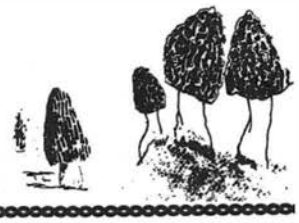
SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 232 May 1987



OREGON CHANTERELLE STUDY

Agnes Sieger

Commercial pickers are getting all the mushrooms. There are plenty of mushrooms for everyone.

Passions are running high these days, and not just here in the Pacific Northwest. But the truth is, no one knows just what the effects of picking are.

The Oregon Mycological Society is trying to find out. Last August, with scientific advice from Dr. Joseph Ammirati of the University of Washington, OMS formed the Oregon Cantharellus Study Project to examine what effects, if any, harvesting has on the long-term population dynamics of *Cantharellus cibarius*, the yellow chanterelle. This is an ambitious project for an amateur group. The Forest Services Laboratory at Oregon State University, Corvallis, which is helping in the study, recommends taking 3 years of baseline data before even starting to pick. At least another 7 years will be needed to determine whether any changes are due to picking or to weather conditions or other natural phenomena.

Commercial harvesting of wild mushrooms involves many interests besides just the amateur mycologist or pot hunter. The OMS Conservation of Mushroom Habitat Committee, which is in charge of the study, has tried to include as many viewpoints as possible. The chairman is the editor of *Northwest Woodlands*, a private publication for small timber interests. He is concerned with the effects that mushroom harvesting might have on the trees, and whether landowners might make money by leasing picking rights. Some of the committee are conservationists concerned with the ecology. One is a mushroom wholesaler hoping to prove that picking does no harm. The committee is trying to involve the Native Plant Society, since mushroom picking may affect vascular plants both directly, through trampling, for example, and indirectly, through the destruction of mycorrhizal associations. The U.S. Forest Service has been a big help. "They're very interested in it," says OMS President Lorelei Norvell. "Once you bring them out during chanterelle season, they get real interested in it."

Impartiality is not the only reason for having a large committee. "We'd like to get as many people as humanly possible," says Lorelei, "because we're going to have to have some people who don't burn out."

She foresees difficulties with burnout because the team working the plots is fairly small, perhaps 10 or 12 people. "Obviously, one of the biggest drawbacks to this whole project is that it's going to involve members who are already involved in Society activities. They have the knowledge." During the season last fall, members tried to visit the plots once a week. "It had to be off the weekends when we're running field trips, we're running forays, we're running shows. It was really impossible to find people who were able to go."

continued on page 4

MUSHROOMS ARE COOKING AT LARRY'S

Patrice Benson

PSMS is collaborating with Larry's Markets to educate the public about the culinary aspects of our local wild mushrooms. On Wednesday, May 13, there will be a free lecture/slide show/cooking demonstration from 6:30-8:30 p.m. at Larry's Market in Oak Tree Plaza, 10008 Aurora Ave. North. Seating is limited, so reservations are required; they can be obtained by phoning 527-5333.

On Saturday, May 16, there will be a cooking demonstration booth at the same Larry's from noon until 6:00 p.m. At the booth, I will be preparing samples of wild mushrooms stocked at Larry's to educate the general public about cooking and eating our delectable wild fungi, as well as divulging information about membership in the renowned Puget Sound Mycological Society. I still need volunteers to help prepare the mushrooms and distribute info at the demo site, as well as to help answer the questions the public will have about all aspects of mushrooms and mushrooming. Please phone me at 722-0691 if you have an hour or two to donate on that day.

GROWING THE OYSTER MUSHROOM

Agnes Sieger

One of the more popular edible mushrooms is *Pleurotus ostreatus*, the oyster mushroom. This species grows abundantly on standing or fallen alder, cottonwood, and maple. It is especially numerous in river valleys and fruits in the fall, early winter, and spring across much of temperate North America.

Its ability to fruit on common straw, to permeate the straw rapidly while tolerating high levels of carbon dioxide (a metabolic gas generated during mushroom growth), and to produce abundant crops within a short time also makes it an excellent choice for small-scale cultivation at home.

Strains of this species are readily available from commercial and private stocks, such as the Full Moon Company which had a booth at the show last October. The nominal yield is 1 kg fresh weight of mushrooms per kilogram of dry weight of straw substrate.

The following method of growing *Pleurotus ostreatus* -- recommended specifically for amateur growers by Bill Chalmers, a supplier and cultivator of exotic mushrooms and equipment -- appeared in the May 1987 issue of *Mycofile*, the Newsletter of the Vancouver, B.C., Mycological Society.

