

SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
2559 NE 96th, Seattle, Washington, 98115

January 1983

Number 188



PROGRESS REPORT ON THE BANQUET PREPARATIONS

The enthusiasm about putting on the 19th Survivors Banquet ourselves is increasing. Since we are fortunate to be located in a suitable facility, we can manage all activities. This alone is exciting. There are many tasks to accomplish and we urge all members interested to help to call Banquet Chairman Charlotte Turner-Zila (325-1519) or sign up at the January membership meeting. The experts for the various activities are already chosen, but they need assistance. Nobody has to wash dishes since we are renting the plates, silver ware and glasses, and they go back unwashed. All the help is needed for reservations, set up, decorating, and food preparation. (Actually, we feel that the members who work during the banquet (mainly serving) should not have to pay for their tickets.)

A group of sixteen recently prepared, served, and ate a "trial" banquet. The comments were very positive and certainly encouraged us to go ahead with our plans as outlined last month.

The 19th Survivors Banquet will be held on Friday, March 18, 1983 at the Monroe Center. The price is \$12 for a gourmet meal and beverage. Reservations can be made at the January membership meeting. For banquet information you may also contact Judi Boa (phone 725-1235). If you are unable to make your reservations in person, you can send your check @ \$12 per person to Joyce Anderson, 1906 - 163rd N.E., Bellevue, WA 98008. Since the banquet price is uniform, no tickets will be sent (your cancelled check is your receipt and you can't forget your tickets at home). Upon arriving the members and guests will be checked in.

Since only 200 reservations will be available, it is advisable to get your name on the list early or you will miss a very new and unique activity of our Society.

Additional banquet details will come next month.

MUSHROOM DONATIONS ARE NEEDED FOR BANQUET

Frozen, dried, and canned and pickled mushrooms (chanterelles, boletes, morels) are needed for at least three banquet dishes. Dried, canned and pickled ones can be brought to the January and February membership meetings. Call the banquet chairman for a pick up of frozen mushrooms.

ELECTIONS FOR 1983 OFFICERS AND BOARD

According to the By-Laws PSMS members must elect five members to the Board as well as a Vice President and a Secretary. The election committee, chaired by Earl Harrison (phone 932-1612) and consisting of Fay Melsen (522-5848); Ed Cantelon (242-6115), and Carl Hermanson (723-5127) is asking for nominations.

You may nominate yourself or someone else, but remember you must have that someone's permission. The chairman will be asking for nominations from the floor during the January and February membership meetings.

The Officers and the Board run our Society. They make the policies and take care of the business matters that come up.

BEGINNERS CLASS CONTINUED IN JANUARY

The topics of the Beginners Class held at 6:45 pm on the Monday evening of the regular membership meeting, will be cleaning, storing, preparing, preserving wild mushrooms. Hildegard Hendrickson will chair this session.

NUTRITIONAL VALUE OF MUSHROOMS

By popular demand we repeat the following nutritional analysis of fresh mushrooms which was originally published by the Mycological Society of San Francisco. It refers to 100 grams.

	Common Button (<u>Agar bisporus</u>)	Shiitake (<u>Lentinus edodes</u>)
Water	88.10g.	75.37g.
Protein	3.50g.	7.58g.
Fat	0.40g.	0.93g.
Carbohydrate	6.50g.	11.42g.
Fiber	1.09g.	2.47g.
Calcium	2.40mg.	300.00mg.
Phosphorus	150.00mg.	800.00mg.
Potassium	- - -	420.00mg.
Iron	trace	19.00mg.
Vitamins		
A	none	trace
B - 1	0.16mg.	0.16mg.
B - 2	0.52mg.	0.64mg.
B - 6	none	trace
B - 12	none	trace
C	8.60mg.	6.25mg.
D - 2	none	76.90mg.
E	none	none
K	trace	trace
Niacin(nicotinic acid)	5.85mg.	7.60mg.
Pantothenic acid	2.38mg.	3.20mg.
Calories	210	170

As you can see, mushrooms provide you with many vitamins and minerals, and it is the butter that adds the calories.

