

Mycena News

Mycological Society of San Francisco

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Membership Information

To join the Mycological Society of San Francisco, send a \$20 check, payable to MSSF (\$12 seniors 65 and over, and full time students), to Wade Leschyn, 219 Sequoia Ave., Redwood City, CA 94061. MSSF members may join the North American Mycological Association at a reduced rate by sending a separate check for \$12 payable to NAMA, to Wade at the same address. For further information call Wade at 415.364.1494.

Mycena News is the newsletter of the Mycological Society of San Francisco and is published monthly from September through May. You can send newsletter submissions by the 15th of each month to Mike Boom, 4323 Sequoyah Rd., Oakland, CA 94605. Or you can email them to mboom@ascend.com, or fax them by calling by voice first to 510.635.7723.

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For mushroom hunters, knowledge is everything. You may have the best basket in the county and a really wonderful mushroom knife with a matching brush, but if you don't know where to go and what to look for, the guy with the paper bag and the waterlogged sneakers will do better than you every time.

We take knowledge wherever we find it: on MSSF forays, at general meetings, in mycology classes, and—most often—from a good field guide like *Mushrooms Demystified* by David Arora. Field guides have their limitations, though, usually imposed by the medium of the printed page. It's expensive to print color photos, so you won't find many color mushroom shots in most guides. Some guides cut costs by limiting the number of species described, and publishers often insist that the writer assign meaningless common names to mushrooms that don't have them. The biggest limitation: once the guide is printed, the information is committed to paper until the next edition, which can be a matter of years, decades, or never. As mycologists make new discoveries and wrangle over new scientific names, the guide remains frozen in the past.

Mike Wood and Fred Stevens, two past presidents of the MSSF, are at work on a solution to these problems: a web site named *Common Fungi of the Bay Area*, accessible for free to anyone with a computer, a web browser, and access to the Internet. It's not meant to replace field guides (you can't pop an Internet-connected computer into your knapsack for a foray—at least yet), but it does complement them by providing a host of

color mushroom photographs, species descriptions, and up-to-date nomenclature at the click of a mouse.

For those of you who don't have a computer or Internet access, a quick tour of the web site, affectionately known as BAF (short for Bay Area Fungi), is in order. It starts by turning on a computer, connecting it via a phone line to an Internet service provider, and then starting a web browser on the computer. You type the URL (the Internet address) of the site into the browser: http://www.mykoweb.com/ba_fungi.html and the

browser shows the first page of the web site: the **Introduction to BAF**. It's here that you can read about the purpose and scope of BAF, the way information is arranged here, and who its creators are. It's here, too, that you can jump quickly to the other main pages of BAF: **Acknowledgments**, where you can read about the contributors to BAF and about Harry Thiers, to whom BAF is dedicated; **Notices**, which contains information about viewing BAF pages and warnings about mushroom

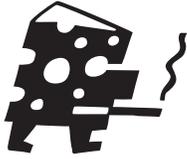


Amanita pachycolea by Taylor Lockwood from the BAF web site.

edibility; **Glossary**, a very useful list of mycological terms along with their definitions; **Bibliography**, an extensive list of mushroom books consulted for the creation of BAF; and the **Species Index**.

The Species Index is the backbone of BAF. It's an alphabetical list that stands, at this writing, at over 190 mushroom species. Mushrooms are included by both their scientific name and—if they have one—common

BAF continued on page 9



Fungal Emanations From the Big Cheese

I'm looking forward this month to our first foray, which takes place in Yuba pass. For the first time in many years we may be using San Francisco State's field station for this foray with a dining hall and a full kitchen at our disposal. Several others and I will bring our microscopes and books for IDing fungi, so bring yours and join in. With the rain the Sierra has already received, I am sure that there will be a bumper crop of fungi.

The mushroom year is starting early this year: there are already coccoli in the East Bay and chanterelles on the North Coast. Check your spots now.

While having a good mushroom year is something that most of us think of as universally positive, *Amanita phalloides* (the death cap)

may be abundant this year, and that can be dangerous for the uninformed. Luckily we have the NAMA/Bill Freedman poster that depicts this mushroom against a skull background to get the word out to the public. The NAMA poster needs to be seen to do any good, so if know of a suitable place to hang one, call Bill at 415.344.7774 for copies and distribution tips.

One last spot of news: Shawn Johnson will take the councilor spot that Joe Dougherty has vacated. Joe has left our community to find fame and fortune in the wilds of the Big Apple, NYC. We wish him good luck.

Norman Andresen

Letters to the Editor

No letters this month. But we do have a correction from last month. If you're interested in contacting Bennie Cottone about midweek forays, his *real* phone number is 415.731.8798, not the finger-flubbed number we published last month.

Whited/Thiers Scholarship, 1997-98

The MSSF offers scholarships each year in honor of Esther Colton Whited and Dr. Harry Thiers. The requirements are:

1. Full time attendance at a local university/college with a major in mycology
2. Two letters of recommendation of which one must be from a professional mycologist
3. A brief statement describing the applicant's research project
4. An agreement to present the results of the research project at a MSSF general membership meeting

You should note that the committee favors graduate students working with the genera common to this region. Send your material to Robert Mackler at 157 Mesa Court in Hercules, CA 94547. The deadline is December 15, 1997.

Bob Mackler

Put Your Name in the MSSF Email Roster

For those of you who have Internet connections, you may be interested in the email roster of MSSF members that Mike Wood maintains. It's in the MSSF web site; the URL is:

<http://www.mykoweb.com/mssf/mssfmail.html>

Mike only includes the email addresses of members who want to be listed. If you want to be listed, or you want to correct your current listing, contact Mike by email. His address is mwood@mykoweb.com.

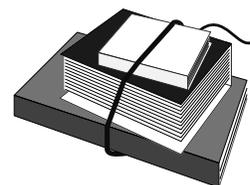
Jepson Herbarium Offers Mushroom Course

The Jepson Herbarium, located on the campus of UC Berkeley, normally specializes on California plants. This fall, however, they're offering a mushroom workshop along the Mendocino coast. Lecturer Teresa Sholars, a teacher at College of the Redwoods in Fort Bragg, will lead the workshop in the heart of mushroom territory—the Mendocino/Fort Bragg area—on November 15 & 16.

The workshop, titled "Mushrooms of California," deals with higher fungi—the fleshy fruiting bodies we consider "mushrooms." Through lectures, slides, and keying based on David Arora's *Mushrooms Demystified*, the workshop will emphasize the family and generic characteristics needed for identification. Both in the laboratory and in the field, students will learn some of the common, edible, and toxic mushrooms found in the area.

