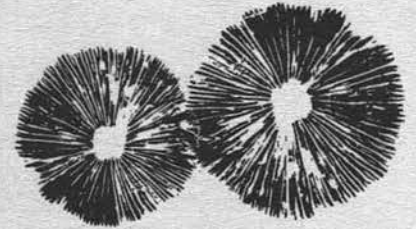


SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY

Number 263

June 1990



FLUORESCENT MUSHROOMS

Greg Wright
[The Spore Print, Los Angeles Myco. Soc.]

Many rockhounds know about fluorescent minerals but how many mycophiles know about fluorescent mushrooms? A fluorescent mineral or mushroom is one which emits light in the visible spectrum when ultraviolet (UV) light is shined on it. Most mushrooms are weakly fluorescent whereas relatively few are brightly fluorescent. Whereas both longwave and shortwave UV light is used to fluoresce minerals, mushrooms mainly respond to longwave UV.

A display of fluorescent mushrooms was a popular attraction at our Orange County mushroom fair (it was popular with those who saw it but not many people saw it since it was hidden away in a dark part of the museum). Fluorescent mushrooms are beautiful, but more than this, fluorescence can be helpful in identifying mushrooms and avoiding many poisonous species.

The most interesting genus for fluorescence is *Cortinarius*. Many species fluoresce brightly, especially species in section *Leproclybe* which contain large amounts of the deadly fluorescent compound orellanine. The common southern California *Leproclybe* is an unnamed species which we call the "Yellow Fluorescing *Cortinarius*." Since no one is likely to eat this strongly musty-odored species, we will probably have to determine the potency of its deadly properties by having it analyzed in a laboratory.

An interesting new *Cortinarius* species which Chick Hendel and Barry Silver have collected has only the universal veil fluorescing brightly. The extent of a universal veil in *Cortinarius* is often difficult to see, but under UV light the universal veil on this unnamed species glowed bright yellow or yellow-green.

Few mycologists have taken advantage of UV light as a taxonomic tool. Besides *Cortinarius*, it can be very helpful in the genus *Tricholoma*. Of the *Tricholoma* species that have been tested by your [LAMS's newsletter] editor, the species that fluoresced brightly were poisonous whereas those that didn't were edible! Specifically, the brightly fluorescing species were *Tricholoma pardinum* (which fluoresces yellow, yellow-green, or blue) and *Tricholoma pessundatum* (which fluoresces yellow).



The strangest case is that of *Tricholoma pessundatum*. The mushrooms we call *T. pessundatum* in southern California, which may or may not be the real *T. pessundatum*, either fluoresce brightly or weakly, but never in between. By sorting "fluorescing" from "nonfluorescing" mushrooms, your [LAMS] editor found other macroscopic differences which could be used to separate them into two species--at least I assumed they were different species until one day I found both types of mushrooms fruiting from the same patch of mycelium.

cont. on page 4

CULINARY I.D.

Lynn Payer
Newsletter, The New York Mycological Society

I'm sure you've all had similar experiences: seeing a restaurant advertise something with "wild mushrooms," asking what kind of wild mushrooms, and getting some weird reply. I'd always expected more, and usually got it, of Europeans. But a recent dining experience in a Frankfurt restaurant in mid-October was not reassuring.

When the menu promised "Waldpilze," I asked whether they were Steinpilz (*Bolates edulis*) and was told, no, they were Pfifferling (chanterelles). But when the dish arrived, the mushrooms weren't Pfifferling at all, but some other type of small, relatively tasteless fleshy fungi. The restaurant was dark, but bringing out reading glasses, one of those wallet-sized magnifying plastics, and carefully scraping the sauce from the underside showed that at least it was a bolete and unlikely to produce lasting harm. But still, I expected more of Germans.

MUSHROOMS

Sylvia Plath, 1959
[Mycena News, Myco. Soc. of San Francisco]

Overnight, very
Whitely, discreetly,
Very quietly
Our toes, our noses
Take hold on the loam,
Acquire the air.

Nobody sees us.
Stops us, betrays us;
The small grains make room.
Soft fists insist on
Heaving the needles,
The leafy bedding.

Even the paving
Our hammers, our arms,
Earless and eyeless.
Perfectly voiceless
Widen the crannies,
Shoulder through holes.

