Deadly Toxin in Mushrooms

MOSCOW — Suddenly toxic, mutant mushrooms have poisoned hundreds of people in Russia and the Ukraine this summer, baffling scientists and casting a deadly shadow over the traditional warm weather pastime of mushroom gathering.

With the death toll topping 60, television news broadcasts an unprecedented warning Saturday night across the Commonwealth of Independent States, telling the people to avoid all mushrooms until the mystery is solved.

An unidentified toxin has apparently infected at least a half-dozen types of normally edible mushrooms, turning safe-looking fungi into deadly toadstools.

At least 193 cases of mushroom poisoning, including 23 deaths, have been reported since the end of July in the vicinity of a nuclear power plant in the Voronezh region of Russia, about 350 miles south of Moscow, Russia's Itar-Tass news agency reported. Deadly mushrooms have also been blamed for 400 illnesses and 40 deaths in the Ukraine.

In most cases, the toxin attacked the victim's liver and kidneys, causing the organs to degenerate rapidly and in extreme instances leading to death within three days, according to Itar-Tass.

How mushrooms long considered edible have suddenly acquired deadly characteristics remains an enigma. Whether the proximity of a nuclear plant to the site of some reported poisonings has some significance or is merely a coincidence is also a mystery.

Hunting for environmental causes, scientists have begun checking the Voronezh plant for radioactive emissions and testing local soil for abnormal concentrations of pesticides or heavy metals.

Mushroom specialists are also investigating whether poisonous fungi could have mutated to resemble their edible cousins.

Despite repeated caveats in the Russian media, which culminated in Saturday night's televised warning, many people have continued to gather, consume, and sell mushrooms, which grow in at least 400 edible varieties around Moscow alone.

— Stephanie Simon of the Los Angeles Times in an unidentified Missouri newspaper August 27, 1992. Sent to the Earthstar by Dr. Ken Cochran, toxicologist and NAMA Executive Secretary.

The Humongous Fungus Debate

Who's got the biggest fungus in the land?

It was made to order for one of those '50s sci-fi thrillers, where the world was threatened by an evil force unwittingly unleashed by a goofy scientist, who was usually lean and gaunt and played by Michael Rennie.

A few minutes into the movie there was the obligatory scene with this alert:

"WE INTERRUPT THIS PROGRAM TO BRING YOU A SPECIAL BULLETIN! SCIENTISTS REPORT THE DISCOVERY OF A GIANT FUNGUS THAT IS NOW MOVING TOWARD DETROIT AT THE RATE OF ..."

But the news actually came quietly last spring in the respected British journal Nature, from three scientists who were neither gaunt nor goofy. Their discovery a giant fungus, an interweave of mushrooms and tentacles, spawned by a single spore and extending across roughly 3 acres of forest soil near Crystal Falls in Michigan's Upper Peninsula.

The researchers estimated the fungus was between 1,500 and 10,000 years old and concluded it was among the largest and oldest living things on earth. Clearly, this was no common mold. Fungi of this magnitude don't grow on trees....

Well, actually, they do. They feed on dead tree roots as they move underground. The only visible parts are the mushrooms sent up to the surface each fall. These honey mushrooms are considered delicious by gourmets and other fungivores—though they may not be aware that these goodies are the fungus's reproductive organs.

Once word of Fungus Maximus reached the popular press (which began calling it the largest living thing), Crystal Falls (population 2,000) found itself the center of interna-
Clearcuts and Race Riots

The latest yuppie craze is trampling through clearcut forests foraging for exotic mushrooms. This discovery on a weekend when my hometown of Los Angeles had exploded in blazing rage, torment, and despair in the wake of a racist verdict.

As Berkeley’s “progressive” City Council imposed the city’s first-ever curfew, I fled to the Sierra to take refuge from the human madness and savour my anguish in Mother Nature’s healing powers. Having grown up with L.A.’s “finest” during the Watts riots and Vietnam War protests, I wanted no part of a likely confrontation with police state powers.

But the chainsaws of greed and insane profiteering had preceded me to El Dorado National Forest, ravaging the woods like a heat-seeking stealth bomber. Unwittingly, I stumbled into the worst environmental devastation I had ever witnessed—a war zone rivaling smoldering Crenshaw Boulevard 600 miles to the south where I took the 1970 census a lifetime ago.