1. Cut 1 kg of wheat or barley straw into 2-in. lengths and pack into a fabric bag such as a pillowcase.

2. Make a little nest in the middle of the straw and add 2 cups of bran and 1 Tbsp of calcium carbonate.

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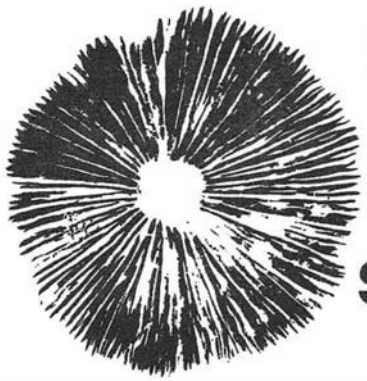

PSMS Spore Prints

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(206) 522-6031

Calendar

May 16	Field Trip, Soda Springs
May 18	Mushroom Identifier, 3-7:00 p.m., CUH Board meeting, 7:00 p.m., CUH
May 19	Beginners' Class, 7:15 p.m., CUH
May 23	Field Trip, Clear Lake
May 26	Mushroom identifier, 3-7:00 p.m., CUH Membership meeting, 7:30 p.m., CUH
May 30	Field Trip, Swauk Creek
June 6	*Spore Prints* deadline
June 13	Field Trip, Crystal Springs
June 15	Board meeting, 7:00 p.m., CUH

NEEDED: Help for the Mailing Committee

Catch up on the latest gossip as you sit and stuff envelopes. Save Millie from having to cart around boxes of stationery with her bad back. The next mailing date is Monday, June 15th. Call 323-2903 now to volunteer. Millie needs you.

Membership Meeting

Tuesday, May 26, 1987, at 7:30 p.m. in the Center for Urban Horticulture, 3501 N.E. 41st Street, Seattle.

Program: PSMS scientific advisor Dr. Joseph F. Ammirati will speak about the dark side of mycophagy -- the danger of taking a cavalier attitude toward selecting wild mushrooms for the table. Dr. Ammirati is widely respected for his knowledge of poisonous mushrooms. An Associate Professor of Botany at the University of Washington, he is an author of *Poisonous Mushrooms of the Northern U. S. and Canada* and is preparing revisions to *Mycology Guidebook* and *The Savory Wild Mushroom*.

PRESIDENT'S MESSAGE **Coleman Leuthy**

Whee! It seems like the process of moving will never end. Perhaps we are finally about settled. We now have our name on our office door.

I goofed at the April meeting -- the June meeting will be on Monday the 22nd, and the board meeting on the 15th. *Starting in September, the membership meetings will be on the second Tuesday of the month.* The Board of Trustees will still meet on the third Monday.

Six very nice wooden folding chairs have been donated to the office/library by Mary Lou Lutz. Thank you, Mary Lou.

Our display case needs sanding, varnishing, and painting in places; it also needs green felt and mounting brackets to secure the glass top. One or two people could be used at this task.

Missing: A historian and scrapbook preparer. Who would like to continue the good work done in the past?

I have been asked about car pooling, both to meetings and to field trips. I would like to work out a system for fall. Who can help one afternoon a week (Wednesday, Thursday, or Friday) in the office so people will have someone at a set time and place to contact?

Photographers take note: I would like to start a special interest photography group. If you are interested in photography, please let me know.

BOARD NEWS **Lois Skoor**

Two motions were passed by the board. The first was to form a committee to submit the name and a biographical sketch of Dr. Daniel E. Stuntz to the Washington State Historical Society for inclusion in the State Centennial Hall of Fame. The second was to increase the dues for the Society, as of July 1, to $10 for individuals, $15 for families, and $8 for students.

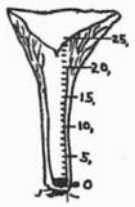
Plans were being formulated by Dennis Bowman for a summer picnic in Gas Works Park on Monday, July 20th.

Caroline Irvin has resigned from the Board, and Dan Schwenk is moving up from alternate to Board member. The new alternate is Jack Herndon.

New library hours are Wednesday 6:30 to 8:30 p.m.

BUILDING FUND — Coleman Leuthy

The building fund now totals about $1300. I want to thank everyone who contributed since the last *Spore Prints*, and especially Reynaldine Sandahl and George Rafanelli. In order to reach our goal in two years, it will take 500 members contributing $50 each on the average. Save the green sheet from the April issue and contribute when you can. If you don't have a green sheet, see any Board Member. They'll be more than happy to oblige.



FIRST ANNUAL SUMMER PICNIC — Dennis Bowman

Bring your shorts and sunglasses and join the fun at Gas Works Park on July 20 because PSMS is having a summer picnic.

The Boas will be bringing their truckload of games, Bob Hanna will be showing us a bit of kite flying, and all you have to do is

1. Bring a meat dish for yourself to cook on an already hot grill (we'll help with the cooking).
2. Bring a dish to pass for the table to share.
3. Provide your own table service.