ONE MAN'S INTENSE RESEARCH

In search of high adventure outside his doorstep, Dr. T.E.T. Bond has kept track of every mushroom that appeared in the lawn of his garden in Bristol, England, over several years. He writes in the October, 1981 issue of the Bulletin of the British Mycological Society that between 1972 and 1976, he found 86 species of macro-fungi and 10,254 individual specimens. He surveyed his domain (about 1/10 acre) every ten days which, during times of abundance, took 3 or 4 hours each time. A wealth of data emerged and Dr. Bond can claim intimate knowledge of his mushrooms. He now knows their preference with regard to weather, time of the year, vicinity of various trees, etc. No mention is made of culinary uses of this exercise, understandably in view of the relative scarcity of delectables. The most common species, in fact, were Galerina clavata and G. graminea. ... An Englishman's home is his castle as well as his stalking grounds.



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Spore
Prints

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OFFICERS Milton Grout, President, 1984 (1)
John Kunz, Vice-President, 1983 (1)
Ferris Anderson, Treasurer, 1984 (1)
Margaret Holzbauer, Secretary, 1983 (2)

TRUSTEES - Term expires March 1983: Hildegard Hendrickson (1); Monte Hendrickson (1); Grace Jones (2); Dennis Krabbenhoft (2); Agnes Sieger (2).

- Term expires March 1984: Kearney Kozai (1)
Marian Maxwell (1); Richard Pauli (1); Don Schultz (2); Charles Volz (1).

ALTERNATES: Ernie Boa; Judi Boa; Charlotte Turner-Zila.

IMMEDIATE PAST PRESIDENT: Carl Hermanson

SCIENTIFIC ADVISOR: Dr. Daniel E. Stuntz

Calendar

- Jan. 10 Monday, 6:45 pm Beginners' Class
Monday, Membership Meeting, 8:00 pm
- Jan. 24 Board Meeting, 7:30 pm Monroe Center
- Jan. 28 Deadline for Spore Print Material. Send all material to 2559 NE 96th, Seattle, WA 98115
- Feb. 14 Monday, Beginners Class & Membership Meeting
- March 18 Friday, The 19th Annual Survivors Banquet

FINAL REMINDER TO PAY DUES FOR 1983 MEMBERSHIP

If you have not done so, please send your 1983 membership dues (\$12 for a family membership; \$8.50 for a single membership; and \$6 for a student membership) to 2559 NE 96th, Seattle, WA 98115, and you will remain a member in good standing. Note that new members who have joined PSMS since September 1982 have their membership paid till Dec. 1983.

Our membership chairman has decals, pins, and patches - all displaying the Society's logo for sale at the membership meetings. Also the red nametags can be ordered through Aino Kunz.

The PSMS fiscal year coincides with the calendar year, and if you have not sent in your check by the end of this month, the issue of Spore Prints you are reading now will be the last one you will receive. Pay up, don't be sorry!

Membership Meeting

Monday, January 10, 1983, 8:00 pm in the auditorium of the
MONROE CENTER, 1810 N.W. 65th Street, Seattle

Program: Charles Volz, the second president of PSMS and current field trip chairman, will give a slide illustrated lecture on the genus TRICHOLOMA. The presentation by our resident expert on this difficult genus should be very informative and enlightening to all of us.

BOARD NEWS

H.R.H.

A quorum present, the meeting started with an acceptance of the minutes of the previous Board meeting. After an examination of the Treasurer's cash flow report, President Grout asked the Treasurer to analyze PSMS cash flow in terms of the various activities (membership, annual exhibit, book sales, donations, etc.) in order to ascertain this relationship. Also the President wants recommendations from the Board in regards to the kinds of donations PSMS should make. President Grout suggested that the donations should be in the best interest of the Society. PSMS cash flow is smaller than the past two years and faces possibly large expenditure if the Educational Pamphlet is reprinted.

President Grout is organizing the intermediate class which was requested by the membership. As soon as the format, time, cost, etc. are known, we will announce in Spore Prints. President Grout welcomes suggestions in this regard.

President Grout has reserved the dates for our meetings for the next year with the Monroe Center and signed a contract with the Center. Also the PSMS show equipment will be stored in Dr. Stuntz basement. Thank you! President Grout is still trying to find a chairman for the 1983 Annual Exhibit.

The rest of the meeting was devoted to a discussion of the 1983 Survivors Banquet. Details are in another section of this issue.

POSSIBLE FORMATION OF A MUSHROOM CULTIVATION GROUP

On and off we have had inquiries about growing one's own mushrooms (including recently a query about how to successfully grow morels commercially). Yet, within PSMS, to the best of my knowledge, such attempts have not been undertaken. Some of our members have purchased "kits" and after following instructions very carefully, only showed varied degrees of success.

