El Niño Comes to Spain

by Victor Serna

Big bad rains can kill many people in the plains of southwestern, usually rain-starved Spain. It’s been a sorry week in Extremadura. Up in the central Spain mountains, this wet, wet season (and they said El Niño was bringing us drought!) takes on its sweetest face: that of the best mushroom fall in several years.

So—at 6:00 AM last Sunday—I’m up for a visit to our mountain cabin in Las Navas del Marqués, 50 miles northwest of Madrid in the Sierra de Guadarrama mountains, 4,000 feet high, where we usually go only with balmy weather. Despite two mountain passes, it’s a fast 45-minute drive including 30 miles of motorway (110 mph in these wee hours of a Sunday!). There’s the first snow of the year already on the highest peaks, 7,000 feet up. But beneath the peaks the temperature is 45 degrees Fahrenheit, it’s been raining for several days, and conditions (if one wears high rubber boots and thick clothes) are perfect for a quick mushroom hunt in the thick underbrush of the largest pine tree (Pinus nigra) forest of central Spain.

A quick stopover at the cabin to grab one extra wicker basket, and it’s daybreak. Fortunately, the sun shines this morning. I go about it efficiently: I have known for years the right spots where the mycelia lie awaiting the picking, including those on our 1.5-acre rooms. (Macrolepiota campestris) and as many others covered with poor grass and a southerly thistle, the cardo corredor (Eryngium campestre) promise me a chance to find that other central Spanish mycological treasure: the seta de cardo or Pleurotus eryngii, a small, wild, incredibly refined cousin of the coarse and boring oyster mushroom (Pleurotus ostreatus) which can be found in every store.

So I do find a bare couple dozen, but also as a bonus six large, fresh, still closed field mushrooms (Agaricus campestris) and as many delicious but painfully tiny fairy ring champignons (Marasmius oreades) as I care to pick. There’s also some thyme, a bit dry by now but still fragrant, and I pick some: useful later. From the forest I’m already carrying a good catch (some 2.2 pounds) of milky agarics and the very little is known about mushrooms and most people fear them (contrary to the mushroom mania in Catalonia and the Basque Country), is the níscolo, aka milky agaric in English, aka rovelló in Catalan, aka Lactarius deliciosus (or the rarer wine-colored Lactarius sanguifluus) in Latin. It’s a southerly (albeit found as far north as Poland in Europe), spectacular, orange mushroom with compact meat that breaks neatly. Not very refined, only loved in Spain and Sardinia as far as I can tell, but solid, meaty. Small “button” ones are often grilled upside down, stems removed, with a mix of mashed garlic, parsley and olive oil in the center. (Do these exist somewhere in the US? They do exist in Mexico, where they’re called Hongo enchilado.)

However, being more of a mycophile, I know and like many other mushroom types as much or better. So I collect for 90 minutes in well-known spots (no competition at all: the lack of love for mushrooms can be a boon to the lone enthusiast!) before driving back to the second mountain pass, where large meadows covered with poor grass and a southerly thistle, the cardo corredor (Eryngium campestre) in Latin) promise me a chance to find that other central Spanish mycological treasure: the seta de cardo or Pleurotus eryngii, a small, wild, incredibly refined cousin of the coarse and boring oyster mushroom (Pleurotus ostreatus) which can be found in every store.
As we all know, *Amanita phalloides* (the death cap) has been especially abundant this year. The August rains and the relatively wet fall have most likely contributed to their almost universal appearance under *Quercus agrifolia* (live oak).

I, along with many other members of the MSSF, have contacted park and land managers throughout the Bay Area to get the NAMA/Freedman poisonous mushroom posters up. I was quite shocked to hear the East Bay Regional Park District (EBRPD) manager say that he did not think that *A. phalloides* was common on EBRPD land. The EBRPD legal department also pitched in with their opinion that this poster might encourage illegal collecting on park land. To anyone who has seen the poster, this is an absurd proposition.

EBRPD legal eagles are paid to be paranoid, but a park manager should not be so ignorant of the dangers to the public in the land that he is in charge of. We of the MSSF are well equipped to disabuse EBRPD park managers of this notion. I suggest that anyone hiking on these lands note the location of death cap fruitings on a map so that we can compile a master map of fruiting spots. As a service to the public and the parks, please get this info to me. If we can get enough data we will send it to the EBRPD.

-Norm Andresen, President

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**EDITOR’S RANT**

By the time you read this, it should be January—unless you’re an email subscriber, in which case you’re reading this late in December. Now’s the time for a quick breather between a month past that contained the Fungus Fair and Christmas dinner, and a month future that contains the 1998 NAMA foray at Asilomar. It all adds up to a very busy year for the MSSF, and you should all take a deep breath and relax while you can.

I was very impressed by the tremendous amount of volunteer energy that made both the Fungus Fair and the Christmas dinner very successful. I marvel constantly that so many competent and enthusiastic people give so much of their time to make the MSSF run as well as it does—everyone from officers to committee chairs to foray leaders to cooks to event volunteers. We are only as strong as our volunteers; fortunately we have some very strong volunteers.

