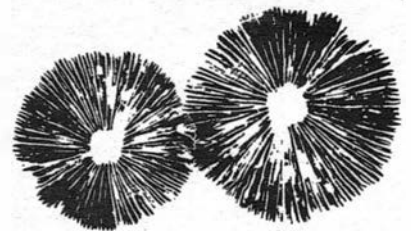


# SPORE PRINTS



## BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY

Number 272

May 1991

### IT'S AMANITA PATHERINA TIME

Jan Lindgren

[Interview]

Oregon Myco. Soc. Toxicology Chair

#### The High Schoolers Made the News on Volume...

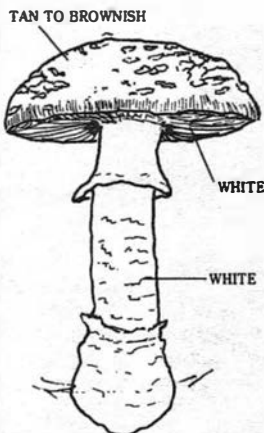
Saturday, April 20th, 32 students from two Bend, Oregon, high schools traveled to Pleasant Hill near Eugene for a music competition. Afterward, some of them went on a mushroom-picking expedition in a near-by field. They ate the mushrooms raw on the bus going home, topping off some hamburgers they picked up during a stop at Oak Ridge.

Then the repercussions began. The victim worst off vomited on the bus, said he felt better, and then went to sleep. By the time the bus reached Bend, he was pounding himself on the chest from involuntary muscle spasms and wasn't breathing. The paramedics got an oxygen tube down his throat and took him to the hospital. Two other students also had respiratory problems.

At 11:00 p.m. Saturday, when I first talked with the hospital in Bend, there were four kids there; when I talked with them again at 2:00 a.m. Sunday, there were 11. Most were treated and released the next day. The last two went home Monday morning.

Besides the three with breathing problems, symptoms included hallucinations, nausea and vomiting, diarrhea, and muscle spasms. Some of the victims were drowsy; some acted drunk; others were simply obnoxious. Except for the breathing problems, all the symptoms were consistent with *Amanita Patherina* poisoning. Breath stoppage has been reported before with *Amanita muscaria* poisoning, but supposedly you can shake the victims and say "Breathe!" and they will breathe.

The Oregon State Patrol brought a vial of stomach contents and a wormy, immature white mushroom to the Poison Center at Oregon Health Sciences University. The Poison Center, in turn, called me for an identification. The stomach contents showed a brown-capped mushroom with white gills similar to *A. patherina*. The mushroom sent along with the stomach contents had a stem and a white cap, a soft interior like a puffball, and no gills but maybe a partial veil. Thinking it came



*Amanita patherina*

from Bend and might be a stalked puffball, I woke up Leeds and Marie Bailey in Ontario, but they agreed it couldn't be a puffball. About 6:00 a.m., I called Lorelei Norvell, past OMS president and present Ph.D. candidate under Dr. Ammirati of PSMS, for help. We never did identify our mystery mushroom. Could it have been a red herring supplied because it had no connection with psychedelics?

The 11 victims claimed the poisoning was completely accidental, and that no other drugs were involved. The Superintendent of Schools suspended them for 5 days anyway.

#### ...But the Little Old Lady Got the Best Value

There was also an *A. patherina* poisoning in Oregon on Friday, April 19th. This time, a little old lady who was almost blind picked some mushrooms growing under Douglas fir on the grounds of the senior care facility where she lived. She took them back to her apartment, cooked them, and ate some. She later called for assistance from personnel at the care center, who took her to the hospital. She suffered muscle spasms and hallucinations, but no deep sleep. She said she saw a beautiful white light and knew she had died and gone to heaven. As the reaction was wearing off, she was heard complaining because she hadn't died after all.

