



April 15
General Meeting Speaker



Dimitar Bojantchev

“Formal Mycology for Amateurs”

Dimitar Bojantchev is a leading taxonomist of macro fungi in California. He has published several papers and described more than a dozen new species. His primary interests are the genera *Cortinarius*, *Russula* and *Amanita* in Northwest America, which over the past decade, he has collected and analyzed with the help of an extensive database of molecular data that he compiled himself.

A computer scientist by education and vocation, Dimitar has found his passion in mycology. He has used computational and bioinformatics techniques to better understand the speciation and evolutionary paths of the genera he studies. Dimitar has served as a science advisor, foray leader, lead identifier, and educator. He moderates a popular online mushroom forum and maintains a website dedicated to taxonomy.

Dimitar will introduce amateurs to the thrills of formal mycology. He will explore the training process, discuss major projects in the field, and address the various identification methods available to us, including microscopy and genetics. Rest assured that discussion will be light on deep technical aspects, with plenty of time for Q&A.

MycoDigest:

Fungi up High: Biodiversity and Canopy Soils

Jennifer Kerekes

Forest canopies, defined as the sum of all the tree crowns, are among some of the least studied habitats on our planet (Orlovich et al. 2013). But forest canopies are hosts to a variety of biodiversity, including vascular flora and animal biota. Within these forest canopies, primarily in wet tropical forests, organic matter derived from decomposed epiphytic plants and decomposed tree litter accumulates as soil mats within tree branches. This accumulated soil is often referred to as “canopy soil,” also known as arboreal soil, aerial soil, crown humus, and canopy organic matter. Canopy soils can also be found in old growth temperate rainforests.



Tropical Rainforest Canopy
Canopy in the Clouds
(Photo by Drew Fulton)

Not surprisingly, within these canopy soils exist microbial communities, including bacteria, ammonia-oxidizing bacteria, and fungi. In fact, one recent study found that canopy soils had higher bacterial and fungal richness than forest floor soils (Cardelus et al. 2009), and another noted that microbial biomass in tropical canopy soils was just as high, and sometimes even higher than the

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PRESIDENT'S POST

Greetings MSSF Members!

We have an important meeting coming up next month. In this issue of the *Mycena News*, the MSSF council announced the nomination of incoming officers and councilors for the 2014-2015 terms. The election of incoming officers and councilors will be by the majority vote of MSSF members present at the May General Meeting, provided that a quorum is present. I encourage all members to attend this very important meeting.

I also want to remind all members that there is a wealth of information on the MSSF website. You can download and view the current and past editions of the *Mycena News*, keep up to date on current and future events posted on the calendar, and download a complete roster of current members, which is updated quarterly. Remember to periodically view and update your member profile, especially if your e-mail or physical address has changed, so you do not miss important announcements or your copy of the monthly newsletter.

Many of you have been awaiting the latest news on the burn zones in the Sierra as they relate to possible morel harvesting in the spring. There are two main burn zones in the Sierra from 2013 forest fires: the American in the Tahoe National Forest, and the Rim in the Stanislaus National Forest. The American Fire burn zone is *now open* after obtaining a personal use mushroom collecting permit from the National Forest Service. The Rim Fire burn zone will remain closed until 2014, but the MSSF has requested special use permits for several organized weekend forays for our members. To date, the MSSF has been approved to assist with the post-fire scientific surveys to be conducted there by Professor Thomas Bruns of the UC Berkeley Biology Department and his team. Any MSSF member who is granted access to this burn zone will be required to participate in post-fire surveys in conjunction with any morel harvesting conducted under the special use permits issued to the MSSF. More information on forays scheduled in the Stanislaus National Forest can be found in this issue of the *Mycena News* as well as the MSSF website. I will continue to keep our members up to date on future forays this spring.

Our guest speaker in March was Philip Ross; his talk, "Mycotecture: The History and Future of Fungal Engineering" was artistic, educational, and entertaining. Our April guest speaker will be Dimitar Bojantchev. I am eagerly looking forward to his presentation.