We diet on water,
On crumbs of shadow,
Bland-mannered, asking
Little or nothing.
So many of us!
So many of us!

We are shelves, we are
Tables, we are meek,
We are edible,
Nudgers and shovers
In spite of ourselves.
Our kind multiplies:

We shall by morning
Inherit the earth.
Our foot's in the door.



Spore Prints

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Calendar

June 9	Field trip, Swauk Creek
June 12	Membership meeting, 7:30 p.m., CUH
August 19	Cultivation group meeting, 1:00 p.m., 12625 N.E. 81st Place, Kirkland
August 20	Board meeting, 7:30 p.m., CUH
August 24	<i>Spore Prints</i> deadline
September 11	Membership meeting, 7:30 p.m., CUH

ITEMS OF INTEREST

Teacher of the Year: Hildegard Hendrickson, teacher of the PSMS orientation classes for new members and mushroom hunter par excellence, was presented with Seattle University's Distinguished Teaching Award. A professor of economics and business, she has taught at Seattle University since 1967. She has served as chair of the Department of Finance and Economics and was named the first holder of the Security Pacific Bank Professorship of Finance. Congratulations, Hildegard!

Collection of Mushroom Articles: *Notes on the Classification of Mushrooms, a New England Perspective*, a special edition of 224 pages containing 87 articles by John Minot originally published in the Boston Mycological Club *Bulletin*, is available for \$35.00 postpaid from Quarterman Publications, Inc., P.O. Box 156, Lincoln, MA 01773.

Mushroom Missionaries: As a result of the article in the *UW University Week*, Denis Benjamin was invited on KING radio (at 6:00 a.m. yet); he was also invited to answer mushroom-related questions on the KOMO garden show. Patrice Benson gave a wild mushroom cooking class on May 23rd at Larry's Market, Totem Lake.

Lost: A cooler was left at the 29 Pines field trip. Call Lyle McKnight, 852-5407.

Membership Meeting

Tuesday, June 12, 7:30 p.m. in the Center for Urban Horticulture, 3501 N.E. 41st Street, Seattle

Dr. Nancy Turner, the ethnobotanist from Victoria and the B.C. Provincial Museum, will talk on the use of plants by Northwest native peoples. Dr. Turner is a world authority on the types and uses of local wild foods and author of *Plants In British Columbia Indian Technology*, and *Food Plants of British Columbia Indians, Part 1: Coastal Peoples, and Part 2: Interior Peoples*. She is a wonderful speaker: entertaining, informative, and enthusiastic. After hearing her speak, your next trip to the woods will be a whole new experience. This promises to be an exciting evening. Mark it on your calendar.

Agenda: 7:30 p.m., Welcome to new members
7:40 p.m., Dr. Nancy Turner
8:40 p.m., Mushroom of the month
8:45 p.m., PSMS business
9:00 p.m., Social hour

MONTHLY GOODIES

Patrice Benson

In order to involve more members in the social portion of our monthly membership meeting, a new format will be attempted at the next and all subsequent meetings. Members whose last names begin with A, B, C, or D are asked to donate a plate of snacks for the after-meeting gathering in June. Beverages will be provided by the Society. Please bring your donations already prepared and leave them in the kitchen before the meeting. If this is successful, then we can adopt this method permanently.

A,B,C,D	June
E,F,G,H	September
I,J,K,L	October
M,N,O,P	November
Cookies	December
Q,R,S,T	January
U,V,W,X,Y,Z	February
Banquet	March



There will be a reminder each month in *Spore Prints*.

BOARD NEWS

Agnes Sieger

The field trip tour leaders seem to be working out. Almost ninety people attended the Crystal Springs trip, and the 29 Pines trip had over 100, most of whom were new members.

Exhibit Chair Lynn Phillips wondered about getting a commercial sponsor for the 1990 poster. The Board voted to allot the regular amount for posters but let Lynn get something fancier if she can find someone to pay for it.

Mycophagy Chair Patrice Benson will coordinate next year's banquet of a gigantic potluck. Tune in to hear how you can help.

The Board voted a lifetime membership to past president Gilbert Austin. They also voted to give a 1-year membership to guest speakers/demonstrators.

Note: Fees for the first year of PSMS membership will be increased by \$5.00 for families and by \$3.00 for singles; this is a one-time-only initiation fee to cover the cost of a new member's packet.