It was here in Stump City off Highway 50 below Lake Tahoe that members of the Mycological Society of San Francisco had set up camp to hunt for choice morel mushrooms. These crinkly nut-like gems sprout up in the mountains when the snow melts each spring, favoring ground that has been disturbed by forest fires, logging, or other activities. Even since my friend James, a former chef at the Zuni Cafe, showed me a jug of scrumptious morels he had plucked in the Sierra, I had fancied going morel hunting myself, envisioning a bucolic frolic through bountiful forests. But hadn’t I counted on the clearcut or the Gold Rush fever that blinded my newfound compatriots to the horrific scorched earth all around us. Viewed from an airplane, clearcuts form ugly scars on the Earth, as if an entire forest had been surgically excised like cancerous growths. But witnessed close-up on foot they are a biological graveyard devoid of life. The only living beings I saw in two days were a solitary snake, lizard, jumping frog, and banana slug. The birds, deer, and other critters had all fled to greener forests. Yet even more shocking to me than the pallid was the utter obliviousness of the morel hunters to the mayhem wrought by the chainsaws and bulldozers. Like modern-day gold miners, these yuppie American consumers were obsessed with scavenging gourmet mushrooms for their larders, and they jealously guarded their stashes like precious jewels. Meanwhile I packed piles of discarded beer cans and empty bullet shells from the trash-littered woods (and engaged in more covert activities). When I asked how they could stand to hang out in clearcuts, one of the foragers shrugged, “They’re good for the species we’re looking for.” During a break to fix a flat tire on the foray leader’s land rover, talk turned to the riot torn inner city streets of L.A. One woman, a Walnut Creek property manager decreed that the looters should all be shot in the legs. Stunned, I pointed out that they were only taking material goods, after all, to strike out against an unjust economic system which had excluded them. She retorted, “It’s not just materialism! It’s anarchy and a breakdown of the social contract!” (A social contract from which folks trapped in our inner cities have been locked out for too long.)

Someone else pondered philosophically how future generations would view our troubled times. I warned that if we didn’t pretty quickly stop killing ourselves and plundering our planet there wouldn’t be any future generations to worry about. Once again my remarks were met by blank indifferent stares. Obsessed by crazed consumerism, these people seemed either unwilling or incapable of feeling empathy toward their less fortunate fellow citizens or other species. I felt as if I had landed among aliens instead of members of my own generation whose beliefs had seemingly been shaped by similar life experiences.

Driving home Sunday I found myself weeping uncontrollably for the rape of the natural world, just as I had wept for the riot victims and for the victims of societal injustice. The clearcut forests loomed as a bleak metaphor for the decay of our “civilization” which had finally ruptured like a long festering wound.

Not only has our social contract collapsed, but we humans have broken a deeper covenant with the vital forces that sustain all life on this planet. In our rush to exploit scarce resources for short-term profits—whether ancient forests, fossil fuels, or gourmet mushrooms—we are severing the very life support systems that bind our fragile existence to this beautiful planet.

When we have destroyed the Earth’s protective ozone shield, polluted the oceans, and mowed down the remaining forests that form the Earth’s lungs, there will be nowhere left to hide. Just as there is nowhere to hide from the violence and anguish that spilled over onto the streets of South Central Los Angeles after the acquittal of four white police officers for beating Rodney King.

Native American teacher Brooke Medi-
A Fine Balance

One would be hard pressed to find a natural system which more clearly illustrates the life cycle than that offered by the world of fungi.

Most amateur naturalists focus their attention on the glorious world of plants and animals, spending rewarding hours in the warm, friendly glow of sunlight where animals, flowers, shrubs, trees, vines, mosses and grasses reign. A bright and beautiful world it is too, one which beckons me to its realm as well. But, alas, I have been led astray.

Just a scant centimeter, more or less, beneath this mesmerizing carpet lies another world, mostly unnoticed, frequently ignored and seldom understood.

If mushrooms did not occasionally, mysteriously pop up and dazzle us with their remarkable forms and varied colors, they might suffer monumental neglect considering their staggering diversity, incredible numbers (at times) and ubiquitous distribution.

They do pop up though and that’s obviously what drew you and I and thousands like us to mushrooms.

We know that all those "green world" plants will, sooner or later, succumb to the ravages of time, animal and insect depredation, viruses, mildews, windstorm and lightning. Down they come! Down to the enveloping floor of the woods, to the pastures, grades, lawns, glens, meadows, along paths and roads and in parks and cemeteries. And there they will become the sustenance of "our world," the fungal world.

So the dead of one world becomes the food of another which will, in turn, reduce this litter back into the nutrients and compounds which that riotously beautiful world will utilize to rise again and flourish, completing that grand circle of life.

Our civilization has short circuited this grand circle in many ways and with ever-increasing impact. Nature, to be sure, is a powerful force with vast recuperative abilities but as some undetermined point in time the system can and will fail—unless we interfere in some meaningful way and restore the balance. Let's hope that our wisdom is equal to our technological proficiency and allows that balance to be restored and maintained.

—Don Dill

What is happening to our world?
continued from page 1

If we cherish a chanterelle, or love a Lepiota, will it prevent them from becoming extinct or mutants? Will interest alone save the rain forests, protect the whales or maintain the ozone layer?