The interest in cultivating mushrooms usually comes from two sources: some consider it a challenge, others want to be sure to have a supply if the natural resource is depleted.

David Thurlow (phone 746 - 0887) a new member and a confessed greenhorn, would like to know how much interest is present in the PSMS membership about cultivating mushrooms. He will obtain information and sources of supplies about growing one's own mushrooms. He will then call a meeting of all interested parties.

And this is where YOU come in. Let David know if you are interested; what you know and/or have done along this line. With a concerted effort, we probably can make progress in the cultivation effort. We want to emphasize again that no prior knowledge or experience is necessary to participate in this group. We will all learn together.

NOTES ON GROWING MUSHROOMS

The Mother Earth News, September/October 1979 issue has an article on growing oyster mushrooms. Also see the article in the November issue of Spore Prints (page 4) by PSMS member Royce Harvey of Los Angeles. We also have a report of a lady growing oyster mushrooms on Bainbridge Island.

We are still waiting to hear about the success, or lack of it, of growing Shiitake on the logs purchased at the Annual Exhibit. We appeal to all members to tell us about their experiences.

From the newsletters of other mycological societies we gleaned that some of their members who scattered morels and wood blewits in their gardens "harvested" a small crop the coming year. Here in Seattle, we have heard that people who scattered bark on their flower beds found morels growing the following spring. Unfortunately, no second crop appeared.

Kathrin Sather sent in a clipping from a German newspaper reporting the cultivation of "brown caps" (only the common name was used, and it seems to be a kind of boletus) on wet straw. The wet straw was put in a shady part of the garden, inoculated with "seed" in the fall, and some 10 to 14 weeks later the first flush was harvested. Frost does not harm the operation. The harvest lasts three to four months. The article gave a source for the "seed".

PSMS is regularly receiving the publication of the American Type Culture Collection. Their catalog states that ATCC maintains the largest collection of fungal seed stock in the U.S. Over 15,000 fungal cultures are stored in liquid nitrogen at -196°C . ATCC also announced the recent establishment of a World Bank for edible mushrooms. Over 500 strains have already been received, including 40 strains of Lentinus edodes. Ascomycetes and basidiomycete subcultures are available in test tubes.

NEW EDITION OF POPULAR BOOK AVAILABLE

A new edition of the popular mushroom book, Lange & Hora: Collins Guide to Mushrooms and Toadstools has been issued at retail \$14.50. Judi Boa (phone 725-1235) will take orders for the book so that a discount can be obtained for our members.

Judi will have 1983 mushroom calendars and books available for sale at the January membership meeting.

Another book has come to our attention, and if enough orders are placed by members, we will obtain it: The Mushroom Feast by Jane Grigson, published by Alfred Knopf, New York, 1975, hardbound, 305 pages, retail \$12.95.

The book is not an identification manual. It is a cookbook for wild mushrooms. The author chose 19 of what she considers the best wild mushrooms for the table (Agaricus bisporus, campestris, arvensis; morels; Boletus edulis; black and white truffles; shiitake; chanterelles; matsutake; Auricularia polytricha; Volvariella volvacea; Lepiota procera; Marasmius oreades; puffballs; shaggy manes; woods blewits; oyster mushrooms; Russula virescens; Amanita vaginata; Hydnum repandum, and horn of plenty; and proceeds to illustrate in numerous ways the choicest methods of cooking each. There are separate chapters on sauces, stuffings, and soups, main dishes side dishes with meats, and a special chapter on mushroom cookery of the Japanese and Chinese kitchen. There is a warm introduction to each recipe telling something special or personal about each. The book has superb line drawings by Yvonne Skargon.

MORE ON MUSHROOM CULTIVATION

NAMA has formed a Mushroom Cultivation Committee chaired by Rick Gamble, 522 6th Street, Annapolis, Maryland 21403. The purpose of the committee is to exchange information on the cultivation of edible fungi. Mushroom cultivation requires considerable experimentation. Communication will save duplication of mistakes.

The Mycological Society of San Francisco has an active cultivation group operating under the chairmanship of Fred Stevens. The group meets prior to the monthly membership meeting of the Society and exchanges information about successes and failures of their endeavors or features lectures. Both of these groups can be contacts and resources for PSMS members who have interests along this line. I wonder whether people in the Pacific Northwest have shown so little interest because we are blessed with many varieties of mushrooms in plentiful supply fruiting over two long seasons.