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

--Curt Haney, President@MSSF

CULINARY CORNER

EDIBLE INSPIRATIONS FOR WHEN THE GOING GETS TOUGH

(Lisa Bacon, Guest Contributor)

The 2013-2014 winter season has been one of the bleakest foraging seasons ever; we can only hope that the recent rains will stimulate some of the spring edibles to fruit. But let's not forget that there is a wealth of other wild foods to lure us into the forests and meadows. Miner's lettuce (*Claytonia perfoliata*), the eponymous salad green of the California Gold Rush, is plentiful this season. Crunchy and mild, it tastes great in salads with a light vinaigrette. (But be mind-



The Fiddlehead fern

ful of pesticide treated areas when harvesting).

Fiddlehead ferns, elegant in shape and jam-packed with antioxidants, are also turning

up in the outdoors this month. While they are regrettably rare in the standard American diet save for a few upscale restaurants, Fiddleheads have been consumed around the world for millenia. With all this beautiful weather, open your mind to these underappreciated edibles and have fun!

I was first introduced to wild foods by the forager and outdoorsman Euell Gibbons. Many of you might be too young to remember him, but he became famous during the 1960s and 1970s for his books, *Stalking the Wild Asparagus* (Alan C. Hood & Company, Inc., 1962) and a series of other "stalking" food books. Given his importance to the history of local sourcing, it is ironic that he is probably best known for his cameo in the Post® Grape-Nuts commercials, where he favorably compared the cereal's health benefits to the local flora foraged in nature. But without his advocacy of these unsung vegetables and herbs, it's safe to say that the Farm-to-Table movement as we know it today might never have gotten off the ground.

There are many other great books available on foraging and wild foods; the following are among my personal favorites. Connie Green, MSSF member and internationally recognized foraging expert, has given us *The Wild Table* (Viking Press, 2010). Co-authored with renowned chef Sarah Scott, and a forward written by Thomas Keller, this delightful book shares techniques and recipes for your favorite wild mushrooms and edibles. Or if something more mushroom-

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Mycodigest continued

microbial biomass in forest floor soils (Vance and Nadkarni, 1990). While there has been very little research into the roles played by fungi in these habitats, a few recent studies have confirmed the presence of fungi in canopy soils. Arbuscular mycorrhizal fungi (AMF) have been reported in epiphytic plants, along with dark septate endophytic fungi in the roots of epiphytic plants (Grippa et al. 2007; Rains et al. 2003). Interestingly, AMF are not always found in epiphytic plants, and some researchers hypothesize that high atmospheric inputs of nutrients reduces the requirement for mycorrhizae in canopy soils (Mafia et al. 1993 and citations within). These studies suggest that spore dispersal and inoculum potential in canopy soils is adequate for mycorrhizal formation, and the lack of mycorrhizae in other epiphytes is not due to spore dispersal limitation. A recent study by Orlovich and colleagues (2013) in the temperate rainforests of New Zealand noted the presence of ectomycorrhizal fungi (ECM) in adventitious canopy roots of old growth Silver Beech (*Nothofagus menziesii*). Genera of ectomycorrhizal fungi found in the canopy roots included *Cortinarius*, *Russula*, *Cenococcum*, *Thelephora/Tomentella*, *Lactarius*, *Laccaria*, *Clavulina* and *Leotia*. Stephenson and Landolt (2011) reported the presence of cellular slime molds (dictyostelids) in canopy soils. Although slime molds are not true fungi, they are often studied by mycologists.

The characteristics of canopy soils have been studied and compared with forest floor soils. In general, canopy soils have been reported to have higher concentrations of organic matter, lower pH and higher nitrogen levels, and experience more extreme fluctuations in their moisture conditions, especially at certain times of the year (Bohlman et al. 1995; Cardelús et al. 2008; Nadkarni et al. 2002).

Indeed, canopy soils are unique microcosms among the tree canopy. These microcosms, or microhabitats, are known to play an important role in the subsystem of tropical forests (Nadkarni and Matelson, 1991). Vance and Nadkarni (1990) suggested that microbial communities in canopy soils may play an important role in regulating nitrogen availability in some tropical forests. These microhabitats remain understudied for microorganisms. Within these canopy soils may be yet another important source of fungal biodiversity. For example, in Stephenson and Landolt's 2011 paper investigating dictyostelids in canopy soils, at least three of the new species described were not known from ground soils. Continued studies of canopy soils will provide a greater understanding of the ecological roles of fungi in rainforest ecosystems and will contribute to our understanding of fungal diversity and biogeography. Next time you happen to be out looking for fungi in an old growth temperate rainforests or tropical rainforest, don't forget to look up!