They say knowledge is power.

As we are learning, more pollutants fill the air, chemicals leak from landfills, trickle down to streams and fill our oceans. Jacques Cousteau has said (and this was years ago) that almost 60% of the life he used to see underwater is now gone.

Mushrooms are environmental indicators. Mushrooms absorb heavy metals like sponges (don't eat mushrooms which grow close to the road). Fungi are very sensitive to environmental changes—amushroom's shape and chemical make-up can change drastically in response to oxygen, nitrogen and light levels. What will global warming do?

Today's newspapers are full of environmental news. Bush wants to open public lands for strip mining. St. Louis' Forest Park is in trouble—funds to maintain the park are hard to find. Bond issue after bond issue has failed.

Organizations, such as the Sierra Club and the Coalition for the Environment are working, powered largely by volunteers. The work is mostly political. They are up against multi-billion dollar companies in economically hard times.

What can we do?

Jeff Tupper, head of the Wilderness Committee of the Eastern Missouri Group of the Sierra Club told me that it gets political within a huge organization like the Sierra Club. Nationally they have 650,000 members, locally, 4500 members. Tupper said "small groups facilitate change."

As a group we can raise funds for environmental causes (that's another topic for the MMS business meeting November 22) and continue to educate people about mushrooms. Knowledge is power.

As individuals, we can get active politically, know our candidates and vote for the environmentalists. We can recycle at home and pick up trash along the trail. As mushroomers, we can pray for acid-free rain.

To save the fungi we must save the trees, the meadows, the wilderness—the air, the water, the Earth. To save the Earth, we must save the fungi.

—Ken Gilberg

Mushrooms like chanterelles and matsukates play an important role in forest ecology, since they live in a symbiotic or mutually beneficial relationship with certain trees. The mushrooms form a sheath on the roots of trees like the mighty douglas fir. Their roving filaments deliver nutrients and water to the tree and the mushrooms receive sugars in return. Botanists have found that if a Douglas fir seedling does not quickly form an association with mushrooms, it will die.

Botanists say the relationship must also be vital to the mushrooms, since they cannot be found except in relation with their host tree."

—New York Times, from "Wild Mushrooms Are Endangered by Their Popularity" July 26, 1992
MMS Business Meeting Set for 11/22
—this part of announcement written by Phil Roos

There will be a business meeting of the Missouri Mycological Society November 22 (Sunday) 10:00 A.M. - 1:00 P.M. at the Powder Valley Nature Center on Craigwood Rd. off Geyer near 270 and I-44. Two major items on the agenda will be organization dues and election of officers.

Dues
A. The level of dues

Currently, our dues are $8.00 per mailing address per year. These dues primarily support our newsletter. For most members, the newsletter is their main contact with the organization. Compared to other newsletters I have seen, (mushroom club and otherwise) ours is outstanding. It is longer, with better writing, better presentation, and frequent pictures.

Currently, the newsletter costs about $1.00 per issue per member, with Ken donating his time. We exchange newsletters with other mushroom clubs as well as sending free copies to the Missouri Department of Conservation and Natural Resources, the Missouri Botanical Garden, and others.

Ken has been doing almost all of the work, including typing the material on the computer. He can no longer do all this work by himself. In addition, he is President of the club and that takes a substantial amount of time.

The following are possible options I see, although other members may have other suggestions:

1. Someone can volunteer to input the text in a punctual way, we can keep approximately the same quantity and quality of newsletter, and raise dues to $12.00 per year.

2. Someone else can be the editor of the newsletter and do it cheaply. Dues can stay at $8.00 or perhaps go up to $10.00 per year.

3. Ken can continue to do the newsletter but limit them to four or five a year. Dues can go up to $10.00 per year.

4. Ken can continue to do the newsletter but the club will pay someone to do the typing. Dues will need to go up to at least $12.00 per year and perhaps more.

B. Timing of dues

When I wrote the By-Laws, we were an organization of about 70 members. With the great publicity Ken has gotten, we have just passed 200. In the By-Laws, I wrote that members who paid after June 1st would not have to pay dues until the following fiscal year. In other words, the 63 current members who joined after June 1, 1992, and everyone else who joins before Nov. 1, 1992, would not owe dues until Nov. 1, 1993, the beginning of the 1994 fiscal year. If we raise dues for the 1993 fiscal year, I believe that we should amend the By-Laws. There are at least two ways to do this.

1. Change the date where membership extends through the next fiscal year.

2. Bill these members for the difference between the old dues and the new dues. Those who don’t pay will be dropped.

C. Associate members

Currently, we allow individuals who are members of other mushroom clubs to join MMS for $3.00 per year. While only about 6 people have done this, the rest of the members support the cost of their newsletters. These dues can either be raised to that of regular members or at least to a level sufficient to cover the cost of the newsletter.

