Mycodigest: Of Mammals and Mutualists

Peter Werner

When asked to discuss some of the important ecological roles of fungi, many of us with some biological background might think of the mutualistic relationships between plants and fungi that characterize various kinds of mycorrhizae, or perhaps the complex symbiosis between the algae and fungi that make up a lichen. We might also think of fungi, particularly hypogeous fungi, as an important food item for many kinds of mammals; however, this only just scratches the surface of what is often a much more complex and fascinating relationship.

If some mammalian/fungal relationships go beyond just a simple “predator-prey” model, we must look at whether this relationship is obligate for one or both partners, as well as examining what the fungi get out of this relationship.

It’s clear that fungi are a dominant food item for many species of small mammals, particularly among squirrels, mice, and voles, and, in Australia, among several groups of small marsupials, such as bettongs, potoroos, and rat-kangaroos. Some of the more notable fungivorous mammals include the California red-backed vole (*Clethrionomys californicus*) and the northern flying squirrel (*Glaucomys sabrinus*), for whom over half their diet is from hypogeous fungi, and the long-footed potoroo (*Potorous longipes*), who’s diet is over 90% fungi.

The paradox here is that fungi are generally presumed to be a low-nutrition food item for most mammals. Certainly, fungi are high in many vitamins and are particularly high in mineral nutrients, making them a valuable supplementary food source. However, many fungal carbohydrates and proteins cannot be assimilated by the mammalian digestive system, hence most mammals cannot use them as a primary food source unless they have some way of assimilating these nutrients.

In the case of potoroos, there is a clear adaptation for breaking down these compounds. Potoroos have an enlarged foregut, containing a population of symbiotic anaerobic bacteria that are capable of fermentative breakdown of fungal compounds into forms that are useable by the animal. The ability of the potoroo to utilize fungal nutrients was demonstrated in an experiment by Australian wildlife ecologists Andrew Claridge and SJ Cork, which involved feeding long-nosed potoroos on a diet consisting entirely of two hypogeous fungi, *Meophellia glauca* and *Rhizopogon luteolus*. It was found that the animals were more or less able to maintain their body weight on this diet.

The adaptations found in North American fungivorous mammals are less clear. Claridge and others later carried out a dietary experiment on red-backed voles and northern flying squirrels, feeding them entirely on *Rhizopogon vinicolor*. In this case, the...
The Depth of the MSSF

Indeed we are a large and diverse assemblage of fungi lovers, a full spectrum of remarkably enthusiastic, intense, intriguing and talented individuals.

Our members include:

- Scientists, in many disciplines
- Cultivators, amateur and professional
- Intellectuals, epicureans and hedonists
- Perfect citizens and scofflaws
- Mycophagists
- Chefs
- Researchers
- Students, teachers, soothsayers
- Mushroom dye makers
- Mushroom paper makers
- Mushroom hunters
- Photographers
- Really nice people who were just wondering about it
- Contributors who volunteer their precious time to make the Society work
- Authors of books we have at home and in our libraries
- Mushroom obsessed people
- Nature nuts
- A few perfectly sane people
- Artists
- Locals and globalists
- Landowners and trespassers
- Esoteric individuals with a passing interest in mushrooms
- Psychoactive mushrooms with passing interest in esoteric individuals
- Pixilated persons
- Archivists and historians
- Entrepreneurs
- Editors and list moderators
- Genius, real and imagined
- Human gems in the rough
- Elves, sprites, gnomes
- And, of course, dues paid people

I know dam well I forgot someone, sorry. Most of us fit into more than one of these categories, a few into almost all of the categories.

It is the MSSF mission to open avenues to all who endeavor to pursue mycological knowledge. Here’s to us. May we share as we dare and share what we must; that’s what makes us great.

Hope to see you all at the Fungus Fair, Holiday Dinner, next general meeting, or the next foray. Best wishes for the Holiday season.