Further reading:

Canopy in the Clouds: <http://www.canopyintheclouds.com/>

Works Cited:

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MSSF SPRING FORAY SCHEDULE

Curt Haney, MSSF President

It's spring foray time again, with all the excitement, high hopes, great expectations, and, yes, uncertainty that the season brings. Last spring we scheduled several weekend morel camping forays in the Sierras. The first occurred at the end of April, and was rife with high spirits tempered by slim pickings; so slim, in fact, that we cancelled the rest. This year's rainfall was as aberrational as last year's, causing continued uncertainty about morel fruiting. We are currently scheduling two weekend camping forays for the last weekend in April (the 25th through the 27th) and the first weekend in May (the 2nd through the 4th). Both will be headquartered at the Pines NFS Campground near Groveland that we used last year. Additional weekend forays will be scheduled in May if the conditions warrant. What is new this year is that we are going to mount two very different kinds of forays.

Traditional Natural Morel Forays: Our foray leaders will set off both Saturday and Sunday mornings looking for the mother lode of morels that were so sparse last year. The foray will operate the same way that we have in past years. We will arrange for a permit for you at the Groveland Ranger Station. You observe the five-pound picking limit. That's it ... good luck! Safety and liability requirements limit natural morel collecting forays to adult MSSF members and family members over 13 years of age.

Post-Fire Myco-Surveys in the Rim Fire Burn Zone: The Pines Campground is within driving distance of the burn zone created by the Rim Fire last fall. The National Forest Service has closed the burn zone to all recreational use through November 2014 at the earliest. Access roads are currently blocked off, and roadside parking areas are marked with signs threatening dire consequences for unauthorized entry. Your council worked long and hard to persuade NFS management personnel to permit recreational access for members of established mycological groups. Unfortunately, NFS management refused on grounds of public safety.



Who will find this year's morel mother lode?

While public access is currently prohibited, the NFS has approved a series of post fire scientific surveys of fungal activity to be conducted in the Rim Fire burn zone by a team from the U.C. Berkeley Biology Department led by Dr. Tom Bruns. The NFS permit authorizes Dr. Bruns to include forays operated by the MSSF as part of his research efforts about post-fire fungal activity. Thus, we are going to sponsor burn zone myco-survey forays as part of our spring forays. We will have general sign-ups for the spring forays on the website. There, you will be able to indicate whether you would like to participate in a burn zone myco-survey on one of the days, and if so, which day you prefer.

Adult MSSF members who participate in the burn zone myco-surveys will be provided with materials for making observations in accordance with Dr. Bruns' survey protocol, collecting voucher specimens of observed fungi, recording locations, as well as other information. Participants will be required to comply with special safety procedures in the burn zone outlined in a NFS form that must be reviewed and signed before the survey begins. Participants must wear sturdy boots, a head covering (hard hat, bicycle helmet, etc.), long sleeve shirts, and an armband identifying him or her as an authorized MSSF participant. Our foray leaders will carry first aid kits, provide armbands, whistles, pocket note pads, pens, and voucher-sample collecting bags. Participants are thus responsible for bringing a head covering, a two-way radio, water, and appropriate clothing. Safety and liability requirements limit myco-survey forays to adult MSSF members over 18 years of age.

We hope that enough adult MSSF members will volunteer for the myco-surveys to make a meaningful contribution to the research effort. If these myco-surveys happen to bring your group into the proximity of morels, there is no prohibition against collecting some, subject to the five pound limitation.

How to Sign Up: The Pines Campground has a capacity of 100, so we are limiting sign-ups to MSSF adult members and family members over the age of 13. We *cannot* accommodate guests. Everyone can join the traditional natural morel forays on Saturday and Sunday. On both of these days, there will be 4 scheduled myco-survey forays limited to 10 adult members per foray. If more than 40 adult members want to participate on a particular day, we will select 40 participants by lot. We will make every effort to ensure that all adult members who would like to participate in a burn zone myco-survey will be included in one, but there are no guarantees. Adult members who are unable to attend the first foray in April will be given preference on subsequent scheduled forays in May or later.

To sign up for the event, log into the members only area at: www.MSSF.org and register in the "Event Registration" section for the forays, This is a first come, first served registration limited to 100 MSSF member registrants as noted above.