That said, I have to admit some dismay at this Christmas dinner. When Norm Andresen asked everyone who worked at the Fungus Fair to stand, only a small percentage of the diners got up. This reminded me of the fact that many of the fair workers who wanted to attend the dinner weren’t able to get in because the dinner sold out early. Many of the diners who did attend were complete strangers to me, faces not found at typical MSSF events where we all pitch in and work.

It’s certainly not a crime to be a passive MSSF member, somebody who just reads the newsletter and enjoys going out for mushrooms. But I’d like to see members who work hard for the society participate in some of the rewards of that hard work. I’d like to propose that next year’s Christmas dinner be open first to Fungus Fair volunteers and (of course) the Christmas dinner workers. Once they’ve been accommodated, any of us who didn’t work at the fair should be able to sign up and—only if there’s room—bring guests. But I think it should be working members first, followed by non-working members, followed by non-members.

With that off my chest, I’ll stash away my soap box and tell you a little about matters editorial. You’ll notice that this month’s issue is back up to twelve pages, bursting over the one-ounce line and upping our mailing costs. I freely admit to going over budget; it’s hard not to when you have so many contributors sending so much great stuff. I’d like to thank regular contributors like Bob Gorman, Larry Stickney, Bill Freedman, and Terri Beauséjour. I’d also like to thank Victor Serna for permission to print his Spanish mushrooming piece, Tom Duffy for his *phalloides* piece, and Sarah Cobey, a non-member, for sending a poem into a newsletter she reads from time to time. I’ll freely admit that I’m very picky about poetry—it’s a pleasure to print something free of treacle and chunk.

We are, sadly, short again on space in this issue, so I’ve held a little in reserve for next month: Tom Beales’ article on preserving mushrooms, Bill Freedman’s article on morels and forest fires (destined for the April issue when morels are on our minds), and—room provided—a surprise photo or two. Please stay tuned.

-Mike Boom

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**Leppie Eaters Beware**

by Chester Laskowski

Justin Evans, a student at U. C. Berkeley found *Chlorophyllum* *molybdatum* growing on the U. C. campus mixed together with *Macrolepiota rhacodes*. The note in *Mushrooms Demystified* on *Chlorophyllum’s* rarity in California made him question his identification in spite of the nice pale green spore print. Though not common, it is present in our area, and clear it was what Justin had found.

This is very unsettling to me. I did not see the site. Justin was observant enough to spy a difference between the two, probably the squat look of the *Chlorophyllum*, but the caps that he showed me would not have captured my attention as anything other than shaggy parasols. I think that this is a clear example of the mushroom newcomer being more observant and aware than the jaded oldtimer. By itself, I might have recognized *Chlorophyllum*. But from a mixed population, it might have gone into my basket.

Mushroomers, beware!
Membership Renewal Time!

The MSSF membership year is from January to December. New members joining this fall (September through now) are automatically extended through 1998; everyone else’s dues expire at the end of 1997. Since many MSSFers renewed at the December Fungus Fair, dues renewal letters will not go out until later this month, after the fair renewals are counted. If we have not yet received a renewal from you this year, this month’s mailing label will show a series of dollar signs, your first reminder that we hope you will be renewing your membership for next year. If you renewed at the fair, fine, otherwise please send in your membership dues at this time and save the MSSF the cost of mailing out reminders. Rates are $20 for adults and families, $12 for seniors (65 and over) and full time students.

Some MSSF members also choose to join NAMA (the North American Mycological Association). The MSSF pays NAMA a club dues based on our total membership, in order for us to be considered an affiliated club. In turn NAMA offers MSSF members a 15% discount for joining NAMA. NAMA dues are $17 when included with your MSSF dues. NAMA dues sent without an MSSF renewal cannot be processed. Also please note that an error in several previous Mycena News reported that the NAMA dues for MSSFers was $12. Such payments will be returned.

-Wade Leschyn, Membership Chair

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Fantastic Fruitings
at Fungus Fair

Thanks to the creativity and dedication of so many enthusiastic volunteers, we were able to produce yet another successful fungus fair this year. Although there were a few potential glitches, none proved insurmountable as time and time again one of you valiant volunteers would ride in on your white horse and save the day! And many, many attendees expressed their support and appreciation for the new venue in the Presidio, for the new two-day format, and for the impressive cast of speakers and chefs who shared their knowledge and experiences on a wide range of mycological subjects.

Now, enough with the fluff. The true raison d’etre of the fair is to collect and display as many different species as possible from throughout the Bay Area. This year we collected 265 species of fungi, listed elsewhere in this newsletter.

Speaking of the ID process, I would like to extend a very special thank you to Dr. Dennis Desjardin and the ID process committee, all of whom have been loyal supporters of and essential participants in the fair for many years. The new, two day format had a significant impact on this committee and their support, expertise and flexibility was critical to its success.

And finally, to all of you wonderful mycophiles with whom it has been a great honor and pleasure to produce the 1997 fungus fair, may the new year bring you many baskets of Boletus, crates of Craterellus, sachels of Sparassis, mounds of Morchella, and larders full of Lactarius fragilis!

See you in the forest!