Mushroom collecting forays are organized for Thursday and Friday with the mushrooms being delivered to the museum on Friday afternoon. Setting up the fair begins at around 10am on Friday with most of the activity taking place after 4pm as the mushrooms come in from the forays. An extensive mushroom identification and labeling process takes place in the parking garage area adjacent to the Natural History exhibits where the fair displays are located and the mushrooms are distributed. The exhibit hall contains individual bays with various specialty tables covering toxicology, ecology, edible, cultivation, medicinal, psychoactive, ethnomycoology, dye, and lichens in the first bays. The taxonomy tables representing the families of fungi are displayed in the last bays so they can be kept cool near the open courtyard doors. In between are some of the mushroom vendors that are also distributed in other locations around the natural history area of the museum.

Leading into the exhibit hall is the main hall where the Introduction to Mushrooms will be located on either side of the woodland diorama. The diorama will retain its photo opportunity nature with the addition of photo ID labels on the surrounding border trim while also serving as the habitat portion of the Introduction the Mushrooms. Also located in the main hall will be the continuing ID where the public can bring in their mushrooms to be identified by MSSF mycologists. The MSSF membership table will also be located in the main hall where you should be sure to go to renew your membership for the year.

In the large theater we will have Paul Stamets and David Arora as our two keynote speakers. The art room where kids and adults can go to create mushroom art will be located in the hall between the lobby and the main theater. Be sure to ask for the new location of the volunteer food room when you check in to volunteer.

In the lobby we’ll have book and T-shirt sales and the mushroom grocery and MSSF volunteer check in. And at the main entrance will be the culinary chef demonstration area, mushroom soup sales, and wild and cultivated mushroom vendors to whet the appetites of the public for all things mushroom to come.

At the end of the fair on Sunday we will need volunteers to help take down and pack up everything and haul it away.

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The Foragers’ Report
December 2005

Patrick Hamilton

The bolete dance began in California in mid to late October with waltzes along the north coast near the Oregon border under Sitka spruce (Picea sitchensis) and then further south around Trinidad where their partners begin to be beach pine (pinus contorta ssp. contorta).

As they make their annual pilgrimage to us (why do they do that each year?—it is so nice of them) the edulis change their buddies again. Out along our coast they opt to mate with bishop pines (pinus muricata) and began to do so in very late October and continue to do so (as of 11/19).

They also like other partners too. Out at the coast madrones can have quite a few of these little fellows doing the porcini polka under them and a bit further inland you might find some boogying with live oaks. Ah, the life of the wild mushroom.

Chanterelles can be noticed associating with different consorts at diverse locales too, even within a rather small geographic area. In Salt Point golden chanterelles (C. formosus) seem to play in the same exact habitat as their king bolete friends while just up, or over, the hill the other local golden chanterelle (C. abarun) appears to enjoy the company of Douglas firs. In other areas (Marin, East Bay, etc) these mushroom are likely to be found under live oak. Hmmm.

Heck, if it wasn’t so we might not enjoy it as much.

And, speaking of fun, yesterday at Salt Point there was a gathering of mushroom people and people new to mushrooms that SOMA organized. (BTW, these monthly forays are open to anybody, even non-SOMA members.) About 40 or so met at Fisk Mill and then spread throughout the northern part of the park to have a look-see.

This forager reporter saw a big difference in the bolete fruiting pattern from earlier in the week to this day. Last Tuesday the porcini were still coming up away from the trees, out at their drip lines, while yesterday they were closer in—a sign that the season is definitely aging.

If the foray had been held two weeks ago this many folks probably would have picked over 150 pounds of boletes but did not on Saturday. The group averaged perhaps only one apiece.

There were some collections of golden chanterelles and even a small cluster of black chanterelles was found. Pig’s ears and woolly chanterelles were seen but noticeably absent were any hedgehogs.

What we did see was an explosion of false chanterelles (Hygrophoropsis aurantiaca). Even though this is a non-mycorrhizal fungus they have been in just about every place where you’d be looking for porcini—and seen in huge numbers this year. A banner year for false chanterelles! Anybody ever eaten them? They are known to be non poisonous but I have never tried them.