We have the park for the entire day so some of you may want to come early and practice your horse shoes. More next month. Mark your calendar.

BOOK SALES, FINE ARTS, HABERDASHERY — Judi Boa

The long awaited *Wild Mushroom Cookery* by the Oregon Mycological Society is finally out. It looks great. I will have one at the next meeting to pass around and take orders. The price is $12.95 retail, but PSMS members get a discount.

Now that we have some rain and the mushrooms are popping up again, why not get some new identification books. I just happen to have a great selection.

One of the best is *How to Know the Gilled Mushrooms* by A. H. Smith, Helen V. Smith, and Nancy Smith Weber. This is a "complete" book, describing many species peculiar to the Northwest, ones that can't be found in other field guides. Concise descriptions and numerous drawings make it useful to beginners as well advanced amateurs (drawings are more useful than colored photographs because they emphasize distinguishing features). At the beginning of the book are sections on how to collect mushrooms, how to store them, how to identify them (with wonderful illustrations), how they develop, what the microscope shows (more good illustrations), how to cook them, why some are dangerous to eat, and where to look for more information. A fine index is combined with a glossary. The main part of the book is organized as a key to species. This is a useful book for anyone who wants to identify mushrooms or learn more about them.

New address: David and Jennie Schmitt
P.O. Box 44209-FMCA 75080
Cincinnati, OH 45244-0209

FIELD TRIPS — Andy Green

For last-minute changes, check the PSMS answering device, (206) 522-6031, Wednesday - Saturday before each field trip.

Soda Springs Forest Camp — **May 16, 1987**
Go east on Route 410 over Chinook Pass. About 17 miles past the summit, turn right onto Bumping Lake Road 174. Continue about 5 miles and turn left into the camp at the Soda Springs sign.

Clear Lake Forest Camp — **May 23-25, 1987**
The camp is southeast of Mt. Rainier National Park on State Route 12. Use the well marked turn-off about 7 miles east of White Pass summit. Travel four-tenths of a mile and take the left fork which is Road 1312. Continue another half mile and turn right into the campground that is across the road from the Spring Forest Camp. There is no shelter or water.

Swauk Creek Forest Camp — **May 30, 1987**
Take I-90 over Snoqualmie Pass and use exit #85, just east of Cle Elum. Follow Route 970 to the Route 97 intersection. Turn left (north) and continue on Route 97 for about 16 miles. The campground is on the right. Swauk Pass is about 4 miles past the campground.

Crystal Sprints Forest Camp — **June 13, 1987**
Use I-90 over Snoqualmie Pass. Nine miles east of the summit, take Stampede Pass exit #62. Turn right at the stop sign. After a quarter mile, before the bridge, stay right to enter the camp.

ROCKPORT FIELD TRIP — Millie Kleinman

Fifty-four members converged on Rockport for the first club foray of 1987, hunting *Verpa bohemica*.

Almost everyone found *V. bohemica* and eleven other species were identified. Many new members were indoctrinated on their first successful hunt by Monte and Hildegard Hendrickson, and returned with baskets of fresh, choice mushrooms. Twenty-nine members stayed for a gourmet meal, which was hosted by Irwin and Millie Kleinman and Andy Green.

Welcome to the following new members:

Charles and Hiroko Brusseau	941-0653
Christopher and Susan Burdge	522-5050
Beryl Dearden	325-3706
Dorothy Dudley	391-6626
David and Luella Garberich	248-0952
Gisela Klos	483-0895
Jonnie McKie	271-3077
Amy E. Pollack	329-6180
Betty C. Schaffner	852-2811
Charles K. Yasuda	364-1600

New phone numbers:

Kate Blowers	838-5843
James Herndon	782-8570
James Odell and Linda Peterson	885-9825
Ralph Plaisted	226-3282
Amelia Schultz	363-4304
Joanne Sebring	868-8910
John Wellman	868-3956

Oregon Chanterelle Study, *cont. from page 1*

So far, the committee has set up 10 plots and, "after interminable wrangling," is beginning to iron out their methodology. The plots are at 2010 ft elevation on the Little Sandy River near Mt. Hood. The vegetation is mixed, with hemlock, Douglas-fir, vine maple, and a lone cascara tree.

"We originally had envisioned plots of approximately 1000 square meters," says Lorelei, "but when we got out there with our clothesline traipsing around the woods, we realized we had a lot of little salal leaves to look under. So they vary in size from 16 square meters to maybe 128 square meters." (To make it easier to computerize, everything is being done in units of two.)

Each plot is divided into grids 2 meters on a side. Most of the plots are long and narrow (2 m by 16 m) so they can be studied without trampling. One, however, is 4 by 4 m (they couldn't resist including the whole chanterelle patch), and one is 8 by 8 m to study the effects of trampling on the mycelium.