-Terri Beauséjour, Fair Chair

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Lost & Found

December is the perfect month for items to wander: plenty of MSSF activity with lots of people. If you’ve lost or found anything, check to see if there’s a match with one of the items below:

**Lost:** A shallow black plastic tub, 20” or so in diameter by 6” high with a perforated bottom. Lost at the fungus fair from the Intro to ID Process committee. Contact: Tom Chester

**Found:** One hardcover Mushrooms Demystified at the Salt Point foray. Contact: Terri Beausejour

**Lost:** One pair of ladies gloves (brown) at the Fungus Fair. Contact: Ann Gabrik at 408.741.8554.

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1997 Christmas Dinner Menu

The 1997 Christmas dinner was a success thanks to the efforts of Anna Grajeda and her crew of volunteers. For those of you who weren’t able to make it, here’s the menu:

- Vegetable borscht soup
- Cream of mushroom soup
- Spinach salad
- Truffled prime rib of beef
- Porcini scalloped potatoes
- Creamy herb polenta with wild mushroom-tomato ragout
- Roasted portobello mushrooms with seasonal vegetables
- Fungal fantasy torte
- Glug, coffee, tea, & water

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Fungus Fair Ideas & Photos?

Calling all 1997 Fungus Fair participants and attendees: Have you comments and ideas to share? What worked in 1997 and how can we improve in 1998? You are invited to attend the Fungus Fair “Post-mortem” event on Tuesday, February 3rd, 7 p.m. at the Presidio Child Development Center.

We would also like to update the Fungus Fair Web Site and the MSSF archives with photos and videos from the 1997 Fungus Fair. If you have photos or videos and are willing to share them, please contact Terri Beausejour at 510.278.5998 or email beauset@autodesk.com.
Spanish Mushrooms continued from page 1.

All in all, when I get back to Madrid by 10:30 AM and change clothes (they’re really covered with mud and tree bark stains), I find myself with some 4 pounds of seven different varieties in addition to my milky agarics. The whole catch is highly representative of a Mediterranean habitat, and quite appetizing!

So after this lengthy introduction, here’s the recipe part! My wife and I get to work on a large family lunch that will start with her mushroom-and-vegetable soup and follow with salad and steaks with a rich accompaniment of my own “mushroom forestière”. First step: all the mushrooms are cleaned, one by one, under a weak stream of cold water which should be used gingerly, and with a small brush: it’s bad to soak the mushrooms; they lose too much flavor. This is slow and boring, but important for these wild mushrooms, often full of mud and pine needles. The stems are completely cut off in the case of the fairy ring champignons; if they’re in good shape, the others can be used.

**Milky Agaric, Potato and Vegetable Soup**

This was a big one for 2.2 pounds mushrooms! But for 1 pound (diced), the quantities would be approximately: two tablespoonfuls extra virgin olive oil, preferably soft and sweet; one medium-sized yellow onion, finely chopped; one mid-sized green bell pepper, seeded and cut into julienne strips; a handful fresh, wide string beans, cut into julienne strips; one large purple-skinned potato, peeled and diced; one large carrot, diced. Salt to taste. A mixture of garlic (one clove), one tablespoonful fresh parsley and several saffron sprigs, all of them carefully mashed or puréed together. One quart or so plain water (this is best as a thick soup, but it can be made lighter with more liquid).

Heat the oil in a large metal casserole. Briefly sauté the onion in it, then add the bell pepper strips. When they’re all tender, add the diced mushrooms, which will soon start shedding some liquid, and stir the mixture together for a minute or so. Add the garlic mixture. Then add the vegetables, salt and water and bring to a boil. Finally add the diced potatoes. Let it boil again, reduce to low heat and cook covered until the potatoes are tender: check from time to time; about 30 minutes. Let it reduce a little, uncovered, if near the end it’s too liquid. Correct salt and serve. This can be reheated (which is not the case of all mushroom dishes).

(If I were to try this with commercial mushrooms, maybe shiitakes would be best, since they’re firm. The flavor and the “bleeding” of the milky agarics, of course, can’t be replicated.)

**Mushroom Mix “Forestière”, My Style**

I’m a lot less scientific about my own dish! I’ve chopped the larger mushrooms into 1/2-inch morsels: from seven varieties, it’s quite a colorful mix. I have four pounds of it (it will be drastically reduced by cooking) and need a large, deep saucepan with a good (four Tbsp) layer of fragrant, spicy extra virgin olive oil at the bottom. I finely chop four large shallots while I heat the oil and I sauté the shallots until translucent. Then I dump my mushrooms in it and stir over medium-high-heat. In seconds they start shedding a lot of water. I stir them and add two good pinches of salt, I grate quite a bit of black pepper over it, add the (washed) leaves from several sprigs of the fresh thyme I’ve picked, and my usual pinch of nutmeg. I let the mushrooms shed more and more water until suddenly it starts reducing very fast. Before it’s entirely dry (about 15 minutes for the whole cooking process) I take it off the fire: I want some of that creaminess without any cream to stay in. A few drops of fresh lime juice just before serving, “et voilà”, the perfect foil for some good sirloin. That, and a magnum of Burgundy: big family day, as I said…

*Editor’s note: This article comes to us via a chat group on the web page [http://www.wine-lovers-page.com](http://www.wine-lovers-page.com). Joe Dougherty alerted me to its presence. The author has been a member of the Sociedad Micologica de Madrid for the last ten years. You can contact him via email at vserna@el-mundo.es.*

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**News From Italy**

Two articles from *Occhio al Fungo*, the newsletter of the Mycological Club “Avis” in Bologna shed some light on the mushroom season in Italy. The first article discusses the drastic shortage of mushrooms in the area around Bologna (Emilia-Romagna) and also in more northerly sections known for the abundance of species and quantities (Liguria, Lombardia, and the Trentino). The club went ahead with its twentieth mushroom show. It was saved by collections made further south: Toscana, Le Marche, and even Calabria. About 300 species were displayed to a knowledgeable public that realized the local shortage and who appreciated the many interesting species from the south.