The class is limited to 20 participants, enrollment is first come, first served. The cost for the workshop is \$165 for non-Jepson Herbarium members, plus approximately \$40 per day room and board. For more information, call Susan D'Alcama at the Jepson Herbarium, 510.643.7008.

Editor's note: You should be aware that this course is the same weekend as the MSSF's annual Mendocino Foray described later in this newsletter. If you take this course, at least come over to say hi!



Salt Point Rendezvous

Free But Not Cheap

by David Campbell

By virtue of tradition established at the inception of this annual event some several years ago, no remuneration (\$) is collected or expected by myself or MSSF from attendees. Free, that's right.

Now, let's read the fine print for I, and we, do charge every munchkin of you with certain expectations and responsibilities.

First, be a paid up member of MSSF.

Next, understand that our primary group mission is to collect edible mushrooms for Saturday evening's mushroom cookout extravaganza. In a boom (not you, Mike) year, this is seldom an issue, and one may, at worst, suffer the indignity of *not* having some of one's bounty accepted into the Big Show. In a lean year, however, when we have found only one or five ceps betwixt the lot of us, they belong to all of us, and it may be necessary for individuals in possession to give them up. If not voluntarily, a cepectomy may be exacted and, failing that, a name may become indelibly etched upon David & Norm's scatlist.

All participants are personally responsible to satisfy State Park regulations. Register and park your car legally, secure your own campsite, and obey the Salt Point mushroom collection policy. MSSF will secure a site for meeting and group cooking, the location of which will be posted on the kiosk at the campground entry.

Further, you are obliged to be brave and true and JUST SHOW UP. That's what the mushrooms do, and so should you. I do not take reservations, and I am disinclined to give directions to Salt Point State Park, Woodside campground, Sonoma coast, 10 A.M., November 8, 1997.

When we organize Saturday morn, seasoned veterans of the woods may be asked to lead a platoon, as we'll try to break up into groups of ten or so. Beginners will be expected to bring their luck and unjaded perspective. Tweeners are to find a niche, some mushrooms, and smile a lot.

After a day's scrum in the wilds, we'll retire to Chez Outback, where WE will create a gastronomic fungal fantasia. Bring to share a prepared dish, or appetizer, or ingredient(s). Be ready to cook, prep, serve, clean-up, build fire, and/or pull cork. There's always room for participation and talent.

Over the years, this event has grown into a showcase for the remarkable creativity and resource of our membership at play with the best ingredients money can't even buy. (Last year, Patrick and Yutaka took the chef's helm and cranked it up as only they can, with incredibly delicious renditions flying from the camp kitchen like sparks from a runaway train).

Bring firewood, if you can.

Now, if I may field a few pertinent Q's in advance...

Q: "I might dive for abalone while I am there, does that fit in with dinner?"

A: Yes. Just don't be late.

Q: "Should I bring a big-boned zinfandel, an aged bordeaux, or just some exotic chardonnay?"

A: Yes, I think so.

Q: "What if it rains?"

A: Yes! Rain enhances. We'll stretch a tarp and do a group hug, as needed.

Q: "It hasn't rained since April Fool's Day, will we find any mushrooms at all?"

A: Yes. Under the driest conditions, upon the crunchiest of forest floors, we have never collected fewer than 20 species at this event. In a perfect world, though, you might consider plundering your dried stash of edibles to bring some as caveat for dinner contribution.

Q: "Do I have to stay for dinner, or overnight?"

A: Yes, but if you manage to escape, the commitments mentioned above still apply.

Q: "With all this hubbub about frolicking in the forest and indulging in bachanallian feast, will I be able to learn any mycology?"

A: Yes, depending on the individual. Albeit the educational aspect of this foray is decidedly informal, knowledge nonetheless permeates the atmosphere, oozes from our pores, and precipitates like fog drip from the canopy of our minds. As always, we will dedicate a table to specimen ID, and hopefully our recently deposed Foray Czar (that would be Norm, he's been demoted to President) will once again practice his Latin upon us.

See you when you get there.



Heard on the Grapevine: Permits at Salt Point?

Mark Norton, the MSSF's attentive Collecting Policy chair, has heard through the state grapevine that Salt Point State Park on the Sonoma coast is going to require permits to collect mushrooms. The permit requirement may start January 1st or perhaps sooner, pending approval from the state.

Permit cost will be \$10, good for one year. You should be able to buy permits at about five different places, a couple of them in Salt Point park itself. Mark promises an update to the story when details are firmed up.

Yuba Pass Foray

October 11-12



Henry Shaw, Foray Chair

As in recent years, the Society will hold its first official foray of the fall season in the Yuba Pass area of the Sierra Nevada. After the long summer drought, this foray usually attracts several tens of eager mycophiles, ready to get an early start on the season. This time of year was a favorite of Dr. Harry Thiers, and continues to be favored by Dr. Dennis Desjardin for his SF State mycology class field trips to the Sierra. A wide range of fall fungi is usually present, and in recent years, we have found an array of *Russula* species, including *R. mustilina* and *R. xerampulina*; several *Albatrellus* species; *Bondarzewia montana*; and numerous beautiful *Boletus* species (*B. haematinus*, *B. calopus*, *B. abieticola*, and even *B. edulus*, but they are rare at this time of year).

This year, we had hoped to be able to stay at the San Francisco State University Sierra Nevada Field Station. However, a bridge leading to the Station was washed out in last year's torrential January rains and the temporary bridge that was installed for use over the summer is due to be replaced at the end of September or early October. If the bridge replacement goes as planned, we will camp in the dorms at the Station, and have the use of the kitchen and lodge. The cost for use of the Station will be \$10/person. If the bridge reconstruction is delayed and we are unable to use the Station, then we will car camp at the Chapman Creek Campground. In either case, cooking will be a group event. Bring food and beverages to share for the feast!

We expect that some people will leave Friday afternoon and stay that night. Alternatively, you can leave early on Saturday morning and meet the group at 9:30am.

Because of the uncertainty over where we will be camping, please contact Norm Andresen (510.278.8998) or Henry Shaw (510.943.3237, shaw4@llnl.gov) for details of the final location. We should know if the Sierra Field Station is going to be available by the beginning of October.

Warning! Snow is not unheard of in Yuba Pass at this time of year. Bring clothes for both warm and cold weather, and adequate sleeping equipment.

