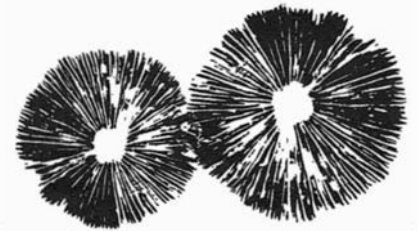


SPORE PRINTS



BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY

Number 246

November 1988

LOST AND FOUND

Henry Pavelek
[NATS CURRENT NEWS, No. American Truffling Soc.]

We believe it is desirable to periodically call to the attention of our members the precautions that should be taken to keep from getting lost in the woods while on forays. Lost people not only spoil an otherwise good day for themselves but also create considerable anxiety for everyone participating in the event.

We often operate in rugged country where it is easy to become disoriented. We also have forays in areas that are not familiar to us. Anyone not adequately prepared for the variety of conditions that exist in a foray area can get lost. In some relatively flat woodland sites, everything may look the same so it is difficult to orient oneself.

Even well-known and respected pioneers such as Daniel Boone had problems on occasion since he operated without many of the tools available to us, such as maps, man-made roads, and fences. A friend, familiar with Daniel Boone's adventures and exploits, one day asked him if he had ever been lost. Boone stroked his chin and thought for sometime before replying, "Well, no, but I can remember a time in the mountains when I was mighty confused for about three days."

A problem that may be even greater than getting lost is becoming injured. Many conditions exist in forested areas that can lead to injuries. To cope with this and the problem of being lost, it is well to stay close to others, at least in pairs. Keep in sight, or at least in hearing distance of them. One should wear proper clothing for the area, including footwear that adequately protects the ankle from injury. Boots, covering the leg up to midcalf, are especially important in areas having rattlesnakes.

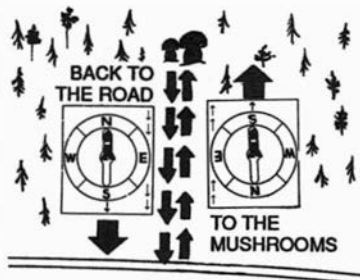
Some of the tools that should be carried are a compass, a whistle for contacting others, a map of the area, a good knife, and matches and paper for starting an emergency fire (your wax specimen bag will do in a pinch).

Start out by locating where you are on the map and study the direction of the existing roads and the direction of the flow of streams, as well as other map features.

If a map of the area is not available, study the landscape in the direction you will be going to orient yourself. Before leaving the car, take a compass bearing on the general direction of the road and the general direction that you will be going. You need only to reverse your direction to get back to the starting point.

As you travel, watch the terrain closely so

cont. on p. 4



PRESIDENT'S MESSAGE

Gilbert Austin

New Member Orientation: Monthly orientation sessions for new members will begin Tuesday, November 8 and run through February. As in the past, the sessions will be conducted by Hildegrad or Monty Hendrickson and will be held from 6:45 to 7:15 p.m., with the regular membership meeting beginning, as always, at 7:30 p.m. In March, the Hendrickson's will again lead the first field trip of the spring at Carnation.

The Mushroom Show: By any measurement, the Society's annual exhibit was a solid, worthwhile, competently arranged event. Notwithstanding the need to schedule this year's exhibit a week later than usual, there was no dearth of representative specimens.

Visitors' comments seemed unexceptionally complimentary. Many made a point of stopping and talking with a Society member to express their pleasure at the variety and splendor of the mushrooms and the style of their display. Visitor volume was also satisfactory. While we don't have final totals for costs and dollars taken in, it seems likely that the "plus" totals will be ahead of a year ago.

Exhibit Chair Ben Woo said that the most gratifying aspect of the show was the way everyone pitched in and helped. I would like to call special attention to the many members whose efforts are not visible during the actual exhibit -- the members who worked on construction, loaded and hauled hardware to and from St. Joseph's, assembled and disassembled the exhibit, and swept the floors. And, of course, special thanks to those members and friends knowledgeable in mushroom taxonomy, who worked late into the evening before the exhibit opening and from early on the day of the opening on identification and labeling of our hundreds of specimens. Thanks, everyone, for another good exhibit!