Officers

As a not-for-profit organization incorporated in Missouri, we are, by law, required to have four officers and three members of the Board of Directors. Since I fill in the form which is sent to the Secretary of State’s office each year, I have simply named people to the other positions. Currently, Ellen Menown is Vice President, Erika Roos is secretary, while Don Dill, Marty Toll and Leland von Behren are Directors. However, the Board does not meet nor make decisions. These are usually made by Ken and Phil, with advice and suggestions from Ellen and Erika.

In an organization this large, with so many activities, including the newsletter, day forays, an annual fall foray, book sales, and the production and sale of T-shirts, the members should select the officers. (I will also ask the meeting to authorize me to buy an appropriate accounting package since my spreadsheet is not sufficient for this complexity.)

I will run again for Treasurer and I assume Ken will run again for President. I urge people to nominate themselves for the other officers. (If the club, at the coming meeting, decides to have an inexpensive newsletter, the new editor should be a member of the Board.)

Actions

I urge you to attend the meeting, give your opinions, volunteer to be officers and help in other ways, decide what the issues are, and vote. People who cannot attend can write me and I will present their opinions at the meeting in a condensed form. You do not need to attend the meeting to volunteer or run for office!

More about the Meeting
—This part by Ken Gilberg

First, we all must thank Phil Roos for his tireless efforts. His title of Treasurer doesn’t say enough. It was Phil who started our club in the first place back in ‘87. He keeps track of our money and bank accounts, minds our state regulations as a non-profit organization, organizes the membership list and prints out the mailing labels you find on your Earthstar. Phil also took on some of the planning of the Fall Campout at Mingo this year.

Phil mentioned Erika and Ellen. They also have given much to the club in addition to support of Phil and me. Erika heads the Culinary Committee. Ellen helps organize the Winter Meeting and proofreads the newsletter. Thank also to Don Dill in his efforts as foray leader. Jim Winn and John Regnier organize the Morel Madness. Barb O’Brien does the centerpieces for the Winter Meeting. Thanks to everyone else who make the various events throughout the year as great as they’ve been.

I am unfamiliar with the ways of running a group but am learning. I wanted a group to do all the things I wanted to do with mushrooms. When I lived in Brooklyn, I was a member of the New Jersey Mycological Society. They had a Fungus Fair, a culinary group, an exciting newsletter, special forays and guest speakers. They had nearly 200 members then, about the same as we have now.

We now have a membership base to support the variety of activities larger mushroom clubs offer. Let’s talk about what we want to do. At the meeting on November 22 we will also welcome volunteers to work on or to head committees such as Morel Madness, Fall Campout, Winter Meeting, Culinary Group, book sales, T-shirts. Other committees may be born...cultivation, dyeing, mycophilately, photography...what’s your bag?

As editor, I might have removed all the stuff Phil wrote above about making the Earthstar “a less expensive production.” I didn’t.

Bragging, I quote a recent note to me from Larry Stickney, past president of the

continued on page 7
**Meeting - continued from page 4**

San Francisco club and editor of their Mycena News - "After seeing dozens of club bulletins from all over the nation and Canada, I vote the appearance of your Earthstar as the best in the lot. I admire a few bits from some others, but yours is consistently excellent."

The great response I've gotten from readers and my personal satisfaction in doing the Earthstar has been the reward for putting the paper together. I appreciate the contributions of stories from others. Most appreciated are articles written on a word processor, saved as a "text" file that I can drop right into PageMaker, the program I work with.

The typing business that Phil mentions is a minor expense. For this issue, I scanned many articles through optical character reading software, (rented by the hour, about $10.00) but I hope to soon purchase a scanner for my own graphic design business. Still, the Earthstar, could use a volunteer typist. We need contributing writers to do stories on members, book reviews, events, personal observations, mushrooms as medicine, an update on Lyme disease, etc. If you have an idea about an article, call or write me.

I've learned a lot doing this and enjoy writing about mushrooms, mushrooming and mushroomers. Gentle Readers, thank you for supporting my habits.

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**The Mushroom on the Hill**

**an extemporaneous poem**

by Leland Von Behren

There once was a mushroom
that lived on a hill.
He sure knew how to show his gills
And when he wanted to make some more,
he just went and dropped some spores.
The spores would travel
to places other than gravel.
They landed in the soil
and would not spoil.
So here come the rain;
when they were born they had no brain,
but somehow they lived sane.

Bumna Shave.

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**I'm hunting for snakes next spring**

TULSA - A wet spring and summer has forced snakes to seek drier ground, and that's giving Rusty Grimpe new responsibilities.

Grimpe, director of the Tulsa Zoo reptile department, is handling a unusually large number of calls from people reporting snakes in their house, yard or on boats.