The sweetbread mushroom or, as I learned it—the spy mushroom (Clitopilus prunulus)—in years passed showed us where the porcini are but this year they appeared before the boletes and were not such a help.

This season’s fruiting pattern has all of us who pay attention to this sort of stuff rather bemused, as usual. Last summer’s surprising rains had to have some affect and the rains in October surely started the boletes coming up (which is kind of the beginning of our season, even though it really goes all year). Then we worry over will it be/is it too cold for the bolete fruiting to be good and don’t you think it’s too hot for a good and early matsutake season and hey, don’t we need more rain?

Ah, the agony of angst about something over which we have absolutely no control but affects us so much. Kind of like a sports fan, but different.

But let’s not anguish over what to do for a special holiday recipe with wild mushrooms involved. How about a French classic, twisted ever so Northern Californian, into a dish that we can have on a celebrative brunch with sparkling wine? 

French Onion Soup With Aged Porcini Bits

serves 6

I am going to cheat on this and make it easier for us. . . . Create your/any great regular French onion soup recipe and then add sauteed, in butter, rehydrated, aged, porcini bits to melted Gruyere cheese which you will then plop (a French culinary term) atop the croutons (large, sliced bread size). Broil these croutons floating in your soup until browned nicely. Open a sparkling wine and smile.

That’s all for now folks!

Fungus Fair

Continued from page 2

The parking situation for the museum will be a little different this year. The Kaiser parking lot will be taken for another event. Street parking, other area parking garages, and BART are the primary options. Things for the fair can be delivered to the museum during regular hours on the Tuesday through Friday before the fair. Delivery can be made at the main entrance or by the front vehicle ramp at the far end of the koi pond or around through the courtyard to the back way to the exhibit bays. Mushrooms delivered from the forays will come in to the underground garage to the ID area.

Remember to sign up for volunteering for the fair with Dan Long at danlong@astound.net
animals lost weight, demonstrating that their assimilation of fungal nutrients is more limited and that they clearly need other items in their diet. Nevertheless, fungi do make up a large portion of their diet and is unclear how they maximize the nutrition they get from this food source. Anatomically, many murids ("true" mice, rats, and voles) have a large number of mucosal folds in their hindgut. These mucosal folds retain bacteria which may be capable of additional breakdown of fungal compounds; also many of these species are coprophagous, and in this way can redigest foods that have undergone additional breakdown in the hindgut.

While mammals can, to varying degrees, use hypogeous fungi as a food source, what do the fungi get out of it? First, it should be noted that most fungal spores can pass through the gut of an animal undigested, hence, consumption of a fleshy fungus by an animal can serve as an additional vector for spore dispersal. In the case of hypogeous fungi, which have entirely lost their ability to forcibly discharge spores, fungivorous animals are, for the most part, the only effective method of long-distance spore dispersal.

This leads to the questions of whether many spores remain viable after passing through the gut of an animal and whether spore viability is in any way enhanced by digestion. A number of studies have addressed this question. These studies involved isolating spores of Rhizopogon or Mesophellia from various small mammal scats, as well as isolating spores from sporocarps of the same fungi; these spore isolates were then used to inoculate seedlings of ectomycorrhizal tree species, such as Douglas-fir or eucalyptus. Most of these experiments demonstrated that both digested and non-digested spores were viable and established mycorrhizae on the target trees, with about the same degree of inoculum potential. In one experiment, however, non-digested Mesophellia spores failed to inoculate eucalyptus trees, while digested ones did so successfully – perhaps the experiment was a fluke, since the results weren’t replicated, or perhaps there are conditions under which digestion of spores does help activate them for inoculation.

Hypogeous sporocarps show often other adaptations that indicate a more specific degree of coadaptation with mammals. Most small mammals have a very strong olfactory sense, with olfaction being the main way in which they find underground food items. Many hypogeous fungi are characterized by strong odors; this certainly could also serve to attract fungivorous insects, however, at least some hypogeous fungi have scents that mimic mammalian pheromones. More importantly, these scents develop as the spores mature, hence, the strongest smelling sporocarps (which are presumably the ones most attractive to fungivores) are those in which the spores are most ready for dispersal.