Culinary Corner continued

focused suits your fancy, *A Cook's Initiation into the Gorgeous World of Mushrooms* by Philippe Emanuelli (Chronicle Books, 2013) is a beautifully photographed and informative addition to your cookbook collection.

No luck this season? Armchair foragers and desperate mycophiles take heart; we have several easily accessible options here in the Bay Area. Visit the folks at Far West Fungi (www.farwestfungi.com) in the San Francisco Ferry Building for fresh cultivated and wild mushrooms. Wine Forest Ltd. (www.wineforest.com) offers the internet forager his or her favorite dried mushrooms in handsome packages. Both organizations are run by MSSF members and have generously supported MSSF events.

Captained by Tom Sasaki, the March Japanese New Year's Feast was fabulous and again presented some tasty vegetarian courses. Our gratitude to the following team members for their outstanding contributions: salmon with miso marinade (Tom Sasaki and George Willis), seaweed salad (Karen Rusiniak), crab asparagus mushroom soup and a vegetarian version (Elise Do), vegetarian sushi rolls (Brandon Hill), seasoned spinach (Tracy DeMay), green beans and sesame sauce (George Collier), rice (India Mandelkern), Mitchell's green tea and ube-macapuno ice creams (Patricia Ris) cleanup (Viktoria and Daniel McElmury). And a shout out to Carol Reed for preparing the coffee (she does this every month)!

Crab Asparagus Mushroom Soup

- 6 cups of chicken broth
- 1 16-oz. can of white asparagus (julienned)
- 1 or 2 whole Dungeness crabs, preferably fresh (boiled, shelled)
- 1 can of cooked quail eggs
- 1 bag of enoki mushrooms
- 2 eggs (lightly beaten)
- 2 tablespoons fish sauce
- 1 teaspoon salt
- Pinch of sugar
- 1 cup of cold water
- 3 tablespoons of tapioca starch
- white pepper (optional)

Bring the chicken broth to a boil and add the crab meat, asparagus, and quail eggs. Slowly add the beaten egg into the soup while swirling the broth with a spoon/ladle in a circular pattern. Turn down the heat setting to low. In a separate bowl, dissolve 3 tablespoons of tapioca starch in 1 cup of water. Then add this to the broth to thicken the soup. Add the fish sauce, salt, and pinch of sugar. As you practice making this soup, you can adjust the amounts to your liking.

Serve with white pepper (optional).

HOSPITALITY COMMITTEE THANKS STEVE WALKUP AND DEBORAH OWEN

The Hospitality Committee thanks Steve Walkup and Deborah Owen, our first guest chef family, for their excellent appetizers during the February 18 hospitality hour. They prepared two different dishes: creamy hedgehog and yellowfeet soup, which was complemented by roasted crimini caps stuffed with feta and pesto.

YOU TOO can be a guest chef at a hospitality function at some point of your choosing in the future. Just email one of your Hospitality co-chairs:

Eric: mullew@comcast.net

George: gwillis2@mac.com

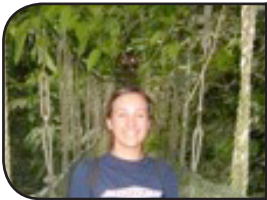
to let us know of your interest.

Soup ingredients: hedgehogs and yellowfeet (sourced from Far West Fungi), cannellini beans, coconut milk, coconut oil, tamari, onion, garlic, parsley, and salt and pepper.



MycoDigest continued

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**About the Author:**

Jennifer Kerekes recently graduated from the University of California, Berkeley with a Ph.D. in Microbiology, where she worked with Tom Bruns. She is interested in the ecology and diversity of saprotrophic fungal communities.



North American Mycological Association

To promote, pursue and advance the science of mycology

HOW TO JOIN NAMA AT A DISCOUNTED RATE

The MSSF is a NAMA affiliated club. Each year the MSSF pays dues to NAMA at a rate of \$0.12 per member to maintain our affiliation. This affiliation provides our members with the option to join NAMA at a discounted rate. If you are interested in joining NAMA, go to their website for complete details: www.namyco.org.

NAMA recently lowered their dues fees, and MSSF members can join as affiliated members for as little as \$24.00 a year and receive the electronic version of their newsletter, *The Mycophile*, or a hard copy for \$30.00 a year.