Grimpe recalls one man who called on a cold, rainy day in February. "He said this thing was coming out of a hole in the ground, and that it was moving very slowly," he said. Grimpe was stumped. The man said it had a brown, wrinkled head and its neck appeared to be white. The man finally captured it and it was a morel mushroom, a gourmet's delicacy.


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**Foray Report**

**Date:** September 27, 1992

**Place:** Rockwoods Reservation

**Leader:** Don Dill

**Number of participants:** 16

**Weather conditions:** Rainy day before and several days before that in a moist summer.

**Species identified:** Albatrellus cristata, Ananita quavoncia, A. rubescens, Armillaria caligata, A. mellea, Armillariella tabescens, Calocera cornea, Clavaria (Clavaria) vermicularis, Clavariadelphus ligula, Citocybe robusta, C. gibba, Coprinus sp., Crepidotus mollis, Dennitin repandum, Entoloma abortivum, Geastrum rufescens, Laccaria amethystina, L. laccata, L. ochropopurea, Lactarius indigo, L. lignyotus, L. piperatus, Laetiporus sulphureus var. semialbinus, Leotia lubrica, Lycoperdon pertatum, Hygrophorus conicus, Mycena luteopallens, Oudemansiella radicata, Polyporus badius, Ramaria arietospora, Russula aerugina, R. emetica, R. rubra, Strobilomyces foeocopus

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**SCHEDULE OF EVENTS**

* **Previously unlisted event**

* **October 17 - (Saturday) 1:00-3:00 P.M.** Foray at Rockbridge St. Park, near Columbia; Leaders: Phil and Erika Roos. Meet at main parking area.

* **October 18 - (Sunday) 10:00 A.M.** Foray at Babler St. Park, Leader: Ken Gilberg. Meet at Visitors Center.

* **October 25 - (Sunday) 10:00 A.M.** Erika and Phil Roos lead a session to learn to use microscopes and reagents to aid in the identification of mushrooms at Missouri School for Doctors' Assistants, 10121 Manchester Road, 1 mile east of Lindbergh. B.Y.O. mushrooms.

* **November 8 - (Sunday) 10:00 A.M.** Foray at Rockwoods Reservation, Leader: Don Dill. Meet at Visitors Center.

* **November 22 - (Sunday) 10:00 A.M. - 1:00 P.M.** Business Meeting at Powder Valley Nature Center on Craigwold Rd. off Geyer near 270 and I-44.

* **December 5-7 - Gulf States Mycological Society Foray at University of Mississippi.** Contact: Anna Pleasanton, 1000 Adams St., New Orleans, LA 70118. Phone: 504-861-4248

* **April 17, 1992 - Morel Madness at Meramec State Park**

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**Noted and Quotable:** New York's April issue points out that...from last year's forays in the northeast comes this great definition from Jay Justice, the editor of the Mycophile: "In this group you find distinctive types of people at forays: dyers, fryers, liars, and identifiers. And sometimes the last two are synonymous!"

—from the Arkansas Mycological Society's newsletter, Arkansas Fungi.
"Jan and I had a great time," Walt Sundberg wrote the *Earthstar*. "Good mushrooms, good people; what more could one ask for in life?"

The fifty-five or so people who came to Mingo for the weekend of September 12-13 all seemed to have a splendid time, enjoyed the gorgeous locale and were amazed by an overwhelming array of mushrooms.

Species were fruiting in great numbers, some of which Walt, who teaches mycology at the University of Illinois Carbondale, had never run across in his 25 years of study.

Jack and Marty Toll led the group through the incredible, fascinating, beautiful swamp. Mushrooms were everywhere.

Gems of the fungal world such as *Boletus frostii* and *Boletus russelli* were found as well as over a hundred species that time and expertise did not allow us to name.

The University of Missouri Forestry Conference Center was a perfect facility to headquarter the group activities this year. Thanks again to Jim Joiner, the Center's director.

The variety of accommodations worked out well. Some stayed at the Center, some camped, and those who stayed at Miller's Motor Lodge were almost all happy except one couple who got a room next to an all night party. The log cabins at Miller's were very comfortable and their front lawn was covered with honey mushrooms.

Erika Petke led a mushroom tasting at noon Sunday which turned out to be enough for everyone's lunch. There were chicken mushrooms with herbs, purple laccaria with eggplant and tomatoes, a taste of chanterelles, hot honey mushrooms on toast and a honey mushroom pasta. Deborah Jones cooked up the huge *Panus strigosus* she found just for folks to try.

Everyone who went wants to go back to Mingo next year. Marty suggests the Campout annually be the weekend after Labor Day.