In Australia, there is an example of a particularly close degree of coadaptation between Mesophellia and the mammals that consume them, particularly the long-nosed potoroo. Mesophellia is a very common hypogeous fungus in the eucalyptus forests of Australia (as common as Rhizopogon in North American coniferous forests). It possesses a central columella that is rich in lipids and is a choice food item for fungivorous mammals. This columella is surrounded by a spore mass that is powdery at maturity; an animal that is eating this fungus will have to tear through the outer spore mass to get to columella beneath. In the process, the animal will get spores all over its paws and fur, in addition to ingesting spores. This adaptation bears a very close resemblance to flowers with powdery pollen and a nectar reward.

In addition, there seems to be a third party to this potoroid/fungus mutualism (or really a fifth party, if you count the anaerobic bacteria in the potoroo’s foregut, plus the ectomycorrhizal trees themselves). Potoroos and other rat-kangaroos often have any of several species of Onthophagus, a type of dung beetle, living in an around their tail. When a potoroo defecates, the beetles immediately jump on the dung; the female beetles then build deep underground nests under the dung pile, while the males deliver dung to them, which they later roll into the dung balls, into which they lay their eggs. The next generation of beetles live off the dung balls, but leave behind quite a bit of the spore-rich dung, which remain buried and can serve as inoculum for mycorrhizal roots into which they come into contact.

Mammalian spore dispersal may play a very important role in mycorrhizal recolonization following disturbances such as fire or logging. This is among the factors being looked at by Tom Bruns and others at UC Berkeley studying mycorrhizal recolonization following the Mt Vision Fire at Point Reyes.

The small mammal/hypogeous fungus relationship clearly is a kind of non-symbiotic mutualism with many analogies to a pollination mutualism, and likely plays a key role in ectomycorrhizal forest ecosystems. It might also be kept in mind that, like most mammals, we too are descended from small shrew-like creatures, and it is entirely possible that fungi may have been an important dietary item at some point in our evolutionary history. Hence, our own fungivory may be something deeply rooted in our past.
Fair Forays

Thursday, December 1

Golden Gate Park Foray. 9 am. Leader: Peter Werner. Meet at Rhododendron Dell in GG Park, across from the intersection of 8th Ave & JFK Drive (just to the West of and across the street from the Conservatory of Flowers). We will collect here, then carpool to various other locations in Golden Gate Park, and perhaps Land’s End if time allows. Bring snacks/lunch and something to drink, the biggest basket you have (we’ll be collecting a lot of species), waxpaper and wax bags, and some extra boxes. Call 415-289-0168 or email pgwerner@sfsu.edu.

Friday, December 2

All forays begin at 10 am, unless otherwise noted.

Roy’s Redwoods and Point Reyes Foray. Leader: Peter Werner. Meet at Roy’s Redwoods, in San Geronimo Valley, on Nicasio Valley Rd, just beyond the intersection with Sir Francis Drake Blvd. We will collect there for several hours and then drive to the Sky Trail at Point Reyes. Pack a lunch and something to drink, the biggest basket you have (we’ll be collecting a lot of species), waxpaper and wax bags, and some extra boxes. Call 415-289-0168 or email pgwerner@sfsu.edu.

S.F. Watershed Collection. Leader: Bill Freedman. By reservation only. Meet at Pulgas Temple on Cañada Road one mile north of the end of Edgewood Drive, which ramps from Route 280. Turn off is south of Black Mountain Road exit to Hillsborough. Please bring waxed paper bags and a roll of waxed paper for large specimens, and a basket or container for carrying specimens which we will pack in large boxes along the forest road. We go rain or shine. Be prepared with durable shoes or boots. Call Bill Freedman soon for reservations. We are usually overbooked. Phone 650-344-7774 or email loufreed@aol.com. Also looking for a van or two to help.