I examined what was left of the cooked mushrooms and went looking for the source. A care center nurse and I found a spring *A. patherina* growing in composted grass, surrounded by the little old lady's distinctive, square-heeled footprints.

#### MEET A MYCOPHILE

Inga Wilcox



A native of Seattle, Coleman Leuthy obtained a B.S. in botany from the University of Washington, where he was a teaching assistant under Dr Stuntz. He did graduate work at Ann Arbor, majoring in mycology under THE Alexander Smith.

Back in Seattle, Coleman became a high school teacher. He taught chemistry, biology (focusing on native flora and wild edibles), and geology for 28 years. For 20 years, he assisted Dr. Stuntz in the Adult Education Program at the UW, organizing field trips as well as helping in the classroom. After accompanying Dr. Stuntz to meetings, Coleman joined PSMS in 1976. After Dr. Stuntz's death, Coleman taught the education classes for PSMS members. He has served on the PSMS Board, as Education Chair, as Exhibit Chair, and as President. He pioneered and coordinated all efforts to secure our new quarters at CUH, which we all enjoy.

Coleman is also on the education committee of the North American Mycological Association, and made a teaching tape entitled "Range and Diversity of Fungi." He is a past president of the Pacific Northwest Key Council. He wrote the PNWKC key to *Lactarius*, has prepared a preliminary key to *Hebeloma*, and hopes to continue the work of Charles Volz on *Tricholoma*.

An outdoors person, Coleman has climbed the major peaks in our state, taught skiing, and crewed on a sailboat around Vancouver Island and the Queen Charlottes. He loves traveling to other parts of the world and observing the native flora.

Coleman's mycological focus is on forays, identification, and education. I think all of us at PSMS can share in his sentiments and appreciate his good work.

## Spore Prints

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### CALENDAR

- May 11 Field trip, Taneum Creek
- May 14 Membership meeting, 7:30 p.m., CUH
- May 18 Field trip, Crystal Springs  
Cultivation workshop, Tilth garden  
Cultivation trip to Stamets farm
- May 20 Board meeting, 7:30 p.m., CUH
- May 22 Special meeting—Roger Phillips, 7:30 p.m.  
CUH
- May 24 *Spore Prints* deadline
- May 25 Field trip, American River Camp
- June 1 Field Trip, Indian Creek Camp
- June 9 Cultivation meeting, Walter Knox's house

### CULTIVATION GROUP

Lori Knox

The Cultivation Group met on Sunday, April 21st, to distribute spawning kits for *Stropharia rugosoannulata*. These will be used to inoculate outdoor bags of wood chips.

Paul Stamets and family have invited the Cultivation Group to visit their mushroom farm in Olympia on Saturday, May 18, from 10:00 a.m. to 3:00 p.m. Paul is planning a bountiful fruiting in preparation for a TV production. Bring your cameras, notebooks, and potluck dish. Please call Walter Knox at 789-8156 if you need directions and to let us know how many people are coming so we can arrange for car-pooling.

Also on May 18, Lynn Phillips is holding a workshop at Seattle Tilth from 10:00 a.m. to noon to help get *Stropharia rugosoannulata* started in their demonstration garden at 4649 Sunnyside Ave. N. The cost is \$10 for Tilth members and \$15 for nonmembers. Participants will receive spawn and directions for preparing an outdoor mushroom patch at home. Participation is limited. Call the Tilth office at 633-0451 to register.

## Membership Meeting

Tuesday, May 14, 1991, at 7:30 p.m., in the Center for Urban Horticulture, 3501 N.E. 41st Street, Seattle



Our speaker is Professor Nancy Smith Weber of Oregon State University. Her books, including the recent *A Morel Hunter's Companion*, are well known to hobbyists. A specialist in Ascomycotina, she is currently studying the northwestern Pezizales. Note: Members with last names beginning with the letters F,G,I, and J are asked to bring refreshments (cookies, fruit, crackers and cheese, etc.) for after the meeting.