On a sadder note, the newsletter reports serious mushroom poisonings. One case, in Naples, received national attention. The victim of *Amanita phalloides* poisoning died because no liver transplant was available to her. The club president, Paolo Cazzoli, urges that people interested in mushrooms for the table receive instruction from any of the numerous mushroom clubs throughout Italy. He also blames the press for spreading inaccurate data about mushroom poisonings. One case is cited in which the press said that *Amanita phalloides* was very similar to *Boletus edulis*.

- Bob Mackler
Collecting Advice
From a Past Voice

Esther Colton Whited was one of the MSSF’s guiding lights in years past, a mycologist who shared her knowledge and enthusiasm with the general membership. I came across the following advice from her in the December, 1982 edition of the Mycena News. It’s information for beginning and current collectors that is still as good today as it was then. -Mike Boom

Welcome new collectors! Welcome to the fall rains, triggering who knows what to appear under leaves and on old stumps. Welcome to meetings and to forays and to a bewildering vocabulary of long names that will soon become familiar.

When you go into the woods, besides the mushrooms you collect to eat, take some for study. If from each venture you learn to know one or two new species, you’ll accumulate some real knowledge in time. These suggestions may be helpful:

Shallow cartons or baskets are best for collecting as they help to resist throwing everything into one bag, which results in an ugly, unsortable mess. Small cans or boxes are good to protect tiny specimens.

If possible, prepare a receiving spot at home before you leave, for you may be tired on return. Spread newspapers for examining collections, which saves time—and cleaning dirt from the floor.

Of course, you need comfortable clothes and shoes. You need a strong knife or small trowel for digging the base of the stem for identification, and waxed paper for wrapping specimens for study. Newspaper makes a fair substitute, but never use cellophane or plastic; it sweats ‘em. Some years ticks and things seem to await a warm body passing under overhanging branches. A good repellent sprayed on neckband, sleeves, and trouser bottoms deters their advance.

Keep specimens for study separate from your edibles and wrap each species separately in waxed paper with a bit of leaf or bark to verify habitat. Try to get different stages of maturity for comparison. Keep a record of your collections, noting date and location; it becomes more and more useful. Assign a number to each species to be studied, and put out each with its number for a spore print, the severed cap gill-side down on black and/or white paper, under a bowl or at least out of drafts. A little sketch helps, too. If not separated in the field, separate each species, especially dubious or unknown ones.

You may be inspired to write really good macroscopic descriptions, and that is the best way to acquire a mycological vocabulary. Any good book will show you the order in which data is recorded: 1.) Pileus (cap), size and surface details; 2.) Stipe (stem), size and description, inside and out; 3.) Lamellae (gills), attachment, color, etc. Note color changes and describe the spore print color, which may alter with age. You can find a picture that shows any feature your specimen has, and see what word is used to describe it. A single specimen is not considered a sufficient standard for a complete description because there are so many variables even among a single species due to age or habitat.

Dry the collections you wish to keep, never freeze them. Slices up to 1/8” thick may be pressed between newspaper and corrugated cardboard, which is then weighted—just like pressing a flower. Tape cellophane over spore prints and put them in a box with some sand or silica gel (for dryness) in a cool place. Even Coprinus species keep quite well if stored in the bottom of the fridge.

Collecting wild fungi is becoming more and more popular, and most people hunt the same well-known or easily identified species. Some easily recognized species may have their numbers reduced and their habitat ruined by over-zealous collectors. The MSSF does not intend to contribute to this, so:

• Leave for “seed” specimens that are past their prime.
• Never leave cuttings or discards where they can be seen.
• Tread lightly and disturb the environment as little as possible; replace leaves and duff as you found it.

A good collector leaves no clues!

-Esther Whited

A Fungus Comes of Age

Behold the mushroom bulging from the ground,
Old maple leaves pressed to its dampened cap,
Across the glade two siblings make no sound
While swelling from the same mycelial mat.
A fragile veil, pulled taut with age, now breaks
Clean childhood with a rip; attracted flies
Explore the cave this ceremony makes
And gently tuck white eggs inside the prize.
Asleep in gills and curled in tender meat,
The larvae swell the sagging, weighted cap
Until the opalescent figures eat
The rotting flesh in which they took their nap.
In truth, the acme of a mushroom’s life
Brings only rot, decay, and maggots rife.