Huddart County Park. Leader: Wayne Leschyn. West of Woodside, off Route 280. Meet at Ranger entrance kiosk. Limited to 25 persons by reservation only. Call early to avoid the rush. Rain or Shine. Wear durable shoes, waxed paper bags etc. Call 650-591-6616 or email wade@belmateo.net.

Memorial County Park. Leader: Fred Stevens. By reservation only. Limited to 25. Meet Leader Fred Stevens at the Ranger’s Station. Bring equipment as above. Call 650-994-1374 or email fstev@sonic.net.

Santa Cruz. 9:00 am. Leaders: Tina and Tom Keller. From Highway 17, take Highway 1 north towards Half Moon Bay. Turn right on Bay Street, go 1 mile, then turn left on High Street. Continue 3.8 miles and look for the silver VW Passat Wagon. Call 408-879-0939 or email tina@sypherslaw.com.

Grass Valley. Leader: Daniel Nicholson. We will drive to a few locations and folks are welcome to bag a few edibles along the way, It is an informal event. I will meet anyone interested at Pioneer Park in Nevada City by the creek (lower parking lot).

Photographers, Start Your Cameras

For our February 2006 general meeting, we’re going to showcase the work of MSSF photographers in a mushroom photo contest.

The rules are simple. Each entrant will have up to 10 minutes to show 10 images. Images can be either slides or digital. (The time and image limit may change based on the number of entries.) Please be prepared to share the ID for each image. You must register as an entrant by February 1st and be a MSSF member in good standing. The best three photos will qualify for a prize TBD.

We’ve got some terrific photographers in the MSSF. Give us your best shot.

To enter the contest, contact David Rust at 510-430-9353 or incredulis@yahoo.com.

MycoDigest

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Further Reading:


presents a slide show and lecture for people new to mushrooms, teaching the life cycle of mushrooms and fascinating mushroom adaptations and features.

1:00
Theater

**Medicinal Mushrooms: Allies for the Health of People and Planet**  
**Paul Stamets** (author of the new book *Mycelium Running* and of several books about mushroom cultivation and mushrooms of the genus *Psilocybe*) examines the beneficial effects of mushrooms for human and environmental health.

2:00
Lecture Hall

**Mushroom Ritual Among the Mazatec Indians of Mexico**  
**Kathleen Harrison** is an ethnobotanist, artist, and photographer who researches the relationships between plants, mushrooms and people, with a particular focus on ritual, myth, art and spirituality. Based on her extensive field work, she will use slides and anecdotes to illustrate the mycological, spiritual and psychoactive rituals of the Mazatec Indians.

3:00
Theater

**A brief history of mushroom hunting and thoughts on its future**  
**David Arora** acclaimed author of *Mushrooms Demystified* and *All that Rain Promises and More*, provides a fascinating look at California mushrooms from the biological and human interest perspective.

4:00 Lecture Hall

**Mushrooms, Toadstools and Symbionts**  
**Else Vellinga**, a mycologist from UC Berkeley’s Department of Plant and Microbial Biology who specializes in the genus *Leptiota*, presents this beginner’s guide to local mushrooms.

1:00
Theater

**MycoRestoration Strategies: Enlisting Mushrooms for the Forest and Garden**  
**Paul Stamets** (Author of *Mycelium Running*, and several books about mushroom cultivation and mushrooms of the genus *Psilocybe*) explores how we can use mushroom mycelia—the fine fungal nets that infuse soil, rotting wood and other substrates—to restore habitat, destroy toxic wastes and steer the course of ecological evolution.

2:00 Lecture Hall

**TBA**

3:00
Theater

**From Ridgetop to Restaurant: on the trail of professional mushroom pickers**  
**David Arora**, the author of *Mushrooms Demystified* and *All that Rain Promises and More*, takes us around the country and the world on a photographic journey exploring the world of commercial wild mushroom harvesting.

Sunday December 4th

12:30
Lecture Hall

**Fungi of the Sierra Nevada: The Delectable, Strange, and Mysterious**  
**Daniel Nicholson** a naturalist and amateur mycologist in the Sierra Nevada has spent the last ten years documenting mid-elevation fungi. He will share his digital photo collection of the fun, common, and more interesting discoveries that have turned up in the last decade of mushroom hunting in his home in the Sierran foothills.