Directions from the Bay Area:

- Take Hwy. 80 east towards Truckee.
- Turn north on Hwy. 89
- Follow Hwy. 89 to Hwy. 49
- Turn west on Hwy. 49 and follow it to Chapman Creek Campground (on the north side of the road) **or** continue on Hwy. 49 to the SF State Field Station (on the south side of the road, about 1 mile before Bassetts).

Driving time from the Bay area is about 4 hours.

Mendocino Woodlands Foray

Nov. 14-16

Click... "...and the forecast calls for increasing clouds through the weekend, with a good chance of rain in the north Bay by the beginning of the week."

Ah... the words all Bay Area mycophiles love to hear as the days grow shorter and the rainy season approaches, with its promise of bountiful fungal fruitings. As I write this in mid-September, we are being tantalized by the first sprinkles of rain in the Bay area, a foretaste of what promises to be an unusually wet and warm rainy season thanks to an El Niño-Southern Oscillation event of record intensity. All this bodes well for an excellent mushroom season.

The Mendocino Woodlands foray is historically our largest fall event, opening the coastal mushroom season and providing the opportunity for our members to catch up with old friends, both human and fungal. Newcomers to the Society are especially welcomed to this event, as it provides a great opportunity to meet many of the Society's "old hands," as well as providing a wonderful introduction to the diversity of fall and early winter fungi that can be found in the coastal habitats of California. Even in dry years, our evening display tables are spread out with specimens of dozens of different species. In good years (as this promises to be), the number can soar to well over 150.

The habitats in the area cover the gamut from coastal pines, to mixed oak-madrone hardwoods, to dense stands of redwood, to the unique Pigmy Forests. Elevations range from sea level to over 1000 feet. Each habitat offers a different assemblage of characteristic fungi. A typical year will have an assortment of *Agaricus*, *Amanita*, *Boletus*, *Suillus*, *Russula*, *Lactaria*, *Gomphus*, *Gomphidius*, *Ramaria*, and *Chroogomphus* species. Highly sought after are the delicious porcini (*B. edulus*), chanterelle (*Cantharellus cibarius*), matsutake (*Tricholoma magnivelare*), cauliflower mushroom (*Sparassis radicata*), and many other edibles.

To encourage people to sign up early so that we can plan the weekend, we are offering a discount to people who sign up early. The cost for the weekend will be \$80/person for reservations made and paid for prior to November 1st. After that date, the cost will rise to \$90/person. Included in the fee are two nights lodging, all meals from Friday dinner to Sunday lunch, and an abundance of camaraderie. As with most Society functions, food and drink are always a vitally important part of the weekend, and as befits the occasion, our evening meals will feature a selection of fungal delights.

The weather in mid-November can be anything from balmy to cold and blustery during the day. Rain is always possible at that time of year. Nights are chilly, so bring appropriate clothing and sleeping gear. The cabins at the Mendocino Woodlands camp provide rustic, fireplace-equipped lodging on camp cots. There are hot showers in the camp's washroom/w.c. facilities. Bring your sleeping bags, towels, toiletries rain gear, and a flashlight.

For more information, or reservations, contact Henry Shaw at 510-943-3237, shaw4@llnl.gov, or send your reservation to him at 1451 Creekside Drive #2098, Walnut Creek, CA 94596.

Henry Shaw

Lichen-Affiliated Fungi at Intermediate Study Group

Chester Laskowski

The speaker at the October study group meeting will be Dr. William Sanders. Dr. Sanders studied at Cornell University and received his Ph.D. in mycology from U.C. Berkeley where he specialized in studies of the morphology (form) of lichen-affiliated fungi. After spending some years in Spain, he's back at UCB doing post-doctoral work on lichens at the University Herbarium. His topic will be "Some Features of Form and Development in Phycotrophic (lichen-forming) Fungi." Everyone is welcome.

Please note that October's meeting will be held at a new location: Tuesday, October 28, 7:30 p.m. at the Child Development Center at the Presidio. From any Presidio entrance follow signs to the "Main Post." Pass through the parking areas of the Main Post to its south end and turn right. The first building (1/2 block) on the left is Herbst Hall where our December Fair will take place. Park behind Herbst Hall in front of the Child Development Center.

If you need further direction, call Chester Laskowski at 510.843.6537 or see me at the October general meeting.

NAMA Foray Reminder

Just a reminder for anyone interested in attending the NAMA foray this February: This is your last month to register without a late fee! Registration after October 31st requires a \$30 late fee. See the Calendar section for more information about the foray, or check the NAMA web site at <http://countrylife.net/ffsc/nama98/>

Calendar continued from page 12

Friday-Sunday, Nov. 28-30: Possible Foray with David Arora. David may once again conduct a Thanksgiving weekend foray and culinary extravaganza somewhere near Mendocino if he gets back to the country in time. Location and cost will be announced later. Contact Larry Stickney (510-465-8529, FungiLarry@aol.com) for information, reservations, and room requests.

Tuesday, December 2: Fungus Fair planning meeting, Presidio Child Development Center, Presidio, San Francisco. Call Terri Beauséjour at 415.927.9623 for details.

Friday, Dec. 5: Pre-Fungus-Fair Forays, ID, and setup. Pitch in and help with the annual Fungus Fair. Note that this year, the Fair will be held on both Saturday and Sunday. This means that the pre-Fair forays will take place on Friday, or, if there is sufficient interest, earlier in the week. Watch this spot for information on foray locations and times.

Saturday & Sunday, December 6 & 7: San Francisco Fungus Fair, Herbst International Exhibition Hall, Moraga Drive, Presidio, San Francisco. Setup starts at 7 a.m. each day, forays start at 9 a.m. on Saturday, doors to the Fair are open 11 a.m. to 5 p.m. each day. Call Terri Beasejour at 415.927.9623 for details.

Monday, December 15: Christmas Dinner. Details to be announced in the next newsletter.

Friday-Monday, February 13-16: 1998 NAMA Foray at Asilomar on Monterey Bay. Your chance to meet fungi fans from around the nation! You must pre-register to attend; call Shea Moss, Registrar, at 408.353.2906 for details or check the NAMA web site at <http://countrylife.net/ffsc/nama98/>.