-Sarah Cobey
This year's Fungus Fair netted a total of 265 different identified species of fungi collected from habitats throughout the Bay Area and points as far afield as Salt Point State Park and Jackson State Forest near Mendocino. For those of you ready to roll through some Latin in tiny print, they're listed here:
Glut and Gluttony: Chanterelle Chanson

by Larry Stickney

Just in case you haven't noticed it yet, chanterelles are putting on the most remarkable showing in years. This is true from the great Northwest down into California. Pickers are getting only 50 cents a lb. Whether the fungus is *C. cibarius* or *C. formosus* as some are now wont to say, they are everywhere, and all the other family members as well: *C. subalbidus, tubaeformis, infundibuliformis; Craterellus cornucopioides, fallax;* or even the lowly *Gomphus clavatus* and the flagrant *G. floccosus.*

What are we to make of this sudden display? Long time careful observers and collectors of these species like Connie Green of Napa and Steve Bowen of San Jose have been comparing notes. Some of you remember Connie's coming-out column here a couple of years ago in which she shared what she has learned about chanterelles in twenty years of commercial collecting. Steve's searchings span an equal amount of time for the same reasons. We know it has been wet this year, but it was quite wet last year at this same time too. Does it take two wet years in a row to produce a creditable crop?

What about the collecting sites? Are last year's good spots, the places where we usually find decent collecting, doing well this year, or even better? Surprisingly, they are not! The ever-faithful fruitings are not there, at least not yet. These primary places are taking a back seat to what have always been marginal sites. Seen for years as secondary sites, they are heavily loaded right now. And, oh, such flavor this first crop holds!

"Get thee to a nunnery" begged Hamlet of Ophelia. Perhaps you shouldn't start looking where absolutely none have ever been seen, but the conditions cry "out," get packing, go do it, and Right Now. Ongoing studies already suggest that the more chanterelles you pick, the more fruiting they produce. Don't leave that little club behind. It won't grow much more, and it has very special uses. (Set one- or two-inch long clubs into a clear hot consomme for a consummate conclusion: chanterelles, even baby ones, pack a lot of wonderful flavor.)

So with an assured crop and an endless supply, what can be done with them all?

Most fungi dry easily and well. Not this one. A dried *cibarius* is as hard as a removable dental plate unexpectedly pulled loose with some sticky food and chomped down upon before one is aware of what's happening. Longtime foray leader from the 70's Bob French taught me the way around the drying difficulty:

Push one's cleaned carpophores down the tube of a Cuisinart into the spinning grater wheel which reduces the sturdy yellow body to chips no bigger than the size of a small finger nail; then dry these pieces. Keep them in an airtight container, lifting a handful at a time into stocks, soups, stews as you build them from scratch. The chips will endure a lot of cooking and release the flavor you know they once had. Of course you may cook and freeze chanterelles for later use if freezer space is no problem for you.

And speaking of freezing, let's talk about chanterelle sorbet. There is no better *cibarius* flavor saver to savor than that captured in this easy ice. And there is no cooking involved beyond melting sugar in water, thrashing the mushrooms in your food processor, and adding a little lemon juice. But you do need an ice cream maker of some sort. Just freezing the result of the mixture without frequent paddling really doesn't do it. Here's what to do:

Heat one quart of water to boil. Add 1 cup sugar, and stir well. Cool thoroughly to quicken the icing time.

Add 1 packed cup of the fully mashed mushrooms. Add one tablespoon lemon juice and stir in well. Place in ice cream maker and proceed according to its instructions.

Serve as a dessert or accompaniment, or a palate cleanser between courses of a sumptuous party banquet.

Forest Sighting of the Month: A fine fungal fedora perched on the only known mushroom author with a palindromic last name.

(Photo courtesy of Lynn Marsh.)
Promiscuous Mycorrhizae Provide Scientific Titillation

Investigators have begun to explore the many plant relationships to be uncovered under the surface of the soil. Most of us are familiar with “mycorrhizae” (MRZ), the mycelial threads which surround tree roots, or invade plant cells to obtain essential sugars and to nourish the plants by supplying them with nutrients such as sugars, phosphorus, potassium, iron, etc. We have been impressed that soil fungi are frequently restricted to specific trees. Now we find that a single fungus can extend between different trees and help them by sharing what seems to be the fungus’s food.

Finding mushrooms as they pop up out of the ground is easy. They are lovely to look at, some are tasty to eat, serve many beneficial life functions and, if we study them, they can add to our knowledge and understanding of other living things. But the mushrooms we see are but fruiting bodies, like apples on a tree which is buried below the surface of the soil. It is more difficult to examine and understand the complexity of what is happening underground because we must apply chemical techniques and complicated instruments such as electron microscopes. The objects of our contemplation are seldom grossly visible and it may take some imagination to visualize what is happening.

Scientists have begun to apply systematic experiments and to study the chemical relationships between fungi and plants. What’s new is that similar studies are being made between plants and plants. And it has been shown that fungi can act as intermediates in this exchange. So far, this pathway for sharing nutrients has been called “matting.” I’ve read two such articles. Carl Zimmer, winner of the 1997 American Inst. of Biological Science Media award and senior editor for DISCOVER magazine discusses the intricacies of underground webs of life in the November issue of the magazine.