There are a few things we'd like to change. We'll mail a package to attendees ahead of time with maps, schedules, etc. Maybe the weekend could be extended. We will surely have more people wanting to attend. This year's limit of 60 was close to being filled. Either it will have to be on a first-come first-served basis (I'm in) or other arrangements will have to be effected. These are among the topics we'll cover in the business meeting on November 22.

—Ken Gilberg
Species List from Mingo Swamp Foray

Mostly named by Dr. Walter Sundberg and Dr. Kenton Olson. List compiled and arranged into orders and families by Phil and Erika Roos. There are about 125 species named.

Agaricales

Amanitaceae
- Amanita bisporigera (?)
- caesarea (?)
- flavoconia
- flavorubescens
- gemmata
- onusta
- polyparamus
- rubescens
- sprepa
- vaginata
- vaginata (group)
- verna (?)
- virosa (?)
- Limacella glooridera (?)

Cortinariaceae
- Cortinarius sanguineus
- Gynnopilus liquitiritial

Entolomataceae
- Entoloma abortivum
- sinuatum

Hygrocybe
- Hygrocybe psitacina
- Hygrocybe conica
- cuspidatus

Lepiota
cus
- Lepiota aquetosquosa
- brunnescens
- caerulea
- castanea
- crispa
- rubrotincta
- seminuda

Pluteaceae
- Pluteus admirabilis
- cervinus
- bombycina

Russulaceae
- Lactarius hygrophoroides
- indigo
- subvernalis (?)
- uvidus group
- yazzoensis (?)
- Russula aerugina
- cyanoxantha (?)
- emetica (group)
- nigrescentipes (?)
- nigricans (?)
- rosea (?)

Strophariaceae
- Naematoloma fasiculare
- Pholiotila polychroa
- Stropharia hardii
- kauffmianii

Tricholomataceae
- Armellaria tabescens
- Clitocybe gibba
- odorata
- Hohenbuehelia petaloide
- Laccaria ochropurpurea
- Lentinellus ursinus
- Marasmius capillaris
- cohaerens
- delectans
- nigroids
- palidocephalus
- siccus
- sullivanti
- Mycena hematopus
- lecana
- luteopallens
- Omphalotus illudens
- Oudemansiella radicata
- Panus striosos
- Pleurotus ostreatus
- Tricholoma respendens
- sejunctum
- splendens
- sulphuroides (?)

Aphyllophorales

Bondarzewiaceae
- Bondarzewia berkeleyii

Cantharellaceae
- Cantharellus minor
- cinnabarinus
- lateritus

Clavariaceae
- Clavicorona pyxidata
- Physalacria inflata
- Ramaria araiospora

Corticiaceae
- Merulius incarnatus
- tremellosus

Ganodermataceae
- Ganoderma lucidum
- Phellinus gibbus

Hydnaceae
- Hericium erinaceus
- Mycoecium adustum

Polyporaceae
- Laetiporus sulphureus
- Lenzites betulina
- Polyoporus adustus
- badius
- conchifer
- dichrous
- elegans (?)
- radicans
- versicolor

Spongipellis pachydon
- Trametes versicolor
- Trichaptium pargamenus
- Tyromyces chioneus

Stereaceae
- Stereum complicatum
- ostrea

Boletales

Boletaceae
- Boletellus chrysenteroides
- russellii
- Boletellus merulioides
- Boletus auriporus
- caesiposus (?)
- pulverulentus
- curtisi
- flammans (?)
- frosti
- illudens
- pallidus
- Gyroporus castaneus
- Phylloporus rhodoxanthus
- Strobilomyces floccopus
- Tylopilus alboater
- indecisus

Lycoperdales

Geastraceae
- Geastrum triplex

Lycoperdae
- Lycoperdon echinatum
- perlatum
- pyriforme

Nidulariales

Nidulariaceae
- Crucibulum levae

Pezizales

Helvellaceae
- Helvella elastic

Phallales

Family Phallaceae
- Mutinus elegans
- Phallus ravenelli

Sclerodermatales

Sclerodermataceae
- Scleroderma citrinum

Tremellales

Tremellaceae
- Sebacina concrescens
- Tremella fusiformis
- Tremelodendron pallidum
Welcome New Members

Almost forty new members joined the society recently as a result of a terrific article by Post-Dispatch staff writer Christine Bertlestone about Ken Gilberg and the MMS.

The story, including a photo of Gilberg holding a honey mushroom and smiling broadly, appeared on page 3 of the Post on September 3. It was also picked up and run in other newspapers around the state.

The MMS is a support group for people wanting to learn about mushrooms. We welcome everyone and urge you to participate just as much as you like. Don't worry at all about how much you know or how much you'll have to do. Nothing is mandatory except the dues. Of course, by getting involved you can make sure some of what you want to see and do happens.