January 8, 2006. SF Watershed property adjacent to the Phleger Estate. Park at the western end of Edgewood Road which ramps off Route 280 just past Hillsborough. 10:00 AM to Noon. By reservation only. Limited to 25 participants. May be wet underfoot. Heavy rain cancels. This is a study rather than a collecting hike. Avoid the rush, call Bill Freedman early at 650-344-7774 or loufreed@aol.com.

January 14, 2006. Mills Canyon Foray. Hit the phone or your e-mail factory. Expert JR Blair, Lecturer with the Mycology Division at the University of SF, will lead this popular fact-filled study designed for beginners down in Mills Canyon, Burlingame on Saturday, January 14. Because of over attendance in the past, this outing will be by reservation only, limited to 25 guests of the Friends of Mills Canyon. We meet at the Adeline Drive entrance at 10:00 am. Heavy rain cancels. This is a study rather than a collecting hike. Avoid the rush, call Bill Freedman early at 650-344-7774 or loufreed@aol.com. Please indicate the number of your party.
Myco-Blitz Forays at Point Reyes National Seashore

Saturday, December 10, 2005, 9:00 a.m.

Saturday, January 28, 2006, 9:00 a.m.

The first myco-foray is Saturday, December 10, 2005. We plan to assemble in the early morning, split into groups and collect fungi in many different Pt. Reyes parkland habitats. If you want to learn more about the mushrooms and help with photography, identification, drying and cataloging for future study, meet us on Sunday, December 11, 2005 at Dr. Tom Bruns lab at UC Berkeley.

A second myco-foray is planned for Saturday, January 28, 2006. There will be a public display of fungi (i.e., a mini-fungus fair) at the Bear Valley Visitor Center on Sunday, January 29th.

Please join us. Learn about fungi, the unique habitats of Pt. Reyes, and have a blast. The more folks who participate, the more species we can add to the list.

Where:

Meet at the Bear Valley Visitor Center. Point Reyes National Seashore NP is located approximately 35 miles north of San Francisco on Highway 1. You can also reach the park via Sir Francis Drake Boulevard. When you reach Olema at Highway 1, turn right. Go one block north and turn left, following signs to the visitor center.

When:

Saturday, 9:00 a.m. – 12:00 p.m. for collecting; return to the Bear Valley Visitor Center for pre-sorting and a look at what is brought in.
Sunday, 12:00 p.m. to ??? Meet at the Bruns Lab at UC Berkeley for identification, photography, drying and learning. 321C Koshland Hall, University of California Berkeley. Parking is available in Koshland Hall or a nearby garage. A map of the UC Berkeley campus is available at: http://www.berkeley.edu/map/. For more information about activities on Sunday, contact David Rust.

What to bring:

Bring mushroom collecting baskets, a tackle box (for small specimens) digging tools or a pocket knife, water, whistle, compass, and lunch. Dress for the weather and bring an extra layer of clothing for warmth. Wear sturdy hiking shoes. All trails in the park are closed to dogs – please leave yours at home for this foray. Wax bags will be provided.

Who:

Members of the Bay Area mycological societies, as well as professional and amateur mycologists from all over the Bay Area. Contact David Rust (incredulis@yahoo.com, 510-430-9353), Peter Werner (pgwerner@sfsu.edu), Ron Pastorno (ronpast@aol.com, 415-924-4818), or Darvin DeShazer (muscaria@pachell.net) for more information.

For more information about the Point Reyes National Seashore, visit the website: http://www.nps.gov/pore/. For directions and a map: http://www.pointreyes.org/.

Slide Photo Programs for Beginners

Tom Sasaki

This is an invitation to beginners and new members, especially those who may have joined MSSF during the Annual Fungus Fair, to join our program preceding the General Meeting in January, February and March. These slide photo programs are a continuation of the ones started last year on the identification and classification of mushrooms. The programs were produced by the North American Mycological Association (NAMA).