MRZ were rediscovered in 1881 when German botanists were sent to France to discover the secrets of growing Perigord truffles. The German public didn’t want to pay the stiff import tariffs on highly favored black truffles. They wanted a share of the market. Professor A. B. Frank was assigned to to bring suitable trees into Germany to develop a truffle industry. Frustrated, he was unable to solve the mystery of the “wee trees” which the soft birches did not tolerate direct sunlight well. In this way, with the help of the MRZ, the birch trees are nourishing and protecting the firs. Other plants may also be transferring chemicals between themselves without the help of fungi—that is what “matting” is all about. Foresters remove “weed trees” such as the soft birches from stands of firs. In doing so, they have been interfering with the balance between these two species as they remove the shade needed by the fir trees for optimal growth.

One more brief note on recent studies on fungal soil relationships. Gary Lincoff, from the New York Mycological Society and several times our guest speaker, spoke to me briefly about mushrooms which will not fruit in the absence of certain bacteria. When I obtain the data to review this, it will be reported in the Mycena News.

In the meantime, I remain a man, part of whose roots lie under the soil, contemplating how little we know of the intense warlike and cooperative activities taking place under our feet.

-Bill Freedman
Identifying *Amanita phalloides*

*by Tom Duffy*

Recently I was asked to identify the mushrooms ingested by a man and his wife at Kaiser-Permanente Hospital in Walnut Creek. There was also an uncle who had ingested the same mushrooms, but lived in Richmond and apparently had no phone. The police went out to his house and brought him to a local hospital. The symptoms which had begun 10–11 hours after ingestion were typical and severe, including nausea, vomiting, diarrhea and marked malaise. The laboratory tests for liver enzymes etc. were being done. Both patients still had diarrhea but their liquid bowel movements had subsided and their bowel sounds were subdued. If they had been absent (a paralyzed bowel or “ileus”), the use of charcoal would not have been helpful. Although Ken Olsen at the SF Poison Center also noted that many patients have at least a partial and temporary ileus on admission, it seems that most physicians are not aware of this possibility. An initial dose of 25–50 grams of activated charcoal in a slurry followed by a (usually) very bright and non-grayed blue such as is seen in many species of *Lactarius*. Other color reactions obtain in a number of genera including pink, lilac, orange and red. These reactions also usually develop at once in contrast to the slowly evolving color that *phalloides* gives over several minutes.

One other character can be useful. The spores are amyloid—a feature that correlates highly, however, with the absence or near-absence of striations at the margin of the cap. The slight potato-like odor is often absent in fresh specimens, although as they dry the odor becomes more noticeable and objectionable. Dr. Robert Orr one time put a specimen on his desk at the California Academy of Sciences to study and in about 3 days he was the recipient of passionate pleas to kindly dispose of it from his associates. The odor becomes very strong and unbearably rotten and unpleasant.

On occasion *Amanita phalloides* is pale tan or almost white, but the other characteristics are unchanged. It is not necessary to have the volva or death cup in hand and, as most know by this time, the presence of universal veil tissue on the caps is relatively uncommon and when present shows itself as mere thin scraps of tissue for the most part. Sometimes thin patches or even a thin (often off-white) central patch persists, but the appearance is stunted compared to the thick luxurious white central patches of most *A. calypttrata* and *A. caesarea*, both of which have the non-amyloid spores and marked edge of the cap striations.

The latter is a beautiful orange and is found in the east, the gulf states and in Mexico, but has not been reported from California, Arizona or as far as I know from New Mexico. It also has yellowish gills and a yellow-tinted partial veil.

The media makes constant references to edible look-alikes in their homelands but this state of affairs, I think, is relatively uncommon. For example, there are no edible mushrooms really looking like *Amanita phalloides* in Mexico as far as I can determine from reports or from Gaston Guzman’s “Identificación de los Hongos—Comestibles, venenosos y alucinantes” (1977, Editorial Limusa, S.A., Mexico, D.F.). Although *A. phalloides* does not occur there, the white *A. verna*, *A. virosa*, and an unnamed member of the *bisorigera* group are found there. *Amanita phalloides*, curiously enough, is found in Vietnam, Laos, etc. but only at the cooler mountain elevations. Many areas are still unstudied between eastern europe and SE Asia.

I suppose mild-tasting could be added to the above characteristics, but only once have I actually tested this (when I was young and foolish, as I think of it now).

*Editor’s note: For those of you unfamiliar with Tom Duffy, he is a retired physician, a past president of the MSSE, past chair of the toxicology committee, and author—along with Paul Vergeer—of California Poisonous Mushrooms, now sadly out of print.*
Sunday, January 18: Memorial Park Foray. Leader: Chester Laskowski. This is a Coyote Point teaching foray where there will be no collecting. Call Chester Laskowski at 510.843.6537 for details.

Sunday, January 18: SOMA Mushroom Festival. Located in the Coddington Mall on Steele Lane in Santa Rosa from 11 a.m. to 5 p.m. Admission is FREE for everyone interested in mushrooms and $100 for those who could care less!

Tuesday, January 20: General Meeting at the Randall Junior Museum in San Francisco. Doors open at 7:00 pm for mushroom ID and book sales; meeting proper begins at 8:00 pm. The speaker has yet to be determined.

Sunday, January 25: Lands End Walk, Lincoln Park, San Francisco. Meet at 10:00 by the water fountain in the parking lot in front of the Palace of the Legion of Honor. Call or e-mail Henry Shaw for details: shaw4@lhl.nrl.gov, 510.943.3237.