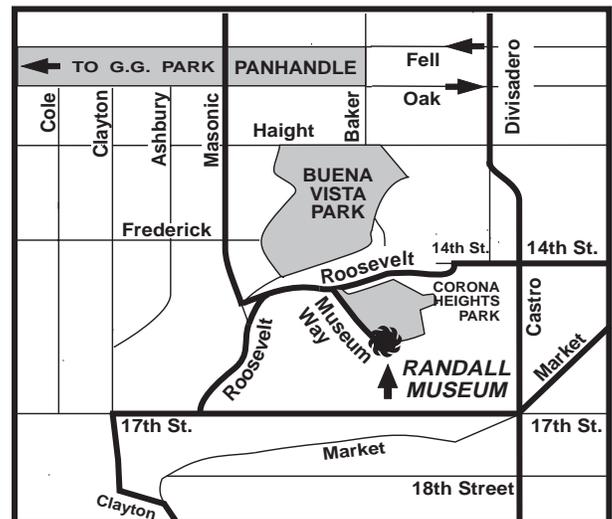
Paul Stamets May Speak at October Meeting

At this writing, it looks *almost* certain that Paul Stamets, noted mycological author, cultivator, and entrepreneur will speak at the October general meeting. Paul is well known throughout the mycological community for his ability to cultivate exotic mushrooms, his business Fungi Perfecti, and the books he has written: *The Mushroom Cultivator* (with J.S. Chilton), *Growing Gourmet & Medicinal Mushrooms* and, most recently, *Psilocybin Mushrooms of the World*.

What may not be as well known about Paul is his expertise at making scanning electron micrographs of fungi (that is, mushroom pictures through a scanning electron microscope), and his expertise in the black-spored genera of fungi. If Paul speaks at this meeting, he will discuss black-spored fungi, which include *Coprinus*, *Stropharia*, *Psilocybe*, and other genera.

The general meeting is on Tuesday, the 16th of October, at 8:00 p.m. It's held in the Randall Jr. Museum in San Francisco, shown in the accompanying map. Doors open at 7:00 p.m. for pre-meeting schmoozing, book sales, and gazing at mushrooms that we all bring in. Please join us!

P.S. If you want to know for certain who the speaker for the evening is, check the MSSF hot line at 415.759.0495.



Fungus Fair News

by Terri Beauséjour, Fair Chair

One of the best things about a two-day fair this year will be having the time to both participate in the creation of the fair and the time to enjoy it as an attendee as well! There are a wide range of possibilities for those of you who would like to participate for just a few hours and enjoy the rest at your leisure. For example:

If the world of fungi is rather new to you, there are many tasks available which require little fungal knowledge and yet are both fun and essential to a successful fair. These including helping in the kitchen, helping direct the public to the new Presidio location, discovering and labeling the fungi on the Presidio grounds for the forays during the fair, helping with setup and breakdown (large tasks for a few, but small tasks for many)—the list goes on...

If there is a particular habitat that is near and dear to your heart or home, take the opportunity to observe it more closely in the next few months—notice which trees, plants and fungi live in that habitat. Whether oak woodland, lawn or pasture, conifer or redwood forest, your observations will be welcome in the creation of our new large-as-life habitat displays. You could even lead some mini-forays through the world you have created, sharing with the public your discoveries and treasures!

From *Amanita* to *Zelleromyces*, if you have expertise in or wish to learn more about a particular family or genus, you may wish to adopt a scientific display table for a few hours. Or get involved with the identification process. Or attend a collecting foray (which will be held both Friday and Saturday this year!)

Do you have a favorite restaurant or market in your neighborhood? Again this year we would like to create some local mushroom displays in markets and restaurants—an opportunity to talk with many people in the public about the mushrooms and to personally invite them to attend the fair. So talk with your local restaurateur or the produce manager at the market to see if they would like to participate. Last year several MSSF members discovered how rewarding and enjoyable it is to talk with their neighbors in this setting about the local fungi!

I could go on and on about the variety of activities we will undertake in the next two months in preparation for this, our most extravagant event of the year. Instead I will simply implore you to call one of the many dedicated committee chairpersons and see what fun is in store in *your* area of interest!

Major Fair Committee Chairs

Fungus Fair Chair: Terri Beauséjour, 415.927.9623, terri.beausejour@autodesk.com

Academic/Scientific: Terry Sullivan, 415.435.8711, wisstudent@aol.com

Displays/Food: Yutaka Wada, 415.898.1451

Events/Forays: Norm Andresen, 510.278.8998

Logistics: Bob Gorman, 415.340.8986

Promotion/Publicity: Mark Thomsen, 510.540.1288, mthomsen@eng.sun.com

Volunteers: Tom Sasaki, 415.776.0791

Interested in Medicinal Mushrooms?

The Fungus Fair sub-committee on medicinal mushrooms is looking for people with personal life histories and interest in alternative medicine, diet, and herbal supplementation for health. Our medicinal mushroom exhibit at previous fairs has been poorly developed. Last year's enlarged exhibit suffered from its own success: it drew day-long crowds, two and three people deep, with consequent poor visibility of information that was displayed flat on the table.

The financial success of last year's fair allows us to create a new exhibit, possibly using color photos and posters behind the table. We'd particularly welcome to the sub-committee anyone with advertising or artistic abilities.

We also hope to sell kombucha and reishi tea taste samples as well as kombucha culture starter kits. With a two-day fair this year, we'll need more people to man the exhibit and spell one another during the fair.

To participate, please contact Chester Laskowski at 510.843.6537. We'll need to get together by mid-October for our first meeting to have sufficient time to develop this new exhibit. I look forward to meeting others of you with an interest in medicinal uses of mushrooms.

Chester Laskowski

Tour a Mushroom Farm!

On Saturday, October 18th, Don Simoni will lead a tour of the Petaluma Mushroom Farm just outside of (naturally) Petaluma. The tour meets at the farm at 10:00 a.m. To get there, take Highway 101 to the E. Washington St. exit outside of Petaluma. Go west over the



freeway for 3.5 miles. This takes you through downtown Petaluma. The road turns into Bodega Highway just after you leave Petaluma. After the 3.5 miles, keep an eye out for Thompson Lane, where you turn right. Go .4 mile, you'll find the Petaluma Mushroom Farm on your right.

This is a great opportunity to see composting on a very large scale and techniques for growing *Agaricus bisporus* in huge quantities. This has, in the past, been a very popular tour. Call Don Simoni at 415.586.4082 for more details.

Flies & Ants Join MSSF Members in Serious Fungi Consumption

Most of us have seen evidence of mushrooms used as food for many creatures. Reindeer, slugs, squirrels and other rodents, termites, beetles and ant gardens come to mind. In the May 1966 issue of *Functional Ecology*—Bass M, & Cherrett, J.M. 10, 55-61—a series of experiments demonstrated that certain ants prune fungal hyphae as a growth stimulant.