SPRING FIELD TRIP REVIEW

Lynn Phillips

Our organized spring field trips will probably be just about over with by the time you receive this. The weather and summer mushrooms are too unpredictable to mount any large-scale hunt. But that doesn't mean that you should stop looking. The mushrooms are there, and you can find them. We've had a lot of people come to our field trips this year, many who are new to the sport or at least the area. I hope you new people have learned enough about the habitat, collection, and identification of mushrooms to continue to go out hunting on your own. The weather has been cool enough this spring that the two main edibles, boletes and morels, may continue fruiting later than usual. Check your maps and look for burns or logged areas in higher elevations for morels. A forest fire in 1988 produced heavy yields of morels all last summer. I know a lot of people will be looking in that area again, including me.

I would like to thank all the people who have volunteered their time to make the field trips work: the hosts, identifiers, and foray leaders who have been taking out newcomers. I hope you will all continue to help and encourage others to become more active participants when field trips resume in the fall under the new chair, Inga Wilcox.



CRYSTAL SPRINGS

Pat and Sue Murosako

Eighty-nine signed-in members, and few who did not, attended the third annual special educational field trip on May 12th. We were greeted by patches of snow in the campground and a cool overcast day. However, it was sunny where the foragers went.

The scheduled field trips, led by experienced guides Kern Hendricks, Elizabeth Purser, George Rafanelli, Mary Lynch, and Harold and Beth Schnarre, were helpful and appreciated by the novice and other mushroom hunters.

Patrice Benson and Dennis Bowman's (co-host) culinary dishes of morels were a gourmet's delight. The cultivation demonstration by Mark Jarand will develop many backyard mushroom farms.

Many thanks to Mary Lynch for the use of her Coleman stove when PSMS's stove went out of order. Her delicious and nutritious muffins contributed much to the all-day snack table.

Morels were found by nearly everyone. Brian Luther and Sara Clark identified 60 species of mushrooms, of which there were 16 Ascomycetes, 42 Basidiomycetes, and 2 Myxomycetes.

By the glowing fireplace in the shelter, 25 members stayed to enjoy the delicious potluck dinner and fellowship.

To all who helped make our hosting a pleasure, for the sharing of information, rides, and general generosity, thanks. We went home with a dozen morels and a greater appreciation of the time and effort put forth by those who work to make each outing a success.

MORELS IN PUFF PASTRY

Harley Barnhart
[Spores & Stipes]

First, catch some morels . . .

- 2 or 3 cups dried morels
- 1 lb ground meat (beef, veal, turkey, or blend)
- $\frac{1}{2}$ cup onion or shallots, diced finely
- $\frac{1}{2}$ cup red or green fresh pepper (bell or Anaheim), diced finely
- $\frac{1}{2}$ cup dry red wine (or dry Marsala & reduce sugar amount)
- 1 TB soy sauce
- $\frac{1}{2}$ tsp finely ground black pepper
- 6 oz salt-free butter
- 26 oz package of puff pastry sheets
- 1 tsp salt
- 2 tsp sugar
- 3 TB arrowroot or cornstarch
- Pinch of dried marjoram leaves, rubbed

Try to find the thicker puff pastry sheets, used for strudel, wrapping roasts, etc. If you make your own, roll out six times, about $\frac{1}{4}$ " thick. Phyllo dough will do, but use at least six sheets, brushing between each two sheets with melted butter; add 4 oz. butter to ingredients.

Take puff pastry from freezer per pkg. instructions.

Wash morels quickly and soak in warm water to cover for half an hour or more. Slop them about during soaking to dislodge dirt, duff, etc. Remove soaked morels to chopping board, reserving liquid, and chop medium to fine. Decant or strain liquid and simmer morels in it for 20-30 minutes, adding water as needed to keep morels covered. Meantime, saute onion and diced pepper over low heat in 2 TB of butter until just soft. Add mushrooms, less liquid, to onions and peppers and stir. Add meat, crumbling and stirring just until pink is gone. If meat is extra lean, add 2 TB cooking oil. Add marjoram while stirring.

Mix soy, salt, sugar, and wine with arrowroot or cornstarch (start with small amount of cold liquid, etc.) and stir this into meat/morel mixture. Increase heat a bit, add water or some broth as required until sauce is smooth and about heavy cream consistency.