Tuesday, January 27: Study Group Meeting, Randall Museum. 7:30 p.m. See notice below for details.

Saturday, January 31: Joaquin Miller Park beginners’ walk. Meet at 10:00am at the Sequoia Arena. Call Norm Andresen for details: 510.278.8998.

Sunday, February 1: Wunderlich Park Foray. Leader: Herb Saylor. This is a Coyote Point teaching foray where there will be no collecting. Call Chester Laskowski at 510.843.6537 for details.

Saturday & Sunday, February 7 & 8: Cultivation class taught by Dr. Mo-Mei Chen. The title of this class is Mushrooms: Farming, Spawn Production, and Marketing. It’s offered at UC Berkeley, on the Berkeley campus. The class room is 3030 Valley Life Sciences Building. Contact UCB for more info.

Sunday, February 8: Lands End Walk, Lincoln Park, San Francisco. Meet at 10:00 by the water fountain in the parking lot in front of the Palace of the Legion of Honor. Call or e-mail Henry Shaw for details: shaw4@lhl.nrl.gov, 510.943.3237.

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/.

Tuesday, February 17: General Meeting at the Randall Junior Museum in San Francisco. Doors open at 7:00 pm for mushroom ID and book sales; meeting proper begins at 8:00 pm. The speaker has yet to be determined.

Saturday–Wednesday, February 21–25: 13th North American Mushroom Conference and Expo held by the American Mushroom Institute at the Fairmont Hotel, San Francisco. This is a conference for serious (mostly professional) mushroom cultivators. For more info, call the AMI at 202.842.4344 or send email to ami@msmlaw.com.

Tuesday, March 17: General Meeting at the Randall Junior Museum in San Francisco. Doors open at 7:00 pm for mushroom ID and book sales; meeting proper begins at 8:00 pm. The speaker has yet to be determined.

Tuesday, April 21: General Meeting at the Randall Junior Museum in San Francisco. Doors open at 7:00 pm for mushroom ID and book sales; meeting proper begins at 8:00 pm. The speaker has yet to be determined.

Tuesday, May 19: General Meeting at the Randall Junior Museum in San Francisco. Doors open at 7:00 pm for mushroom ID and book sales; meeting proper begins at 8:00 pm. The speaker has yet to be determined.

Monday–Thursday, July 6–9: Asia-Pacific Mycological Conference in Thailand. For details you’ll have to break out the web browser and check out http://www.biotec.or.th/diary/mycology/mycology.htm or send email to mycology@biotec.or.th.

Study Group Returns to Russia

The November study group shared its collective world-wide experience in mushrooming in the absence of its main speaker, Galina Plizgen. A fall and emergency hospital visit of her young son kept her from the meeting. She will be at our January meeting, however, to discuss Russian mushroom collecting and, if we can manage it, we will show some video tape of the fungus fair.

The January meeting will be in the yellow room of the Randall Museum at 7:30 pm, Tuesday, January 27th, exactly one month after our General Meeting.

- Chester Laskowski

January Meeting: What's Up, Doc?

The January general meeting is on Tuesday, the 20th of January, at 8:00 p.m. It’s held in the Randall Jr. Museum in San Francisco. Doors open at 7:00 p.m. for pre-meeting schmoozing, book sales, and gapping at mushrooms that we all bring in.

At this writing the speaker for the meeting has yet to be determined. Once the speaker is settled, it should be posted on the MSSF phone message, which you can try at 415.759.0495.
In last month’s Mycena News Larry Stickney commented that “in more than 25 years we have never seen such dazzling beauty in Mendocino Woods before.” Eagle eye hunter Henry Moore and I headed for the Sonoma/Mendocino Coast shortly thereafter in a vain search for the illusive Boletus edulis (king bolete) but found an eruption of fungal wonderment. Larry was right. The damp woodland floor was ablaze in tongues of coral mushrooms: pink, ochre, saffron, scarlet, ecru, lemon yellow. Among them were Ramaria botrytis (a decent edible), R. formosa, and R. araoispora. There was an extensive fruiting of a stunning lavender-capped Cortinarius sp., hundreds of Gomphus floccosus (scaly chanterelle) in a mass fruiting, the lovely wine-colored Agaricus subrutilescens, and the almond-scented Collybia oregonesis.

Bolete indicators were there: Amanita muscaria (fly agaric) and Clitopilus prunulus but no boletes. They had fruited weeks before in response to an early rain and were immediately devastated by weather too warm for their liking.

No problem! The collecting basket filled rapidly to the limit with chanterelles (black, golden and white, yellowfoot) and belly-button hedgehogs: Craterellus cornucopioides, Cantharellus cibarius, C. subalbidus, C. infundibuliformis and Hydnum umbilicatum. A week or so later Hydnum repandum (the large, fleshy hedgehogs) appeared as well. Interspersed with these we found several prime specimens of Tricholoma flavovirens (man on horseback) and T. magnivelare (matsutake).

My dinner table that evening was graced with a saute of hedgehogs and chanterelles heaped upon a creamy polenta to which had been added a handful of grated Romano cheese and a “glug-glug” of olive oil. The dish was washed down with a sprightly Italian Dolcetto Red wine. What a day!