Human beings often congratulate themselves on man's uniqueness in introducing "farming" to the world. Not so. Acorn woodpeckers harvest insect larvae from acorns planted in the bark of trees. Ants gather leaves, cultivate them with feces, (just as we do), and use them for food. Dutch Elm Disease is the direct result of beetles trans-planting spores of *Ceratocystis ulmi* to grow and girdle the cambium layers of trees and serve as food for developing larvae.

Leaf cutter ants cultivate leaf material on which they grow basidiomycete fungi. No fruiting bodies are found, but bunches of swollen hyphae (staphylae) are produced and used as food. Ant workers are assigned to tend to the harvest. They lick them, and occasionally break them off at the stems and eat them. The authors of this research sought to determine whether this might be a "pruning process", intentionally stimulating staphylae production, and increasing the branching of the mycelia.

At first, laboratory-cultured colonies of fungi were grown in petrie dishes and 1/2 were allowed to be grazed by ants for 3 hours. The other half were not. For two days, the number of staphylae were reduced in the pruned colonies. But on subsequent days, there was 30% more growth in the ant-grazed group than in the untouched control.

The investigators questioned whether these results were due to mere mechanical changes or possibly to chemical agents such as pheromones or feces. Another series of experiments was set up: 1. staphylae harvested mechanically with a needle; 2. staphylae stroked and broken with a needle; 3. ant feces applied without damaging the staphylae; 4. crushed heads of ants suspended in water and added to the culture, (to simulate the effect of chemicals secreted by the labial and salivary glands).

After three days of observation, there were significant greater crops of fungi in the first two groups. The controls, and adding feces or mouth parts had no effect on growth stimulation. Therefore, the effect was probably mechanical. Other possible chemical treatment by the ants such as in suppressing other fungi or bacteria, or other gardening activity unknown to them were considered. The authors point out that this is like mowing the grass, stimulating regrowth by removing the vegetative part of the plant, and not like harvesting a tree by removing the apples.

These results are probably far removed, but support the results of crude surveys concerning mushroom regeneration in harvesting chanterelles which did not decreased the regrowth of chanterelles and may have stimulated them to grow more abundantly.

Here is a report on an apple-eating analogy rather than a vegetative one: Drs. Bultman, T.L. & Matthews, P.L., reported in *Oikos*, 75, and the *Canadian Journal of Botany*, 73, (Suppl.1). on the fungus-feeding

habits of other invertebrates. This is a quadruple ecological relationship between a grass, a fungus, a millipede, and a fly. The millipede, *Aniulus bollmani*, (we have found many millipedes inside of collected fungi), seeks out fruiting bodies of the golden yellow ascomycete fungi (*Epichloe typhina*) on the stems of grasses such as *Festuca arundinacia*. The fly, (*Phorbia phrenione*), transfers sexual spores from the stem of one grass to another as if pollinating the fungus as it lays its eggs on the grass for its larvae to feed on the fungus mycelia. Golden ascocarps are formed on the stems and are eaten by predator millipedes. Fungal spores are dispersed by seeds, although the number of seeds produced by infected grass is reduced. Spores are also carried away in the guts of the millepedes and in the fly larvae. In this research, we illustrate an example of simultaneous predation, symbiosis and parasitism between four organisms and three Kingdoms. As we learn more about nature's ways, we expand our understanding of a few of the strands which constitute the web of life on earth.

Mycophagists please note. We're not alone!

Bill Freedman



Mountains of Fungi

Larry Stickney, Jeff Berg of Phoenix and Steve Pencall of Riverside spent a long Labor Day weekend in the eastern-Arizona White Mountains. The days were red with *Amanitas*, both *rubescens* and *caesaria*, white with *Coprinus comatus*, wet with daily thunder showers, bright with lightning by night, and noisy, with lovely rainbows in the daylight hours and glorious dawns to start each day.

Boletus edulis was not yet peaking, but the hunt, as always, is what we all enjoy. Doing so by driving around meadow edges to effect easy collection was a new pleasure for this old collector at those breathless 8500' altitudes. The bolete crop simply didn't appear inside the forests, seeming to prefer the kiss of the morning sun. Even chanterelles were found along the wetter, mossy spots where the pines lined the green grassy pastures punctuated with fat cattle. Back in the woods many mycological wonders prevailed in show-stopping quantities which would greatly enhance any mushroom fair, including our own, were that an option.

A five-hundred-mile-plus tour through the high Sierra the following weekend with Steve Bowen of San Jose turned up perhaps half a dozen *B. edulis*. Most of them occurred along the Tuolumne river at 8600 ft. near the bridge on Highway 120 in Yosemite's high country. Exiting Yosemite at Tioga Pass, we found none in Luther Pass on Highway 89, and just one decent specimen along Audrain Creek on Highway 50 this side of Echo Summit. While summer showers have been common, real soaking widespread storms have not yet come to the mountains. So when they do there ought to be a generous fall fruiting for all who find a way into them. Don't miss it.

Larry Stickney

No Bull: Bovine Mushroom Hunting

by Patrick Hamilton

We knew that we needed some fine shrooms for a Sunday brunch, but here it was April in Marin County and way too deep into the season to hope for much. David Campbell, one of the best and truly the only mushroom buddy I know that will go almost anytime, anywhere, for anything good, had called and suggested a few spots near my home in Inverness.

We met off a coastal road that bisects a great stand of California live oak and immediately checked for chanterelles (we have a variety of oak types but the *Quercus agrifolia* is the only one under which this mushroom grows here). First thing you notice when looking late in our local mushroom year for the *Cantharellus cibarius* veins of yellow gold is the comely lushness of the darn poison oak. Those beautiful shiny new waxy leaves just glistening there in groups of threes, hoping to get in under our pants and all the way up to behind our knees. Jeez... Actually we're lucky because it rarely bothers us. But not finding chanterelles does and we found none there.

So we drove into the burn area of last fall's Mt. Vision fire and then hiked through varying environments looking for morels. David spotted two red-brown beauties under mixed Douglas fir/Bishop pine habitat and we continued to search; but that was it.

We headed back down the road towards Highway One where we know an area for *Macrolepiota rachodes*. Through the fence, along the lovely stream and past the big white horse, through the next barbed wire gate by the other horses and into the place where the cattle usually gather earlier in the year. Hmmm, Poison hemlock, *Conium maculatum*, was everywhere in the spot we intended to look; and a recently fallen branch of a bay tree, *Umbellularia californica*, covered the little hillock we were searching for.