(Mushroom, the Journal

"The Fungus Among Us is Grist for Mushroom, the Journal of Gathering Gastro- nomes." So the story begins on the front page of the Wall Street Journal, September 28, 1992. Of the magazine's audience—a tiny but growing subculture that likes to hunt for, collect, identify, photograph, tell jokes about, but most of all eat wild mushrooms."

"It's the eating part that gives the avocation its sporting edge. Some species are lethal. Others just make you sick or make you hallucinate. (Some 'shroomheads prefer the latter.) Still other mushrooms are not merely edible but delicious."

Mushroom, the Journal of Wild Mushrooming, is co-edited by Maggie Rogers and Don Coombs. It started publishing quarterly nine years ago and is going stronger than ever.

Ms. Rogers is a research librarian and last year's winner of NAMA's award for contribution to amateur mushrooming. Coombs teaches journalism at the University of Idaho, at Moscow, where Mushroom is published.

Mushroom tracks fungal news, announces pending mushroom forays, features book reviews, cultivation information, art, cartoons and regular columns on photography and cooking.

You will, at times, find articles from the Earthstar in Mushroom, but this newsletter could never cover all that the 40 page magazine covers. It is always a treat when the latest issue arrives.

Subscriptions are $16/year, $28 for two years, $39 for three. Order from Mushroom, the Journal of Wild Mushrooming, 861 Harold St., Moscow, Idaho 83843.

—Ken Gilberg

Hunt Morels On Horseback

The Springbrook Hills Resort in Walloon Lake, Michigan offers five consecutive weekends, April 16-18 through May 14-16, 1993 of morel hunting on horseback. Cost is $139 per person.

One great thing about using a horse to hunt morels is it allows you to ride to back areas where people seldom reach on foot. Ride for a mile or so, dismount in a good looking area, tie up the horse and start looking for mushrooms.

For more information call Springbrook Hills at (616) 535-2227 or write them in zip code 49796. Or go out and buy a horse.

—sent in by Betty Grimm

SYLVIA—By Nicole Hollander

The Adventures of Clyde, Domestic Scientist

Clyde! Clyde! Clyde!

Clyde, my little beauties, grow.

Clyde, my luscious, delicious, hungry Caleb.

"Darn, double darn," moaned Clyde, "my fungus is nowhere near as big. How much does theirs weigh?"

"Clyde!" I snapped, moving my chair slightly to the right to avoid a tendril. "Where are you growing this fungus?"

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Of Booze and Mushrooms

Either this summer's bounty of chanterelles was exceptional or I'm finally figuring out where and when to find them. After we cooked them every which way and gave away a few, I wanted to preserve some. The books say the best way to preserve chanterelles is to saute or microwave and then freeze. Our freezer isn't cold enough to trust. When chanterelles are dried, they get very tough. Then they can be powdered and added to soups and sauces. Joe's Book of Mushroom Cookery had an idea that struck my fancy.

Joe suggested putting about an ounce of dried chanterelles in a bottle of vodka like pepper vodka or citron vodka. It was delicious. I've gone through more vodka than ever and I swear it wasn't me who drank it all. I like it straight, ice cold, with a dried apricot, but it can also be added to orange juice for a Chantilly Screw or to grapefruit juice for a Salty Cibarius. You'll still taste the chanterelle flavor. How about a Bloody Girole?

Gary Lincoff suggested for those not wishing more hair on their chests to try dried chanterelles in dry vermouth.

Another thing to try (I forget the reference) is put black trumpets, Craterellus fulax, in sauterne. Perhaps this could make Gallo taste like Chateau d'Yquem. Not really, but we're communicating ideas here.

In Orson Miller's Mushrooms of North America, he offers a "Mycological Martini." "Mix up a batch of your favorite martini recipe. Pour into martini glasses and place in it a small button of Agaricus, FRESH."

In A Judge Judges Mushrooms by Samuel R. Rosen, is a recipe for "Bourbon Mushrooms." "Take as many mushrooms as you may need. Place in a small bowl, cover with bourbon, and refrigerate. Serve these with coarse salt sprinkled lightly over them."

From A Passion for Mushrooms by Antonio Carluccio are "Bewitched Mushrooms, Fungii streptati."

"Here is the delicious formula for serving mushrooms as a dessert invented by my good friend Gennaro. It consists of first Blanching carefully selected mushrooms in vermouth and then preserving them in a suitable liqueur. This enables the mushrooms to be kept for some considerable time, but because they are so delicious and the temptation to eat them so great, we have never been able to keep them long enough to find out how long. Since the mushrooms in their liquor are very rich, they are best used to garnish desserts such as ice cream, creme caramel, and creme brulée."