George Rafanelli identifying mushrooms at the 1988 PSMS Annual Exhibit

Building Fund Boost: As those attending the October meeting are already aware, Dr. Patricia Winter has given the building fund a wonderful boost with a donation of \$1000. Dr. Winter has indicated she hopes her contribution will prompt others, especially those who have not yet contributed, to step forward. And, as mentioned last month, two other members, who continue to prefer anonymity, have pledged matching money: one of \$500, the other of \$100.

Spore Prints

is published monthly, September through June, by the
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Calendar

Nov. 7	Beginners' class, 7:00-9:00 p.m., CUH
Nov. 8	Membership meeting, 7:30 p.m., CUH
Nov. 14	Beginners' class, 7:00-9:00 p.m., CUH
Nov. 14	Board meeting, 7:00 p.m., CUH
Nov. 15	Intermediate seminar, 7:00-9:00 p.m., CUH
Nov. 18	<i>Spore Prints</i> deadline
Dec. 5	<i>Spore Prints</i> mailing, 10:00 a.m., CUH

FORAYS

WORKSHOPS

RETREATS

Study Tour: Gary Lincoff, Andrew Weil, and Emanuel Salzman will lead a mushroom and wildlife study tour of Madagascar from April 13 to April 28, 1989, with a 7 day post-tour extension to Mount Killimanjaro. For details, contact Fungophile, P.O. Box 5503, Denver, CO 80217-5503 Tel: (303) 296-9359.

Stamets Workshop: Paul Stamets has offered 10% off to all PSMS members who attend his mushroom cultivation workshop on December 3 and 4. See the September 1988 *Spore Prints* or call (206) 426-9292 for details.

North Coast '88: The Mycological Society of San Francisco invites members of other clubs to the Second Annual North Coast Retreat on November 25 through November 27. Reservations are needed by November 11. Call (415) 387-3108 or write MSSF c/o Jerome Rainey, 1830 Page St. #B, San Francisco, CA 94117

Died: Rudolph Werth on August 24th of leukemia. Rudy was a PSMS member for 18 years.

Died: Marcus M. Ohlson, charter member #91, on September 21st. Our sympathy to his wife, Lots.

Died: PSMS member Bill Burnett Williams, 67. Our sympathy to his wife, Ioleen.

Membership Meeting

Tuesday, November 8, at 7:30 p.m. in the Center for Urban Horticulture, 3501 N.E. 41st Street, Seattle

Brian Luther's subject is "The Fascinating World of Fungi on Antique Postcards." We are glad to have him back. He told us about mushroom postage stamps last November in a talk that has been repeated and widely praised around the Puget Sound area. Brian has been an enthusiastic, active PSMS member since his undergraduate days at the University of Washington. His special interest is taxonomy; he heads our i.d. committee and is a Pacific Northwest Key Council member.

SAVE THE RUSSULAS

Gregg Ferguson

[Mycological Society of San Francisco *Mycena News*]



Russula, usually preceded by "just another," is a large group of fleshy fungi with few admirers. No other group of mushrooms is so disliked and abused.

When I first started studying mushrooms, Russulas were a group I could always count on finding every season. Many were brightly colored and conspicuous. Others were duller and often hidden. All were a treat to find and to photograph.

When I started associating with fellow fungophiles, I was assured that all mushroom hunters acquired a taste for stomping Russulas. I was shocked to hear that these otherwise loving people admitted to destroying any mushrooms for any reason. However, as I tucked a few years of hunting under my belt, I became enlightened on the just causes of stomping Russulas. I've hunted for matsutake in *Manzanita* thickets so dense that rabbits lose fur scampering through them. I've crawled on my stomach 30 feet to uncover "just another *Russula*" in those thickets. After finding "just another *Russula*" once too often, I, too, shamefully admit to stomping and kicking my share.

It's not that I hate Russulas; I don't think any of us do. I think that when you're having a bad day hunting, you need something you can release your aggression on. If you have the choice of kicking your hunting partner(s) or a mushroom, any decent person will kick a *Russula*. It is said that everything on earth has a purpose. It just may be that God intended Russulas as therapy for us mushroom hunters.

I still have a strong affection for Russulas. I still enjoy finding them (as long as I don't think they are some other mushroom). I still enjoy photographing them, and I now enjoy eating a few varieties. *Russula xerampelina* is an excellent edible.