My buddy found a wonderfully huge cluster of mature shaggy parasols hiding in that pretty and poisonous stuff, under that broken bough. There were great big open caps and even some tight little buttons, perfect and plenty for tomorrow's meal.

To cook this meaty and full-flavored mushroom, chop small then simply sauté with olive oil, a little onion, maybe a red wine reduction, and salt and pepper. If there are enough to preserve by drying look forward to the incredible soup and stock these will make. I try to keep them for at least a year before using because their flavor and aroma will intensify (just like boletes). They become so strong in fact that Louise Freedman, in her book *Wild About Mushrooms* (written for the MSSF and my favorite mushroom cookbook), even suggests somewhat discretionary use.

I stashed those leppies ("McLeppies" now?) in a brown bag in the crotch of an oak tree. Next we were going up and over the hills to try again for golden chanterelles. Gosh, there were beautiful views from there of the Coastal Range and the lush green springtime hillsides of west Marin. Everything was in place—the clouds, the sky, the distant tree line, the wildflowers, and even a hollering Holstein...

So of course being vocal I answered in my best moo. Whatever I said, when translated into the particular local bovine colloquial, must have made that lady real mad—she attacked us. Now I am a sort of country boy who used to raise hogs, horses, sheep, etc., but I just don't know from cows. And as good as he is at hunting mushrooms, David was about as worthless here.

We stood mesmerized waiting for the other man to take charge in the very middle of a very large meadow with a very large sharply horned howling female range critter charging us. Ever seen two fairly big guys trying to get behind each other quickly? Think about it.

Well, you can actually cover ground that way, but not very fast, of course. Yet the cow was and she was big and probably assuredly had "Mad Cow Disease." Hell, she was mad enough at us. Jeez, is this mushroom hunting? Do the folks back home know what we do to gather for the table?

The tree line stayed very far away but the furious cow got very close and was really bellowing now. To defend us I picked up a stick that turned out to be a withered stalk of last year's anise or mullein, or whatever. I swooshed it like a mighty sword (think *Braveheart* here, after all we were Campbell and Hamilton) and the damn thing goes limp, and so do we.

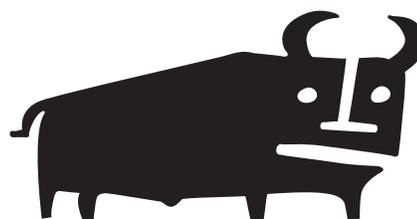
Fortunately she made a tactical error. Drunk perhaps on her apparent power and thinking that she would spear us two obviously shaken but not stirred fellows (like some martini olives) she veered off to flank and filet us but by now we were close enough to the oaks to sprint into them.

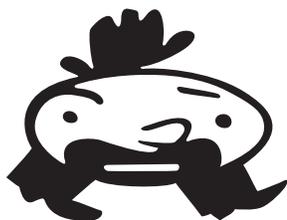
This was not a retreat—we were running forward, kinda. We are manly men, we. A little Monty Python lumberjack type music here, please. Thank you. Plus there were chanterelles right where we entered that oak and bay woodland.

We also found a large *A. manita velosa* to add to our collection. Not a bad day: morels; a springtime Amanita; golden chanterelles and shaggy parasols, a mad cow, wow.

The *A. velosa* is best just sautéed in butter. The browning butter compliments the nutty flavor of this great-tasting mushroom. Obviously be very careful in its identification! If you are lucky enough to have this species in your area you are among the fortunate few who have an opportunity to enjoy perhaps one of the very best of all wild mushrooms. (At least this is my and David Arora's opinion).

I was asked to make an egg dish for brunch so this recipe was created. It is adapted from a basic oven omelet dish like "Dutch Babies" and can be remodified easily.





Sunny Super Sunday Oven Omelet

Servings: 8

This is a good-looking and great-tasting egg dish that will rise, literally, for any occasion.

The Filling: Ingredients

- 2 lbs. mushrooms (can be any mixture of good edibles), finely chopped
- 2 tbl. shallots, minced
- 1.33 tbl. olive oil
- 1.33 tbl flour, all purpose
- .33 cup heavy cream
- Salt and pepper to taste.

The Egg and Cheese Mixture: Ingredients

- .67 cup flour, all purpose
- 22 oz. milk
- .25 cup butter, unsalted, cut into 1/2" pieces
- .5 tsp salt
- dash pepper and nutmeg
- 12 ea. eggs, slightly beaten
- 12 oz. Gruyere cheese (can use Swiss and Jack mix, Fontina, etc.), coarsely grated

Making the Filling

1. Sauté the mushrooms and shallots in the oil for 10 minutes. If using dried mushrooms, add the soaking liquid and reduce totally.
2. Reduce heat and sprinkle in the flour. Cook and stir over medium heat for 2 minutes. Add the cream—cook and stir until it thickens. Add salt and pepper. Set aside.
3. Set oven to 400 degrees F.

Making the Egg and Cheese Mixture

1. Place the flour in a large pan—whisk in the milk. Heat at high temperature and stir constantly until the mixture boils and thickens.
2. Remove from the heat—beat in the butter, seasonings and eggs. Stir in the cheese.
3. Spread 1/2 the mixture into the bottom of a buttered casserole dish. Spoon the filling into this. Cover with the remaining cheese mixture.
4. Bake for 30-45 minutes—until puffy golden brown. Serve immediately.

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name. A mouse click on any species name takes you to the species description page for that mushroom.

Each species description page starts with a color photograph of that mushroom, followed by text describing the mushroom. You'll find its scientific name, citation, common names (if applicable), and synonyms. You'll also find descriptions that include the macro- and microscopic features of the mushroom such as its pileus (cap), lamellae (gills), stipe (stem), and spores. After the descriptions come comments about edibility, habitat, and anything else of note about this particular species. The bottom of each species description page includes links to more color photographs of the mushroom, descriptions of the mushrooms found elsewhere on the Internet, and lists of references in books to the mushroom. Its not uncommon to have four or more color photos for a single species of mushroom.

If you think of beautiful mushroom photographs as mushroom pornography, then Mike Wood and Fred Stevens are the Larry Flynts of mycology. You'll find more lovingly photographed fungi here than any other site I've ever seen. A large part of that is due to the contributions of Taylor Lockwood, America's (if not the world's) premier mushroom photographer. This is not damnation by faint praise—Taylor's photos are striking in their use of color, texture, and composition. And until Taylor comes out with a coffee table book, this is the best place to see his photos outside of his own slide shows.