Melt remaining 4 oz butter and coat shallow baking pan (e.g., 9x12x2"), using pastry brush. Cover bottom and sides with puff pastry (see note above on phyllo) and brush with butter. Spread about half of meat/morel mixture on bottom, cover with another layer of pastry, brush top-side with butter, and spread other half of meat/morel mixture on the second pastry layer. Top with third layer of pastry brushed with butter (plus beaten egg if glossy surface is desired).

Bake in 375°F oven for 20-30 minutes, until top is lightly browned. A light sauce (bechamel, mornay, or velouté), served separately will nicely augment the dish if it is a principal course.



When you go berrying, you collect blueberries or blackberries. You don't pick every berry in sight, mix them in a bag, and then expect some "expert" to tell you which are edible.

—Ben Woo

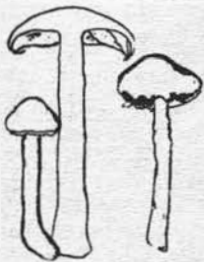
Fluorescent, cont. from page 1

Now I think they are varieties. Another puzzle to be worked out is the edibility of these mushrooms. I vomited after eating a single bite of what probably was the fluorescent variety (this happened before I was using a UV light) but I had no problem from eating five bites of what probably was the nonfluorescent variety.

Another brightly fluorescing mushroom is *Rhodocybe nitellina*, a small tan or orangish mushroom which has a rancid cucumber odor. It fluoresces bright yellow. I made the mistake of eating a single bite of it and vomited repeatedly as a result. A more common mushroom that fluoresces bright yellow is *Naematoloma fasciculare*. Sometimes it causes poisoning and sometimes it doesn't.



Not all brightly fluorescing mushrooms are poisonous. For example, many *Russula* species fluoresce bright or moderately bright yellow or blue. Another example is the edible *Stropharia riparia*, the gills and partial veil of which fluoresce bright yellow. In another local edible *Stropharia*, which may be a variety of *S. ambigua*, there is a universal veil which fluoresces bright yellow. *Gymnopilus*, which usually is too bitter to eat, sometimes is edible, and sometimes causes psychoactive (hallucinogenic) effects due to psilocybian compounds, fluoresces bright yellow.



A recent study contributed to by David Aurora, Bob Sellers, and other members of the Fungus Federation of Santa Cruz ("Isolation and Bioactivity of 2-Aminoquinoline from *Leucopaxillus albissimus*," by Jurg R. Pfister in *Journal of Natural Products*, Sept.-Oct. 1988, pp. 969-70) sought to find out why the giant mushroom *Leucopaxillus albissimus* is so resistant to bacterial decay. The researchers found a bright-blue-fluorescing compound which has antibacterial, antitumor, protease (protein-digesting enzyme) inhibitory, and mutagenic

(causing genetic mutation) activity. It's no wonder that some people who have eaten *Leucopaxillus albissimus* found it difficult to digest!

If you would like to buy an ultraviolet lamp, a mineral shop would be a good place to find one.

CULTIVATION GROUP

Lynn Phillips



We had a great turnout for our media-making and potluck-eating session in April. There seems to be quite an interest in sterile media and other supplies for those who don't have the time, space, or money to invest in a lot of cultivation paraphernalia. So we are going to have some assorted supplies available for sale at the June membership meeting: sterile agar bottles, filter discs, rye grain, canning lids, information sheets, etc. If there's anything you need, see us at the cultivation table before or after the meeting.

At our Crystal Springs meeting in May, Mark Jarand gave out wooden dowel plugs, colonized by mycelium of *Hericium abietis* and *Sparassis crispa*, with directions on inoculating stumps or logs. Please keep records and let Mark know when, and if, you have successful fruiting.

Our next cultivation meeting, and the only one scheduled for this summer, will be at Mark's house on Sunday, August 19, at 1:00 p.m. Please mark this on your calendars because there will not be another notice. We will probably be doing some bulk substrate inoculation with *Stropharia* and *Pleurotus* as well as tissue culturing. For more information about the cultivation group and any of its activities, call Mark Jarand, 828-0648.



*This will be the last newsletter until September.
Have a good summer!*



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Save postage. Pick up your membership roster at the June meeting.