I suppose this story is my attempt to win the Russulas some sympathy. They have been abused long enough! So the next time you're in the woods and you get the urge to stomp another *Russula*, stop and think. Maybe the next person to walk past that *Russula* will be a novice and may have never seen a *Russula emetica* quite so red or a *Russula brevipes* quite so large. More important, the next person to pass that *Russula* may have had a worse day than you. That *Russula* may be just what he needs to release his pent up rage at discovering that someone has been there before him -- the perfect therapy for him (and his partner). Saving the *Russula* may save a friendship. Think about it. Save the Russulas!

WANTED (ALIVE): *Agaricus Bisporus* Richard Kerrigan

I am gathering genetic information on wild strains and populations of *Agaricus bisporus* (*A. brunnescens*). I will promptly reimburse anyone who sends a wild collection of *A. bisporus* for their costs: \$5.00 if spore prints are mailed, \$15.00 if fresh materials are sent by courier. Please telephone (416) 828-5380 before sending material by courier so someone will be ready to receive it. Such shipments should be marked "Material for research. No commercial value." I am also negotiating for funding to provide monetary rewards of up to \$100 for significant new collections of *A. bisporus* and the related, rare species *A. subfloccosus* and *A. subpersonatus*.

Very fresh, young mushrooms can be wrapped in a paper towel and covered with waxed paper, placed in a small, crush-proof box, and sent overnight by express-mail or courier. Cultures, on agar slants, padded inside a crush-proof box, can also be sent by overnight courier. Clean spore prints (on new aluminum foil; don't let moisture condense if possible; otherwise air-dry under a large clean bowl before mailing) are also useful, if fresh specimens or cultures cannot be sent. Send spore prints by first-class mail. All materials should be sent to

Richard W. Kerrigan
c/o Dr. James B. Anderson
Dept. of Botany
University of Toronto,
Erindale Campus
Mississauga, Ontario
CANADA L5L 1C6

OF TIME AND FUNGI

Capital Mushrooms

Not only do mushrooms have a calendar to tell them when to fruit, but they also have an even more precise clock that keeps time even when isolated from external influences. Because they cohabit one big cell, all nuclei of the yellow slime mold *Physarum polycephalum*, for instance, simultaneously sense that it is time to untangle the DNA and divide, with the result that the slime mold pulses as it spreads. The bread mold *Neurospora* develops spores that show up as a sort of fuzz precisely every 22 hours, while the fungus *Nectria cinnabarina*, when allowed to grow from a point inoculum, will make a ridge of spores every 16 hours at the edge of the slowly growing disk.

LAKE WENATCHEE FIELD TRIP

Larry Baxter

The weather was balmy for our second field trip this autumnal season. A couple of drenching rains in as many weeks preceding the outing brought the mushrooms up. Thirty-six people attended the event. The identifiers were Nick Popoff, Sara Clark, and Larry Baxter. Sixty-four species were brought in. Some of the edibles represented were *Boletus edulis*, *Cantharellus subalbidus*, *Gomphus clavatus*, and *Tricholoma ponderosum*.

BOOK SALES

Mae Green

We now have copies of the Louise Freedman's popular and good-looking cookbook *Wild About Mushrooms* issued by the Mycological Society of San Francisco. See me about this and other mushroom-related items, from books and posters to sweatshirts and towels, at the book sales counter at the next meeting.

HYBRID MUSHROOMS IN STORE?

ASH News

American Society for Microbiology

Although consumers gobble up tons of the common domestic mushroom, *Agaricus brunnescens*, annually, little is known about its genetics, and its life cycle makes hybridization difficult.

This may soon change. According to a recent report (*Appl. Environ. Microbiol.* 54: 1643-1648, 1988), Canadian researchers James Anderson, Alan Castle, and Paul Horgen have now developed straightforward methods to produce hybrids and follow them precisely with molecular genetic techniques.

The first step in producing hybrid mushrooms is to obtain homokaryons, or cells with only one genetic nucleus. Unfortunately, most spores are heterokaryons containing two or more distinct genetic nuclei in each cell.