In January, our program will be Gilled Mushrooms I: White Spored. It will include the Amanita, Lepiota, Hygrophorous and the Russula families. In February, it may be Gilled Mushrooms II: White Spored and will discuss Amellaria, Mycena, Flammulina, Collybia, Marasmius, Clitocybe, Laccara, and Pleurotus among others. In March, we will feature Gilled Mushrooms IV: Purple-Brown to Black Spores. Photos will be of Agaricus, Stropharia, Psilocybe, Coprinus, Panaeolus, Chroogomphus and more. Gilled Mushrooms III: Pink to Brown Spored may be shown at some later date.
Letter from Burgundy

Eric Bellis

I thought readers might be interested in my mushrooming experiences here in France where I’m living in a village surrounded by sheep and cow pastures, vineyards and deciduous and coniferous woodland.

The Burgundian winter has set in and with the thermometer staying below freezing, my mushroom hunting has been curtailed. I had some time to explore the fields but I also have to earn a living and so I didn’t get out as much as I would have liked. The end of the summer was very dry and I was waiting for autumn rain to reveal what Burgundy has to offer mycophiles. My first discovery was right on the edge of a small country road, dozens of large white caps pushing up through the grass. The slugs had beaten me to it, but there were still a lot with minimal damage. Definitely Agaricus, but not one I recognized (not that I am an expert, mind you.)

In France, you have several options for identification; ask someone knowledgeable, go to the pharmacy (all French pharmacists are trained in mushroom identification), or look in a book. I chose to ask a neighbor, a retired farmer who knows everything about the people, history and nature in our village where he has lived his entire life. These were boules de neige, he told me, cutting the end of the stalk off with his pocketknife to check for worms. I offered him some but he had already found some himself. Later I looked them up in the authoritative Champignons De France by Marcel Bon: Agaricus albertii. They were quite tasty, very meaty and rather chewy. They have reappeared in the same place several times since, but never in such abundance.

After another cold, dry spell, we had a few days of heavy rain followed by warmer temperatures. Ideal, I thought, and sure enough, there were mushroom hunters all over the fields, well-equipped with sharp knives and shallow wooden baskets to collect the harvest. I inspected one basket full of another kind of Agaricus with beautiful pink gills, rose des prés, A. campestris. Not wanting to intrude on his territory, I went off to find my own in pastures opposite my house. I couldn’t see any from a distance, but soon found plenty, mostly growing in fairy rings, or rather giant rings sometimes twenty feet across. The mushrooms appeared in circular bands of richer, greener grass that was clearly benefiting from some relationship with the fungus. In a few excited minutes I had enough to give half to another neighbor and still have more than I could consume eating them for breakfast, lunch and dinner for a week.

I had left my David Arora books in California, thinking the mushrooms would all be different here, but that was a regrettable mistake. I bought the French guide, which has keys that have failed to identify every single unrecognized mushroom so far that I have found. This is particularly discouraging because it takes ages to translate all the obscure adjectives used in the species descriptions. Another Agaricus I found seemed to be intermediate between A. silvicol and A. sitivicus according to the book; I found them in identical microhabitats under hedges dozens of miles apart, with very large, distinctive rings and other features that should make them easy to identify. Perhaps I’ve discovered a new species! Oh, well, mushrooms will continue to fascinate, confound and amaze us wherever we find them.

Calendar

Monday, January 9: (note change of date) Culinary Group monthly dinner. Reservations required. 7 pm at the Hall of Flowers, Golden Gate Park, San Francisco. To make a reservation call Pat George at (510) 204-9130 or e-mail plgeorge33@yahoo.com no later than Friday, January 6th.

Friday-Monday, January 14-16. SOMA Winter Mushroom Camp. Special guests this year include Paul Stamets, well known author and fungal pioneer; Leon Shemoff, editor of Mushroom, the Journal and Dr. Michael Kuo from MushroomExpert.com. $195 until Nov. 15, $225 after. Registration closes on Wed. January 4. Includes lodging, meals, and all classes & activities. Sunday only fee: $110, includes all the day’s activities & presentations, and main dinner feast. Info: 707-829-2063 or camp@somamushrooms.org.