Many other photographers have also contributed high-quality photos to this site, including MSSF members Boleslaw Kuznik, Bob Mackler, Herb Saylor, Terry Goyan, Ari Kornfeld, and Mike Boom. A lion's share of photographs, especially those of the less common species, are taken by Mike and Fred themselves.

BAF made its debut on the Web in August of 1996, and has been in place for a little over a year now. In that time, it's attracted over 11,000 visitors from around the world. Creating BAF and keeping it up to date has been no mean feat. Mike is the webmaster: he designs the web pages and keeps the site up to date. He's also the photo editor. He meets with photographers many times during the year, going through slides, often with Fred and other BAF contributors present, to pick out the best photos for each species. He digitizes the slides with a \$2000 Nikon slide scanner, then runs the images through Adobe Photoshop to tweak color balance and saturation for the best presentation on the web.

Fred is the chief writer for BAF. He writes the contents of each species description, then sends the descriptions to Mike, who adds them to the web site with the appropriate photos. Whenever new species and photos go up, Mike lists them in a "What's New" page so repeat visitors to BAF can quickly take a look at new descriptions and photos.

BAF is a continuous project, and is constantly updated. In addition to adding new species descriptions, Mike and Fred revise what's already online, upgrading photos when possible, revising text when necessary. They have ambitious plans for the future. They will, of course, continue to add new species as they acquire more photographs and information about the species. They may expand the scope of the site beyond common Bay Area mushrooms to uncommon spe-

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Colorado NAMA: A Report

NAMA's 1997 Sam Mitchel Memorial Foray in central Colorado brought together about 350 mushroom lovers from all across America. They found over 300 different species in three days. Fifty of these were new finds for Coloradans, probably due to the fact that the area has no indigenous professional mycologists.

A great many professionals came to the 9500 ft. base level of Copper Mtn. Ski Resort. Their presence, particularly men like Dr. Moser and Dr. Ammirati, were well qualified to put exact names on the ubiquitous forms of *Cortinarius* which appeared everywhere. *Boletus edulis* made an abundant showing if not in the almost overwhelming quantities that the Centennial State proffered NAMA in 1983 at Granby Lake. Chanterelles failed to show up, alas. The Rockies have the most exquisite *C. cibarius* found anywhere.

Three side-by-side lecture rooms were busy every day after the many foray buses took the hardy hunters out gathering for the day to fascinating-sounding places like Mayflower Gulch, Peru Creek, Holy Cross View, and most appropriately, Weary Man Creek. The list of lecturers and guests reads like a *Who's Who in American and World Mycology*: Dennis Desjardin, Orson Miller, Jack States, Gary Lincoff, Walt Sundberg, Rod Tullos, Nancy Weber, Dr. Moser, Dr. Horak, and of course Harry & Ellen Thiers.

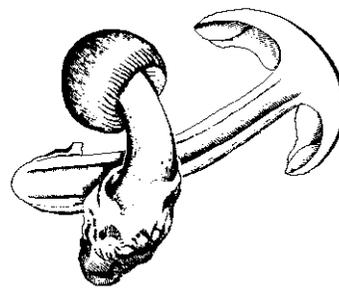
On the floor above the lecture rooms was the dining room/evening lecture hall, the sorting and exhibit hall. All meals were buffet style, meaning long lines for decent if not memorable food. A bar set up in the same area helped shorten the sometimes long waits, and definitely enlivened after-dinner/lecture hours.

Awards were presented to Richard Homola of Orono, Maine (not present) for his contributions to amateur mycology, and to Mrs. Lee Barzee of Colorado Springs as the Knighton Award recipient. There was also a special award to Harry Thiers for long and selfless contributions to the Colorado Mycological Society during its annual August exhibits in Denver. Retiring Executive Secretary Ken Cochrane of Ann Arbor was also appropriately feted.

Twenty two MSSF members were in attendance: Jack Aldridge, Brian Ali, Lisa Bauer, Monique Carment, Judy Dater, Tom & Ellen Duffy, Roger and June Ecker, Bill & Louise Freedman, Estee Neuworth, Steve Pencall, Tom Sasaki, Mike Stein, Larry Stickney, Sumner Stone, Jane Wardzinska, Nathan Wilson, and Mike Wood as well as Ellen and Harry Thiers already mentioned above.

Next year's foray, to be held in just five months at Asilomar, will further honor Dr. Thiers. Make your plans now to come help us honor him during the President's Day weekend in February with several times the number who went to Colorado in August. Paid reservations are requested by the steering committee by the end of this month for reasons too mundane to mention. Get out those credit cards and checkbooks now: it may be another twenty years before we can again expect to have such singular sessions so close by.

Larry Stickney



Wanted: 35 mm SLIDES!

For years, one of the goals of the MSSF has been to give to the world a better understanding of roles fungi play in nature. We currently offer an in-house beginner's program, but we have also conceived of an "outreach" program to reach into the school systems as well as garden and nature-oriented organizations.

We can boast of having enough talented speakers to visit society meetings and classrooms. Some already visit schools at all grade levels, usually on an annual invitation. Our public forays such as at the Legion of Honor and San Joaquin Park in Oakland have been very well received. But we haven't been able convince the School Boards on either side of the Bay to include a unit on Mycology as a part of the class curriculum. Anyone who thinks they can link us up somehow please call or e-mail me.

We want to use our mushroom knowledge, our posters and live mushrooms to share our excitement about the Third Kingdom. Slide shows and videos make our presentations personal and colorful.

For 25 years, I've been collecting 35mm slides of mushrooms, forays, personalities and anything of potential interest for the future. Some I've taken myself, others were donated by many individuals. Since I first began, I have placed these at the disposal of members and occasional non-members to prepare slide shows. They have been borrowed many times. With close management, we have so far lost no slides. Speakers can create their own personal collection with duplicates.

We are requesting that MSSF members who record fungi, events or whatever is related to the group share with the 35mm "library" your best proud photos. Label them with your name. Place them with me and they will be made available to other members. In particular, if some of our group are currently involved with slide shows, this article is to inform you that we are prepared to assist you with visual material. No cost is involved. It will require a visit to my home. This is a chance to make a useful, practical contribution to the MSSF.

Your slides may also be reviewed by Mike Wood for possible inclusion in the well prepared Mykoweb site presentation of local mushrooms.

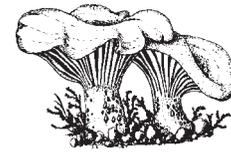
As a side benefit, we hope to attract more students and teachers to attend the fairs as part of their nature education. Thank you.