The matsutakes were less easily dealt with. Their ineffable aroma and flavor is something else! David Arora’s description: “somewhere between dirty socks and red-hots” is only the vaguest approximation. Following Dave Campbell’s suggestion, they were thinly sliced and set to marinate for a few hours in white wine, white wine vinegar, soy sauce, garlic and olive oil. Drained of their marinade they were sauteed with chopped onion and pieces of cut-up chicken, the whole set to braise in the oven with the marinade, chicken stock, additional white wine and a bouquet garni (bay leaf and sprigs of parsley and thyme tied up in a piece of cheese cloth). A nice soft Australian Chardonnay worked well as an accompaniment. Dave also does an extraordinary matsutake risotto.

Closer to home golden chanterelles continued to fruit in abundance under live oak from Marin and the East Bay to the Peninsula and the Santa Cruz Mountains. One of my favorite patches, though, was torn up beyond recognition by feral pigs. Chanterelle hunters beware! Before you stoop to nudge that golden fungus from the earth you may want to look over your shoulder to see if a porcine competitor is bearing down on you.

And then there was the annual Mushroom Fair, a success beyond our wildest dreams. Fungal highlights included Naucoria vinicolor, a fungus on Arora’s “rare” list and indeed rare at our Fairs. Some unusual specimens in one way or another included Hericium erinaceus (lions mane), Otidea alutacea (brown clustered ear cup), Boletus flaviporus, and Russula flaviceps. The panel was unable to key out a species of Russula with a peach colored cap from Junipero Serra Park. There was also an unusual group of Agaricus semotus from the same location.

And just when we thought that the bolete season was history, there are reports at this writing of a significant number popping up in the East Bay Hills and Marin County. Norm Andresen found B. aereus (under liveoak!) in the East Bay as well. There are also reports of boletes fruiting under the pines in Carmel Valley.

In news off the Internet, a mushroom hunter in the Pyrenees stumbled upon a cache of bombs, grenades, uzis (you never know what you’re going to find out there!). Meanwhile there has been a rash of killings of truffle-hunting dogs (canicide?) in Peimonte due, it is believed, to a scarcity of white truffles this season. All truffle hunters with live truffle-hunting dogs are suspects in the case.

To contribute to The Forager, call me at 415.340.8986, e-mail to mycologer@aol.com or post your findings on Wade Leschyn’s Natural World Bulletin Board at 415.261.1212. Thanks to Dave Campbell, Larry Stickney, Mike Boom, Norm Andresen, Matthew Gandin, Bob Mackler, Mark Norton, and Henry Moore who contributed to the preparation of this report.

Calling all volunteers! The MSSF, in conjunction with The Fungi Federation of Santa Cruz, will be hosting the NAMA conference on Presidents’ Day Weekend, 1998. This event, more fun and more mushroomy that you can imagine, is predicated on the volunteer efforts of folks like you. We need people to sign up for short, two-hour shifts, greeting returning forays, helping with setup and breakdown of the exhibit hall, working with the professional mycologists to shuttle samples to appropriate display tables, and to operate and “host” lecture sessions where a small amount of AV knowledge would be good. Please call Lisa Bauer at 415.695.8889 or e-mail recycqueen@aol.com if you are interested in any of these tasks. You’ll be glad you did. And thanks for volunteering!
Calendar

Friday–Sunday, January 2–4: SOMA Mushroom Camp near Boonville. For questions, please contact Charmoon at 707.887.1888 or e-mail charmooon@trr.metro.net.

Saturday, January 3: Joaquin Miller Park beginners’ walk. Meet at 10:00am at the Sequoia Arena. Call Norm Andresen for details: 510.278.8998. (These walks will be held every other Saturday—unless otherwise noted—until the end of the local mushroom season.)

Sunday, January 4: Lands End Walk, Lincoln Park, San Francisco. Meet at 10:00 by the water fountain in the parking lot in front of the Palace of the Legion of Honor. Call or e-mail Henry Shaw for details: shaw4@llnl.gov, 510.943.3237.


Saturday, January 10: Mills Canyon Foray. Fred Stevens and Bill Freedman lead this annual foray into creekside Mills Canyon in Burlingame. It goes from 10 am to 1 pm. For more information, call Bill Freedman at 650.344.7774.

Sunday, January 11: Mushroom Madness. Another of Loraine Berry’s great mushroom feasts in Ross (Marin County). Starts at 1:00 p.m. $30/$35 per person, limited seating. For more information, call Loraine at 415.454.0914.

Saturday, January 17: Memorial Park Foray. Fred Stevens leads this foray to collect examples of fungi in preparation for a hands-on teaching session the following morning at Coyote Point Museum. The foray may last until 3:00 P.M. This will be a collecting outing. Bring baskets and waxed bags. On Sunday, bring beverage and food if you plan to stay late. Call Chester Laskowski at 510.843.6537 for details.

Saturday, January 17: Joaquin Miller Park beginners’ walk. Meet at 10:00am at the Sequoia Arena. Call Norm Andresen for details: 510.278.8998.

Sunday, January 18: Huddart Park Foray. Leader: Norman Andresen. This is a Coyote Point teaching foray where there will be no collecting. Call Chester Laskowski at 510.843.6537 for details.

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