If you plan to attend the annual 3-day NAMA foray, which this year is in the shadow of Mt. Rainer in Washington State, you will need to be a NAMA member. Note: Membership covers up to two adults living at the same address.

American Fire Burn Zone Now Open

Great News! The American Fire burn zone closure order, scheduled to be in place until September 2014, was officially terminated on March 13 2014. Anyone interested in exploring this burn zone for fungi will need to obtain a personal use collecting permit from the American River Ranger District Office in Foresthill CA. This should be an excellent opportunity to forage for morels this April as long as there is sufficient moisture and ground temperatures rise to acceptable levels. This burn zone is east of Auburn, reaches an elevation of 6000 feet, and is close enough to the Bay Area to be an excellent day trip. At present, we do not plan to schedule organized camping forays into this burn zone. There are few available campgrounds in this area and the NFS campgrounds do not open until 25 April, the same time that our Yosemite forays are scheduled. Permits can be obtained from the following location:

American River Ranger District Office, Tahoe National Forest, 22830 Foresthill Rd. Foresthill, CA. 95631
(530)-367-2224

Point Reyes Books, Toby's and
Point Reyes Farmers Market present:

DAVID
ARORA

Author of *Mushrooms Demystified* and *All That the Rain Promises and More*

Saturday, April 5

at Toby's Feed Barn
Point Reyes Station

food, beer,
wine: 5:30

talk: 6:30
"The Wheel
of the Fungi"

tickets:
\$15 online
\$20 door
ptreyesbooks.com



All proceeds benefit the
Roneil Powell Memorial Fund

David Arora will talk about his adventures in the fungi kingdom at Toby's Feed Barn in the heart of Point Reyes Station on Saturday, April 5. Arora has traveled the world hunting rare, mysterious, fascinating fungi. Inspiring, informative, and often hilarious, Arora's talks are always different, always fun.

This is a fundraiser for a local family that has suffered two tragedies in a very short period of time. The Porrata/Powell Family's four year old son, EZ, was diagnosed in January with a rare form of cancer. Just two nights after the family returned home from the first week of chemotherapy in Oakland, the father, Ron, died in his sleep: a heart attack. Ron was the sole breadwinner. He left behind his wife, son EZ, and seven year old daughter Yoly. This family has been very active in the community for many years.

The barn doors open at 5:30 pm. Arora's talk, "The Wheel of The Fungi," begins at 6:30 pm. Come enjoy the evening with this fine raconteur and slurp some mushroom soup. Food, beer, wine and autographed books sold separately. Get your tickets now – this event will sell out!

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



"A World of Wonder at Your Feet"

April 2014, vol. 65:08

MSSF Calendar April 2014

Monday, April 7, 7 p.m. - Culinary Group Dinner
County Fair Building, Golden Gate Pk., 9th & Lincoln, S.F.
"A Taste of Chile." Pre-registration required for attendance. See calendar section at www.mssf.org. Email culinary@mssf.org to volunteer. Next culinary dinner May 5.

Tuesday, April 8, 7:30 p.m. - MSSF Council Meeting

Tuesday, April 15, 7 p.m. - MSSF General Meeting
Randall Museum, 199 Museum Way, San Francisco.
7 p.m. - Mushroom identification and refreshments.
8 p.m. - Speaker: Dimitar Bojanchev

April 25-27 - Morel Foray
Pines NFS Campground

May 2-4 - Morel Foray
Pines NFS Campground

Monday, May 5, 7p.m. - Culinary Group Dinner
County Fair Building, Golden Gate Pk, 9th & Lincoln, S.F.

Tuesday, May 13, 7:30 p.m. - MSSF Council Meeting

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!

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

MSSF council members have nominated the following MSSF members as the incoming society officers and councilors for the 2014-2015 term:

President:	David Gardella
Vice President:	Brennan Wenck
Treasurer:	Henry Shaw
Secretary:	Eric Multhaup
Councilors: (1 year term)	Tyler Taunton
(2 year term)	Jackie Shay and Joe Soeller

The election of officers and councilors will take place at the Annual Meeting, to be conducted during the general meeting scheduled on May 20, 2014 at 8pm.

Curt Haney President@MSSF.org 415-333-8820

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 May 2014
issue of Mycena News is April 15th.
Send all articles, calendar items and other information
to: mycenanews@mssf.org