"Many hours time (and a few hangovers) have been incurred in experimenting on this recipe—choosing mushrooms for colour, shape, texture, aroma and inherent flavour, and then matching them with a complementary liqueur. For instance, the small Laccaria laccata and the pretty L. amethystina are wonderful preserved in the Italian liqueur Strega (the name means 'witch' in English); Craterellus infundibuliformis is delicious in Cointreau; small Cantharellus cibarius (chanterelles), with their delicate apricot aroma, and Marasmius oreades (the fairy champignon) are excellent in a Hungarian apricot liqueur called Baracs; while the powerful flavour and aroma of Clitocybe odora (the ansesed mushroom) is ideal combined with Sambucca."

"These combinations have been tried and tested, and the possibilities for further experimentation are endless—but always remember to check your mushroom identification book for any species which has an adverse effect when combined with alcohol."

500g/1 lb. small firm mushrooms
1x75cl bottle sweet white vermouth
1 small cinnamon stick
4-6 cloves

enough liqueur to cover the mushrooms in the jar

"Clean the mushrooms very thoroughly, leaving some of the stem. Put the vermouth in a stainless steel pan and bring to a boil (take great care at this stage—boiling vermouth is inflammable), add the spices and the mushrooms and cook for 3-4 minutes. Strain and discard the spices. Allow the mushrooms to cool completely, place them in a clean jar and cover them with the liqueur. Keep the jar in the refrigerator for a while before serving."

"You are sure to be bewitched by this Hansel-and-Gretel recipe."

If you try any of these recipes or experiment further, let us know the results. Don't get carried away please. We don't need splinter groups like AA/MMS.

Of course, there are hundreds of mushroom recipes which utilize wines—sherries, Madeira, dry whites and reds. That's a future Culinary Corner.

Another future Culinary Corner will feature mushroom recipes from historic and antique sources. Please look out for interesting items and send a copy to the Earthstar.

Mo Hotter Mo Better

Claudia Joyce wants to share this resource with members who are into hot food. Especially Marty and Jack. For Mo Hotter Mo Better's catalog of hot and spicy condiments, jerkies and sauces with "pictures, cooking hints, corny descriptions and useless advice" call 1-800 462-3220.
The Silver Spoon Test
—written by Elizabeth Moses of the Kaw Valley Mycological Society from their newsletter, The Kansas Mycolog.

When I was buying my ticket to the NAMA foray this year, The travel agent, a young woman originally from Bavaria, spoke enthusiastically of mushrooming in her native country and mentioned the mushroom checking points where the experts checked one’s findings for poisonous items. She also volunteered the information, learned from her uncle and aunt, that a sure test for safety was to cook the mushroom with white onions; poisonous fungi would turn the onions purple. Though this variation of the silver spoon test was new to me, I assured her of the fallacy of this belief—and met with a stony wall of resistance. “The mushroom checkers,” I was told, “say the same thing.” The message was clear: What was I, a native of a country only two hundred years old, to question the experience and wisdom of generations of Bavarian grandparents, parents, aunts, uncles, and mushroom checkers?

This incident prompted reflection on the origins of the belief that poisonous mushrooms cooked with a silver spoon will turn the silver black, while an edible one will not. This bit of folklore is prevalent in all parts of this country and in other countries as well. Why? How did this belief get so widely prevalent and persist over generations? The association of blackness with rottenness, sickness, death is obvious. But why the association of poisonous fungi with blackness when cooked with silver? And why is this belief so loyally cherished in the face of contrary evidence?

It certainly has no protective value. I had a report of a person who got sick from eating a mushroom that passed the test when cooked with a silver coin. His explanation was that this showed how money in this country has deteriorated; the government just doesn’t put the amount of silver in silver coins that it used to.

I have tried this test by cooking, both by boiling and sauteing in butter, professionally identified specimens of Amanita verna, the White Death Cap, and A. virosa, the Destroying Angel, to see if I could detect even a tiny trace of darkening of the silver. For all I can prove to the contrary, there may be individual variations in these species, but these particular Amanitas left the silver still shining. On the other hand, Maggie Rogers, editor of Mushroom the Journal, reported that her morels, which she ate anyway, failed this safety test. In answer to my question, “Do you know of any even mildly poisonous mushroom that turns black when cooked with a silver spoon?”, toxicology expert Dr. Kenneth Cochran mentioned reports of Lactarius sulphureus growing on eucalyptus trees as being reported as poisonous (though not fatally) to some people in California. He suggested that the silver spoon might test the sulfur content, the pH factor.

Still, eucalyptus trees are not common worldwide. Deadly mushrooms pass the silver (and onion) test, and good edibles fail. Perhaps it comes down, finally, to belief in a form of magic that can make the difficult and dangerous easy and safe. A simple test that anyone can do will allow anyone to enjoy delicious mushrooms safely. We don’t need to depend on books and so-called experts; we can do it ourselves, now, without working at it. And indeed, in many instances, this is true. There must be a lot of good edibles that do not turn silver black or onions purple. Happy hunting.