Contact Bill Freedman to arrange for transfer: 650-344-7774. email: loufreed@aol.com. FAX-650-344-2227

Bill Freedman

The Forager

by Bob Gorman



The big news this month is the imminent arrival of El Niño. The big question is: How will it affect the fruiting of mushrooms? For one thing it means that there will be more rain this season than we can handle. And the rains will be warmer than usual.

Connie Green, who has made a lifelong study of the yellow chanterelle, observed that during the last big El Niño of 1982-3 we had the best season in memory for golden chanterelles. There are some interesting phenomena occurring which would seem to bear this out. In a normal year, chanterelles start fruiting on the Olympic peninsula in mid-August and then start fruiting down the coast into California during succeeding weeks. This year fruiting started in the Coos Bay area and then proceeded down the coast in rapid succession all the way as far as Point Reyes. Only then, some five weeks later, did they appear on the Olympic Peninsula. Not only are they earlier but already they are more abundant than normal. So keep an eye on your chanterelle patches, folks. This will most likely be a year of the chanterelle.

In other news from points north, Larry Stickney found a nice healthy *Sparassis radicata* (cauliflower mushroom) on the Sonoma Coast, again, earlier than normal. A few *Boletus edulis* (king bolete) were found north of Eureka, signaling the beginning of that season. October rains could trigger substantial bolete fruiting. Remember the classic rule: ten or so days after the first substantial autumn rain. It could

be an excellent year, too, for boletes in the Sierra—early to mid-October is peak season.

Laetiporus sulphureus (sulfur shelf) have been showing, mainly on eucalyptus logs in the East Bay and the Napa/Sonoma area. An *Albatrellus sp.* was found at Salt Point in mid-september. Fred Stevens checked out the Donner Pass area on Labor Day weekend and despite generally dry conditions found *Suillus tomentosus* and several Russulas under “mushhumps” including a secotiid Russula: *Macowanites sp.*

Locally, Fred has found *Lepiota cepaestipes* under cypress and *Clathrus rubescens* (basket stinkhorn) in chip beds. The usual *Agaricus xanthodermus* (yellow-staining agaricus), *A. Californicus* and a few *A. bernardii* (salt-loving agaricus) were seen on lawns but the edible *A. arvensis* (horse mushroom) and *A. augustus* (the prince) were rare. Under the pines, Fred found the first *Suillus pungens* and *Chroogomphus vinicolor* of the season along with *Amanita pantherina*. *Lepiota naucina* (smooth parasol) has been common on watered lawns and I collected a few nice *Macrolepiota rachodes* from a chip bed.

To contribute to *The Forager*, call me at 415-340-8986, e-mail to mycoforagr@aol.com. or post your findings on Wade Leschyn's *Natural World Bulletin Board* at 415-261-1212 Thanks to Fred Stevens, Connie Green, Larry Stickney, Patrick Hamilton, Mike Boom and Norm Andresen who contributed to the preparation of this report.

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cies as well. As their species list grows, they may cover the Sierras and northern coastal California as well. At some point, they may add a set of computerized identification keys to the site, an exciting prospect that could make keying much easier than flipping through voluminous field guide pages.

The next big step for BAF is a move to CD-ROM. Mike and Fred plan to put the entire contents of the site on compact disc by this December or January, and want to be able to sell it for a nominal price at the upcoming NAMA foray in February. The advantage of CD-ROM is access to all of BAF's content without an Internet connection and the slow page viewing that the Internet brings. If you have a laptop computer with a built-in CD-ROM drive, you can take it into the field with you and consult BAF as you find different fungi. Maybe the day when you can use BAF as a field guide isn't so far off after all.

Mike Boom

If you're interested in viewing BAF, the URL is http://www.mykoweb.com/ba_fungi.html. If you have photos or expertise you'd like to contribute to BAF, you can contact Mike Wood at mwood@mykoweb.com or Fred Stevens at fstev@wco.com.



Coprinus comatus by Mike Wood from a BAF species description page



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Calendar

Friday–Sunday, Oct. 10-12: Yuba Pass Foray. (See article, this issue) We will either camp at the Chapman Creek Campground, or (pending notification that it will be available) the Sierra Nevada Field Station of SF State Univ. Contact Norm Andresen (510.278.8998) or Henry Shaw (510.943.3237, shaw4@llnl.gov) for details and final location.

Saturday, October 18: Tour of Petaluma Mushroom Farm. (See article, this issue.) 10 a.m., 782 Thompson Lane. Trip leader, Don Simoni. For details call him at 415.586.4082

Tuesday, October 28: Intermediate Study Group meeting. A talk on lichen-related fungi by Dr. William Sanders, beginning at 7:30 p.m. at the Child Development Center at the Presidio. See the article elsewhere in this newsletter.

Thursday–Sunday, October 30–November 2: Breitenbush Hot Spring Forays at Detroit, Oregon. For information and registration: Breitenbush Hot Springs, P.O. Box 578, Detroit, OR 97345. Phone: 503.854.3314.

Tuesday, November 4: Fungus Fair planning meeting, Presidio Child Development Center, Presidio, San Francisco. Call Terri Beausejour at 415.927.9623 for details.

Saturday & Sunday, November 8 & 9: Salt Point Rendezvous with David Campbell. (See article, this issue) This is a car-camping foray at Salt Point State Park, your chance to see if the boletes and chanter-

elles are popping along the Sonoma Coast. Your chance, too, to cook over a hot Coleman stove for a Saturday evening gourmet potluck followed by swapping tall fungi stories around the campfire. Meet at the Woodside Campground at 10:00 am Saturday. Direction to the main campsite will be left at the entrance to the campground. Call David at 415.457.7662 for details.

Friday–Sunday, Nov. 14–16: Mendocino Woodlands Foray. (See article, this issue) Our traditional fall cabin-camping fest will be held (we hope) at the peak of the Mendocino-coast bolete season. The cost will be \$80/person if reservations and payment are made before Nov. 1, and \$90/person thereafter. Call or e-mail Henry Shaw (510.943.3237, shaw4@llnl.gov) for more info and reservations.

Saturday & Sunday, November 15 & 16: Jepson Herbarium Mushroom Course in Ft. Bragg/Mendocino area. This workshop is taught by Teresa Sholars. For more information, call Susan D'Alcama at the Jepson Herbarium, 510.643.7008.

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For the most current Calendar information, call the MSSF hotline at 415.759.0495 or check the MSSF web site at:

<http://www.mykoweb.com/mssf>