reservations are required by Friday, April 30<sup>th</sup> and are limited to 60 diners. To make a reservation, contact Pat George at (510) 204-9130 or plgeorge33@yahoo.com. Remember to bring your own tableware, beverage and an appetizer to share. More details of the dinner menu can be found at <http://www.mssf.org/culinary>. This will be our last meeting until September, when we have our phenomenal potluck. Because Labor Day is the first Monday, we will have our dinner on Tuesday, September 7<sup>th</sup>.

**Tuesday, May 18<sup>th</sup>, 7 pm - MSSF General Meeting**  
Randall Museum, 199 Museum Way, San Francisco.  
7 pm, mushroom identification and refreshments.  
8 pm, Todd Osmundson presents *Conservation of Fungi*.

The submission deadline for the September, 2010 issue of *Mycena News* is Friday, August 19<sup>th</sup>. Please send your articles, calendar items, and other information to: [mycenanews@mssf.org](mailto:mycenanews@mssf.org)

## CALL FOR VOLUNTEERS

**We have two important volunteer positions to fill:**

***Mycena News* Editor** I will be moving on next year; after our summer hiatus, I will be happy to assist the incoming editor in laying out the September issue. This position requires a commitment of about eight hours per month. If you are interested in helping the Society and gaining some editing experience, please contact me at: [dave.lubertozzi@att.net](mailto:dave.lubertozzi@att.net). Adobe Creative Suite software (InDesign, Photoshop, Illustrator, Dreamweaver, Acrobat Pro) will be provided for your personal use.

**Book Sales Chairperson** Curt has been handling the book sales for three years and this position will be open as he moves on to the Vice Presidency. Be the first to read (and review!) all the books the MSSF sells. The council voted to buy a storage cabinet at the Randall Museum so you won't have to haul the books back and forth to each meeting. To assist in the transition he will help the new chairperson with ordering in the first year. If you are interested please talk to Curt at the next general meeting or call him at (415)-640-6233.

Don't be shy, we'll get you started. Remember, our great organization would not survive without volunteers!