The plots are numbered and catalogued and marked with building tape and clothesline attached to big white poles. Each mushroom is identified and assigned to a unit on the grid. In addition, each chanterelle is numbered and marked with a bamboo skewer and brightly colored fabric tape.

"I seem to be elected the one that's doing the fungal inventory," says Lorelei. "Jan Lindgren knows vascular plants, and she's doing the vascular plant inventory. We still have other things we have to do, like the mosses and the lichens. We have to set soil blocks for soil moisture. We're only 3 or 4 miles away from a full weather station, so we'll be getting data from that."

Many variables affect mushroom productivity: rainfall, relative humidity, distribution by animals, air and soil temperature and moisture, soil composition, and nutrient availability to name some.

"This is why you need control plots," maintains Lorelei. "Because if you don't have the control plots and you have an off year when there aren't any chanterelles, everyone says, 'Uh-huh, it's the picking that doing it. The pickers are getting all the chanterelles.' Last year I was telling people until I was blue in the face, 'You can't say that. It's not a good year for chanterelles.'

"The chairman of the committee is strongly urging that we put up rather large plots which we immediately start picking, using the 10 other plots to provide information on type of flora in the area, so immediately we can still the clamber, What are you finding?"

The OMS committee may not have any data on picking yet, but it is beginning to learn how chanterelles grow. That they are very long lived, for example. That some get up to about 2 cm and never develop any further whereas others jump from 2 cm up to 5, 6, or 7 cm. That areas only a few feet apart and within 10 ft in elevation peak at different times.

It should be an interesting study, and an extremely useful one.

Many shall run to and fro, and knowledge shall be increased.
–Daniel 12:4

Growing the Oyster Mushroom, *cont. from page 1*

3. Holding the top shut, shake the bag to mix the ingredients.

4. Tie the bag shut and immerse it in water held at 140°-150°F for 1 hour. Use a heavy object (brick) to keep the bag under water.

5. Clean the work area and sink with a solution of one part household bleach to ten parts water.

6. Remove the bag to the sink to drain and cool (leave it for at least 1/2 hour, or overnight if you wish).

7. With clean hands, clean clothes, and a clean work area, transfer the straw to a new large garbage bag. Tie the large bag shut very near the top. Move the bag around to loosen up the straw and help cool it so it is no more than "wrist" temperature.

8. Open the bag and put in 1/2 to 1 cup of *Pleurotus* spawn. Tie the bag shut near the top. Tumble the ingredients to mix.

9. Fold a new clear plastic bag (about 14 in. by 18 in.) into lengthwise pleats and punch holes through all the layers. When unfolded, there should be 15 to 20 holes.

10. Transfer the straw to the perforated bag. Compact the straw, tie the bag tightly, and tape the corners down neatly.

11. Rinse out the large garbage bag and put the clear bag inside it. Fold the top down loosely.

12. Leave this bag in a relatively cool place for the first 3-4 days (a basement at 50-60°F is OK). You can then move it to a warmer place if you wish, but 60°F is alright.

13. After the spawn has colonized, light (12 hours a day) and ventilation are needed. The top of the bag may be rolled down. Make about twenty 1-in. cuts near the upper part of the clear bag, and open the top.

14. As fruiting takes place, mist with water once or twice daily until fruiting bodies are 30-40% of harvest size and then as needed to prevent caps from cracking.

15. As the fruiting cycle draws to a close and the bag feels very light, it can be soaked in water to induce more mushrooms to grow.

Two cautions: (1) Because of the abundance of spores generated by *Pleurotus*, growing these mushrooms in enclosed spaces can cause allergic reactions in some people. (2) Unlike *Agaricus* and similar genera, *Pleurotus* fruiting bodies release spores almost from the moment they are formed, raising the possibility of infesting the surrounding environment. Indeed, Pat Patterson of the Oregon Mycological Society recalls that several years ago in Harrisburg, Oregon, spores from some oyster mushrooms being grown in an old wooden building escaped and infested the joists, causing the second floor to collapse straight down into the junk shop below.

YOUR PSMS MEMBERSHIP HAS LAPSED.

If you wish to renew, please fill out and return the following form.

PUGET SOUND MYCOLOGICAL SOCIETY 1987 MEMBERSHIP RENEWAL

Enclosed is $ _____

$12.00 Family Membership
$ 8.50 Single Membership
$ 6.00 Full-time Student Membership

Please mail your check and this form to: Margaret Holzbauer
703 S. Cloverdale St.
Seattle, WA 98108

Name _____

Address _____

_____ Phone _____

A return envelope, stamped and self-addressed, will be appreciated.