Tuesday, January 17: Mushroom Program for Beginners. Slide photos will be shown in the auditorium of the Randall Museum starting at 6:45 p.m., preceding the General Meeting and will run about 45 minutes. The January program will be Gilled Mushrooms I: White Spored and will include the Amanita, Lepiota, Hygrophorous and the Russula families.

Tuesday, February 21: Mushroom Program for Beginners. Slide photos will be shown in the auditorium of the Randall Museum starting at 6:45 p.m., preceding the General Meeting and will run about 45 minutes. The February program will be Gilled Mushrooms II: White Spored and will discuss Armillaria, Mycena, Flammulina, Collybia, Marasmius, Clitocybe, Laccaria, and Pleurotus among others.
Membership Corner

Polly Shaw

Heartbreak. Missed foray!

Can’t access the listserv tips?

Forgot to renew...

Time is almost up to renew your membership for 2006, without missing a beat on the newsletters and listserv access. Our 2005 memberships expire December 31. Check the mailing label on your Mycena News to find out when your membership expires.

Fill out the information on the right side of this page. Mail a check for the appropriate amount (made out to “MSSF”) to “MSSF Membership” c/o the Randall Museum, 199 Museum Way, San Francisco, CA 94114. Or, to save postage, you can give the envelope with the filled out form and check to Polly Shaw at the monthly meeting, culinary dinner, or the December 3-4 Oakland Fungus Fair.

You can also renew online by using the PayPal option on the MSSF website. If you do, please send Polly Shaw a personal email (at sfwaterbug@yahoo.com or 415-665-3293) with the information on the reverse of this column. It does not give secondary members, telephone numbers, an alternate email address or interests.

The regular adult/family membership fee is $25. Seniors over 65 and full-time students pay $20. E-members pay $15 to download the Mycena News and other publications from the website.

The MSSF treats membership information as private, but it does VERY occasionally release its membership list for mailings by mycological businesses. If you do not want your info published, either contact the membership chair or indicate on your renewal that you do not want to receive commercial mailings.

Officers: 2005-2006

President: David Campbell                  415-457-7662
davidcampbell@mssf.org

Vice President: J. R. Blair                    650-728-9405
jrblair@outrageous.net

Secretary: Carol Hellums                      415-753-2144
hellums@worldnet.att.net

Treasurer: Hilary Somers                    650-812-0402
hilary.somers@gmail.com
Friday, December 2, Fungus Fair forays. There will be numerous forays today (Salt Point, Joaquin Miller, Big Basin, Point Reyes, Crystal Spring Reservoir, and on and on.) For the latest list, foray leader and contact information, check the Yahoo group site, the MSSF.org members only area or Page 5.


Tuesday and Wednesday, Dec 6-7, Mushroom Dinner at Lalimes Restaurant in Berkeley. For the 10th, year Lalimes will have a prix fixe mushroom dinner the week right after the fair. The MSSF will have a display set up and will be there answering questions. For menu and reservation information contact www.lalimes.com or call 510-527-9838

Saturday, December 10, 2005, 9:00 a.m. Point Reyes Foray. Led by Tom Bruns with David Rust, Peter Werner, Darvin Deshazer and Ron Pastorino. See inside this issue for more details.

Monday, December 12: Annual Holiday Dinner. Open to all MSSF members. 7 pm in the Snow Building located at the Oakland Zoo, 9777 Golf Links Road, Oakland. Reservations are required. Cost: $32.00 for members, $37.00 for guests. Checks or money orders should be sent to Hilary Somers/MSSF Holiday Dinner, 4148 Briarwood Way, Palo Alto 94306. Be sure to include the names of your party and if they are MSSF members with your payment. Please make your reservations no later than December 8th. There will be no December regular Culinary Group dinner due to this special event.

Note: Deadline for the January 2006 issue of Mycena News is December 21. Please send your articles, calendar items and other information to: mycenanews@mssf.org