U.S. MUSHROOM GROWERS THREATENED BY IMPORTS

The U.S. mushroom-growing industry is being battered by cheap imports. Chinese canned mushrooms imported in 1981 totaled 27 million pounds. Before resisting imports from mainland China, the mushroom growers battled against mushroom imports from Taiwan.

The outlook for growers is particularly grim in southeastern Pennsylvania. Kennett Square (population 5,000) calls itself the mushroom capital of the world. In this town even gas stations sell mushrooms. In Chester County the number of mushroom farms dropped 60% from last year. There are presently 650 mushroom farms in the U.S., and it is feared that at least 100 will go out of business next year.

The industry's slump, ironically, comes at a time when America's demand for mushrooms is greater than ever. The Chinese ship only processed mushrooms and have not attempted to sell fresh mushrooms in the U.S. But the smaller farms accustomed to growing for the processed market find it hard to convert quickly to selling fresh produce. Growers say it takes time and luck. Fresh mushrooms rely on eye appeal. Growers aiming for the fresh market must adjust soil and other conditions to discourage less appealing brown or cream-colored produce. Shoppers usually buy only snow-white, unscathed ones, and many of the highly perishable fungi discolor when exposed to light.

The problems for U.S. growers began in early 1980, shortly after China received most-favored nation status. In spite of a pledge in 1979 not to dump mushrooms, the growers say, China quickly targeted mushroom farming, which is very labor-intensive, as an ideal export industry. The American Mushroom Institute has called for import quotas like those imposed by the European community.

Growers are vulnerable for several reasons. Mushroom cultivation requires dark, dank, windowless concrete houses, where workers, wearing head lamps cure and prepare the mushrooms and their compost. Farmers in trouble can rarely sell such facilities except to other mushroom farmers, few of whom are eager to invest now. They are also being hurt by high interest rates, which further drive up costs. Growers who leave the industry are rarely prepared for other work. When a major cannery closed in Chester County, Pa., about 1,000 workers lost their jobs. Often they have been in the mushroom business since they left school.

FUNGI FOUND NEAR SNOW BANKS

Dr. David Largent, scientific adviser to the Mt. Mazama and Humboldt Bay Mycological Societies, last spring held a lecture on the above topic. The mushrooms discussed and books in which either an illustration or description can be found, was then printed in Mycographia, the newsletter of the Mt. Mazama Assn. from which we obtained the information. Even though the lecture was geared to southwestern Oregon, most of the fungi also fruit here in the Pacific Northwest in the spring. January is still too early to go out looking for them. But you may want to review your sources so that you are ready when they do appear in the spring.

Fungi Found Near Snow Banks: Lampadara sp. - a slime mold found on twigs and logs protruding from snow banks. Farr: How to Know Slime Molds; Sarcosoma latabensis (Bulgaria mexicana) Arora: Mushrooms Demystified, p.588; Pithya vulgaris, Tylutki: Mushrooms of Idaho and the Pacific Northwest. Discomycetes, p. 32. Calosypha fulgens, Miller: Mushrooms of North America, p. 336. Gyromitra gigas, Ibid., p.328. Discina perlata, Ibid., p. 340. Nivatogastrium nubi-genum, Ibid., p.315. Mycena viscosa, Arora: Mushrooms Demystified, p.205-206. Lyophyllum montanum, Miller: Mushrooms of N.America, p. 148. Plectania nannfeldtii, Tylutki: Mushrooms of Idaho and the Pacific Northwest, Discomycetes p. 25.

Fungi Occurring On Sites Recently Covered By Snow:

Gyromitra esculenta, Miller: Mushrooms of N.Am., p. 332. Gyromitra infula, Ibid., p. 335. Hygrophorus subalpinus, Arora: Mushrooms Demystified, p. 110. Hygrophorus erubescens and H. purpurascens, Ibid., pp. 112-113. Agrocybe praecox and A. acericola, Miller: Mushrooms of N.Am., p. 200. Morels (M. elata is usually the first to appear) Ibid., pp. 325-326. Ptychoverpa bohemica (Verpa bohemica) and V. conica, Ibid., p. 328.