**Special Meeting, May 22, 1991, 7:30 p.m., CUH.** Roger Phillips, British naturalist, photographer, and a delightful speaker, will introduce us to his new book, *Mushrooms of North America*. His previous book, *Mushrooms and other fungi of Great Britain and Europe* is well thumbed by PSMS identifiers. Don't miss this special event. (Members with last names beginning with the letters L,M,M,O, and P—please bring refreshments.)



### BOARD NEWS

Agnes Sieger

PSMS sold \$700 worth of books at the March meeting. Denis Benjamin plans to redo the education material before the beginner and intermediate classes next fall. The Banquet broke even. Elizabeth Hendricks agreed to help with publicity for the show. Half the people who did not renew their membership had joined during the past year; 10%-15% were old members. Marie Guillas will be relinquishing the *Spore Prints* mailing after June. We still need a librarian and are missing some library books.

### INTO THE WOODS WE GO

Mary Lynch

With the warm winds of February and rains of March and April, the 1991 Spring mushroom season looks very promising. The field trip dates and locations follow. We will again have foray leaders to lead small groups into the woods to demonstrate how to hunt for mushrooms. (I do not promise that the Spring groups will be as successful as the Fall groups I led, which all found chanterelles or matsutake.) I promise a lot of fun and beautiful scenery. The groups will go out at 9:15, 9:45, 10:15, and 10:30 a.m.

The hosts (some spots are still open) will be set up by 9:00 a.m. with coffee and hot water to welcome members. Some goodies will be provided, but be sure to eat a good breakfast or bring a lunch/snack to have enough energy for hiking and hunting. Identifiers will be available in the afternoon to assist in identification.

The Great Feast/Potluck will start at 4:00 p.m. One does not have to have mushrooms in their dishes. Any favorite dish is welcome. For noncooks, contributions of bread or drink or munchies are fine. Bring your own utensils. These dinners are a lot of fun as favorite hunt stories and spots are shared.

If you need a ride or want to host or lead a foray, call Mary Lynch, 391-5379.

**May 11** **Taneum Creek Campground**  
(110 miles east of Seattle)

Take I-90 over Snoqualmie Pass to exit 93 and follow road signs to Taneum Road (go 3.8 miles on Thorp Prairie Road and cross back over freeway to the south side). It is 10.2 miles to the shelter from the exit. The last 4 miles are a fairly good gravel road. The rest is paved.

**May 18** **Crystal Springs Campground**  
(elev. 2400 ft, 60 miles east of Seattle)

Drive east on I-90 over Snoqualmie Pass. Continue east 9 miles and take Stampede Pass exit #62. Turn right at the stop sign. After 1/4 mile, before the bridge, turn right to enter the camp.

**May 25-27** **American Ridge Lodge**  
(elev. 2800 ft, 110 miles southeast of Seattle)

From Enumclaw, southeast of Seattle, continue east on State Highway 410 over Chinook Pass. About 17 miles past the summit, turn right onto Bumping Lake Road 174. Turn right again after 1/4 mile and turn right to go uphill and through the gate. Continue for about 1/2 mile to the lodge. We will charge a \$5.00 camping fee. You may sleep indoors but conditions are primitive.

**June 1** **Indian Creek Forest Camp**  
(elev. 3000 ft, 130 miles southeast of Seattle)

From Enumclaw, continue east on State Highway 410 about 40 miles. At Cayuse Pass turn right onto Highway 123 and continue 16 miles to US Highway 12. Turn east onto Highway 12 and go 13 miles to White Pass. Go another 8 miles. The camp is a mile east of the Clear Lake turnoff.

**CONFERENCES, TOURS**

The Telluride (Colorado) Mushroom Conference is Aug. 22-25 and a mushroom tour of Thailand is Oct. 11-29. Call Emanuel Salzman of Fungophile, (303) 296-9359.