Using enzymes, Anderson and his colleagues produce protoplasts in liquid culture, 10% of which have only a single nucleus. They then mate them and pull out the hybrids. Crucial to the success of the new method is restriction fragment length polymorphism (RFLP) analysis, which relies on differences in neutral but constant DNA patterns to track the fate of various homokaryons.

Adaptation of RFLP analysis, which is now being used extensively to map human and other complex genomes, could well affect the international mushroom trade. Currently, mushroom growers have no way to protect special strains, and outright theft by competing mushroom growers is commonplace. With a definitive identification system, which RFLP analysis provides, special strains could be protected by enforceable patents.

Meanwhile, the ability to make hybrids more readily could lead to production of special mushrooms with improved commercial characteristics. Researchers are already studying and manipulating traits such as colonization and growth rate, color, and optimum growth temperature. The extent of their effort will depend largely on how eagerly the industry embraces the new technologies now available.

GIANT MUSHROOMS

Anatoly Gorbachev, a driver from Kuibyshev, a city on the Volga, made a rare find. Not far from the driveway, in a clearing in the wood, he noticed two snow-white balls. They turned to be two huge puffballs, one weighing 7 kg and the other even more. There used to be finds of this kind in these parts, but two mushroom giants is a great rarity, to be sure.

-- contributed by Tanya

TASS photo



Lost, cont. from p. 1

you don't cross a ridge into another watershed. Also, as you travel, look back periodically in the direction from which you came. The landscape looks different looking back than it does looking forward, which often confuses people. If the sun is out, it is also good to periodically observe its direction for the time of day to help keep you oriented.

You should also be familiar with the accepted whistle signals: one whistle, "Where are you?"; two whistles, "Here I am."; three whistles, "HELP!"

Fortunately, to date we haven't had the experience of anyone being lost for an extended time, but on a few occasions we have had people returning later than they should have by not observing these principles. We sincerely hope we never do have anyone getting lost for an extended period of time.

[NATS not only doesn't want to lose its members, it doesn't want to lose its collecting sites, either. All truffle finds are reported with latitude and longitude — degrees, minutes, and seconds!]

MUSHROOM ASTROLOGY

Bob Lehman, LAMS

Scorpio (Oct. 23 - Nov. 21): You love the mysteriousness of mushrooms. You plot your mushroom hunting strategy in advance, taking into account the motives and likely strategies of competing mushroom hunters. While others on a foray engage in small talk, you sneak away from the group to fill your basket from your secret spot. Aries may cover more ground, but you know how to get more out of the ground you cover. You don't mind Leo's boasting about his chanterelles because you know he'll be proud to give you some. You are willing to endure difficult conditions in order to find the mushrooms you want. You are fascinated by poisonous mushrooms.



CHICKEN BREASTS WITH SHIITAKE

Louise Freedman
[Mycena News]

4 single chicken breasts, skinned and boned	1/2 in. slice fresh ginger
2 Tbs fresh lemon juice	1/4 cup soy sauce or more
1-1/2 cups water	12 dried shiitakes, stem- med and rinsed
5 garlic cloves, minced	

Rub the chicken breasts with lemon juice. Arrange chicken in a baking dish and bake for 15 to 20 min. in a preheated 400° oven or until the breasts are brown and juicy. Turn the chicken occasionally while cooking.

While the chicken breasts are cooking, pour the 1-1/2 cups water into a medium saucepan. Add the garlic, ginger, soy sauce, and the mushrooms. Simmer uncovered for about 15 min. Adjust the taste. If too salty, add more water; if not, add more soy sauce.

Place 3 caps over each breast on individual plates and spoon the sauce over each breast.

FIELD TRIP IDENTIFIERS

In case you were wondering about the new names cropping up as field trip identifiers, three lucky apprentices have taken up i.d. chairman Brian Luther's offer to train a new cadre of mushroom identifiers. The three trainees are **Larry Baxter**, **Sara Clark**, and **Nicholas Popoff**, and we'll be hearing more from them as time goes on.

The *Coprinus atramentarius*
Has a reputation nefarious.

When we tried it with whiskey,
That proved a bit risky
But at least it didn't bury us!

-Harley Barnhart, *Spores & Stipes*

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Thanks, Ben — Thanks, everybody!
For another good mushroom show!