Pyrophilous Fungi: Occurring on burn sites in forests and elsewhere: Pholiota fulvozonata, Smith, Smith & Weber: The Gilled Mushrooms, p.238. Geopyxis cupularis, Smith & Smith: The Non-gilled fleshy fungi, p. 26-27. Cordyceps ophioglossoides, Ibid., p. 61.

Early Spring Mushrooms: Paxina acetabulum, Miller: Mushrooms of N.Am., p. 333. Lyophyllum atrata - often on burnt areas, fishy odor, Pileus very dark when young, 1-2" in dia. convex, umbilicate in age. Stipe short, lighter in color than the pileus. Gills adnate, crowded, rather broad, grayish-white. Melanoleuca brevipes, Smith, Smith & Weber: How to know the gilled mushrooms, p. 119. Flammulina velutipes Miller: Mushrooms of N.Am., p. 132-133. Amanita pantherina, Ibid., p. 34. Agaricus augustus, Ibid., p. 191.

Dr. Largent stated that spring fungi are mainly in the following classes: Ascomycetes, Basidiomycetes, and Myxomycetes. The true and false morels are examples of Ascomycetes, as well as the disc and cup fungi. Gilled mushrooms and boletes are Basidiomycetes, while the slime molds are Myxomycetes.

Dr. Largent also cautioned that eating substantial amounts of morels on successive days may cause poisoning. Don't eat the spring mushrooms raw.

Further Readings:

Cooke, William B., Subalpine Fungi and Snowbanks, 1955 Ecology 36: 124-130.

Miller, Orson K. Snowbank Mushrooms in the Three Sisters

Wilderness Area, 1965 Mazama 47: 38-41.

Miller, Orson K. Notes on Western Fungi, 1967 Mycologia 59: 504-512.

Watling, R. Identification of Larger Fungi, 1973 (Hutton Ed. Pub. Ltd.), Amersham, England, pp. 216-221.

NOTE: Even though you won't find these mushrooms at this time, it will not take too long for the snow banks to start melting from wind and sun, and the fungi can fruit.

MUSHROOMS CAN BITE IN OTHER WAYS Bob Burrell

The editor of the Ohio Mushroom Society wrote this article as a follow-up to "How Poisonous Are Poisonous Mushrooms.

We are all familiar with the many ways that mushrooms may cause toxic or fatal reactions after eating them.

Although the myth persists that the explanation for the occasional toxicity seen with certain mushrooms in only some individuals, but not all, after ingestion is due to allergy, real evidence to support this popular assertion is very hard to come by. I am aware of one case in a member of the New York Club, who had reactions after eating sulfur shelves (Laetiporus sulphureus) that almost certainly was an allergy. The symptoms were not from the intestinal tract however. They were referable to the skin in the form of hives, and most seriously, some initial tightening of the larynx. The mushroom was not fresh, and one other person ate parts of the same mushroom without ill effects. I also have only been able to find but one case of a person breaking out in a rash (something like poison ivy) from merely handling a mushroom, but even this case was not clear cut. It occurred in a worker who grew mushrooms commercially, and in addition to his contact with the mushrooms, he had recently sprayed them with an insecticide, a material much more likely to have caused his rash.

Speaking of mushroom growers, they have other problems. A disease known as hypersensitivity pneumonitis sometimes occurs in these people. This disease is a much more serious and complicated form of allergy and is usually due to the bacteria and molds that grow in the compost, but some cases have been reported from Japan, where it was caused by the spores of the mushrooms being cultivated, Pleurotus ostreatus.

In New Jersey, a few people suffering from seasonal hay fever were found to be sensitive to mold spores rather than pollen. The air was unusually laden with fungal spores. It appeared that the offending agent was spores from Ganoderma applanatum which enjoyed a particularly heavy fruiting in that locality and which produces prodigious amounts of spores.

One form of endocarditis results from microorganisms, usually bacteria, growing on diseased heart valves. It is a chronic, serious disease, unless treated properly. In 1971 a man died from this disease after failing to respond to conventional antibiotic therapy which is extremely effective against bacterial causes of this disease. His heart valves proved to be infected with a fungus that most of the medical mycologists could not identify. Cultures of it were sent to various laboratories and finally an agricultural lab figured out that it was the imperfect (non-fruiting) stage of a Coprinus, most likely Coprinus lagopus.

HAVE HOPE -- SPRING WILL COME SOON

In mild winters members have found Verpa bohemica as early as February 20th west of the Cascades at sea level. But now is the time to study your guides, so you are ready in time!