**STEELHEAD PARK FIELD TRIP** **Dick Sieger**

Last winter's mud slides dirtied the roadside near milepost 25 on the way to Rockport. Apparently young alder, whose value we measure by the cord, couldn't hold soil ~~once~~ kept in place by real trees whose value we measure by the board foot. Fresh snow from the previous night brightened the hills around Concrete and Rockport.

A few of us—Millie Kleinman, hostesses Betty Hamilton and Margo Harrison, and I—couldn't be drawn from the pleasant shelter and passed the time gossiping over coffee and wine and cookies. We talked about the field trip at Lake Wenatchee 16 years ago when, carrying my 4 month old daughter in my arms, I found a motherlode of morels. I tucked them into pockets, arms, baby blankets. I would have had to leave Amy in the forest if there had been any more. We talked about the restless unborn baby Baxter. We talked about modern shamans. Jack Orth stopped by, and we talked about his predatory kiwi vines that threaten to take over but produce only male flowers. I recalled a field trip to Masonic Park a few years ago when we saw Navarre Orth for the last time before her death. She was very ill, but her spirit still shone.

We were early for *Verpa bohemica* and the cup fungi that grow in Rockport State Park. But squatting on the

fragrant forest floor, I admired minute, crumbly gray-green lichens and a *Pluteus* that was too handsome to collect.

Larry Baxter and I looked at the few species brought back for identification. All but *Verpa bohemica* grew on wood. One was a *Crepidotus* sp. that looks like a small *Pleurotus* but has brown spores. Larry found some large fresh *Pleurotus ostreatus*, his first. It is attached to the tree by a structure that Dr. Libonati-Barnes calls a pseudostipe—from the bottom it looks like a stipe and from the top like part of the cap. There was a brilliant orange-red cup, *Sarcosphaera coccinea*, which frequently appears on early spring field trip tables, and an old, tough, frayed *Coriolus versicolor* that had survived the winter. We checked some *Verpa bohemica* to see if they were strong smelling and conical like the ones that caused a serious poisoning a few weeks before, and looked through a half dozen books trying to identify a *Collybia* with violet gills and brown wavy cap that fit the description for *Baeospora myriadophylla*.

The few of us who stayed for an early potluck dinner enjoyed fine food and good company. Later, a hostess said, "Dick, since the field trip was a bust, would you write it up?" If this field trip was a bust, what is a good one like?

**NOTES ON MORCHELLACEAE** **Dick Sieger**

Spring is the season for the family Morchellaceae in the Pacific Northwest. The family includes morels and is easy to learn because we have few genera, few species, and few look-alikes.

A combination of microscopic features, especially the nature of the spores, distinguishes Morchellaceae from the rest of the order Pezizales. Morchellaceae have oval spores with a smooth surface and no internal oil drops. The ends of the spores lack projections but are unique in having external granules when fresh and still in the ascus. Some Pezizales have an ascus that stains blue in Melzer's reagent, but asci of the Morchellaceae remain unchanged. The family is drab, lacking the carotenoids that brighten many cup fungi.

**Field Key to Northwest Morchellaceae**

- 1a. Stalk absent or hidden beneath the cap . . . . . *Disciotis venosa*
- 1b. Stalk present and clearly visible . . . . . 2
- 2a. Cap smooth or with fertile wrinkles; only the top of the cap attached to the stalk . . . . . (*Verpa* spp.) 3
- 2b. Cap with depressions and sharp, sterile ridges; sides of the cap partly or entirely attached to the stalk . . . . . (*Morchella* spp.) 4
- 3a. Cap almost smooth . . . . . *Verpa conica*
- 3b. Cap entirely wrinkled . . . . . *Verpa bohemica*
- 4a. Cap margin free from the stalk like a skirt. . . . . *Morchella semilibera*
- 4b. Cap margin attached to the stalk . . . . . 5
- 5a. Ridges on the cap darker than the depressions . . . . . *Morchella angusticeps* and others
- 5b. Ridges on the cap the same color as the depressions or lighter . . . . . *Morchella esculenta* and others

Confirm your identification with a good book like *A Morel Hunter's Companion* by Nancy Smith Weber.

## Notes on the Species

*Disciotis venosa* smells like chlorine laundry bleach, separating it from the legion of tan cup fungi we find in the spring. It has a sagging, flattened, cup-like shape and friable flesh. Mature specimens are brown and wrinkled inside and tan and blistered outside. It grows in clear cuts and is seldom found. Few people have eaten it—consider its consumption a medical experiment rather than an adventure in dining.

*Verpa conica* is rarely collected in the Puget Sound area. I last found it in the mid '80s in an abandoned Kirkland apple orchard that has been transformed into a parking lot. It looks like the more familiar *Verpa bohemica* with the cap's wrinkles ironed out. It is probably edible but rarely eaten; please save it for study. What we call *Verpa conica* may be another species. Edmund Tylutki's *Mushrooms of Idaho and the Pacific Northwest* gives a spore size of 28-34 x 15-19  $\mu\text{m}$  and that is the size we find. A dozen North American and European books give a much smaller spore size, about 21-26 x 12-15  $\mu\text{m}$ .

*Verpa bohemica* has two spores per ascus rather than the eight found in other Morchellaceae. That leads some mycologists to move it into its own genus, *Ptychoverpa*. It is a northern species, uncommon in Europe and North America but well known to local mushroomers. Early morels provide the first meals and toxicological statistics of the year. Parboiling removes some of the risk and all of the flavor. For people who can't tolerate the mushroom, the poisoning takes two forms. In the gastrointestinal form, the body rids itself of irritants quickly and effectively. The other form, usually after large quantities are consumed, produces loss of muscular coordination. The toxin is unknown.

*Morchella semitibera* has some features of *Verpa* and some of *Morchella*, so some authors place it in the monotypic genus *Mitrophora*. Cutting the mushroom in half from the cap down through the stalk shows that about half of the cap is attached to the stalk and the rest hangs free like a skirt. One seldom sees it around here. It is considered indifferent fare.

*Morchella esculenta* and *M. angusticeps* are the two names I use for morels, leaving dozens more for you to use. Identifying species of morels is difficult, if not impossible, because microscopically they are so similar and macroscopically one shape and color blends into the next with no clear boundary. Environment may affect their appearance. It may be possible to assign names to some of the distinct morels. For instance, a filter-tip size morel fruits in central Oregon west of the Cascades and PSMS's Morel Committee was able to group some forms using a statistical program. More than a few people become ill after eating morels, but just about everyone else loves them. I even heard of some one who is allergic to dairy foods who fries his morels in butter anyway because they taste so good. *Sunset Magazine* said morels have a smoky flavor. That is true for morels from Pakistan and India where they are dried over smoldering dung.

Thoroughly cook all Morchellaceae before eating them. Make sure you can tell them from Helvellaceae and particularly from *Gyromitra esculenta*, a dangerous look-alike. *G. esculenta* contains gyromitrin which produces monomethylhydrazine at moderate cooking temperatures. This toxin can cause debilitating illness and death. Dr. Ammirati states that Gyromitrin and monomethylhydrazine have not been found in any of the Morchellaceae.



Good hunting, and dry them in the sun!

## ARBORETUM STUDY GROUP

C. Leuthy

The University of Washington Arboretum Foundation is in the process of organizing a mushroom study group. This is another opportunity to study, think, and learn about mushroom and have them identified.

Meetings are scheduled at the Graham Visitor Center in the Arboretum on May 13th and June 11th at 9:30 a.m. The program will begin at 10:00 a.m.

For information, call Coleman Leuthy, 322-2554.

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Regular meeting, Nancy Smith Weber, May 14  
Special meeting, Roger Phillips, May 22