

SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY

200 Second Avenue North, Seattle, Washington, 98109

October 1978

Number 145



FIELD TRIPS FOR THE FALL SEASON

Dick Steger

Oct. 7 & 8 - The Dalles Forest Camp (2,200'): Travel east on State Highway #410 to about 25 miles southeast of Enumclaw. The camp is on the right. Usually produces a good mix of fall mushrooms.

Oct. 21 & 22 - Fort Worden State Park: 1-1/2 hours from Seattle. Take the Edmonds-Kingston or the Seattle-Winslow ferry and continue across the Hood Canal Bridge to Port Townsend. Follow the signs to Fort Worden State Park, a mile north of Port Townsend. Overnight accommodations are available in the park and campsites may be reserved by calling the park at 1-385-4730. We are guests of the Jefferson County Mycological Society which is holding its annual exhibit this weekend. Pot luck is 5:00 p.m. Saturday. Sunday morning the public will view our mushroom display tables. Half of the county is parkland with deer hunting prohibited, so it should be safe to wander around. *Lepista nuda* and matsutake were plentiful last year.

Oct. 28 & 29 - Oak Patch Camp: Go south of Bremerton to Belfair and past Belfair State Park. At the new blacktop road on the right, bear to the left and uphill and continue for about 3 miles to the wide gravel Oak Patch road. This is a private camp for retarded men. There is no fee, but donations are encouraged. The residents will join us for pot luck, so bring extra food. They look forward to it all year.

Nov. 5 & 6 - Millersylvania State Park: Travel I-5 south. About 10 miles south of Olympia, take exit #95. Go east under the freeway about 3 miles and turn north. The park is about one mile.

AMANITA VERNA FOUND IN WOODLAND, WA.

The Oregon Mycological Society reports that one of their members found some white *Amanita verna* near Woodland, Wa. this spring. They were identified as *Amanita verna*, and this identification was verified by Dr. Joseph Ammirati at the University of Toronto North American Poison Mushroom Research Centre. Previously extremely rare in the Pacific Northwest, we now have evidence that not only *A. phalloides* (found by Ben Woo in Seattle) and *A. virosa*, but also *A. verna* are growing here.

HOW TO COLLECT MUSHROOMS

H.R.H.

For the past two years we have printed an article on How To Collect Mushrooms for the Annual Exhibit. This year we will cover excerpts from that, but also tell new members the best way to collect mushrooms for their own personal use.

If you are collecting mushrooms for the "pot", it is recommended that you field-clean them, i.e. cut off the part of the stem that is dirty, before you put them in your basket. You will be surprised how much easier it is to finish the

cleaning job at home.

If you are collecting mushrooms for the Annual Exhibit, or if you need to have them identified, then bring in the "whole" fruiting body, including the base, since it is often the deciding macroscopic feature for identification.

Also remember that many fungus varieties are fragile and delicate and must be given the greatest care so that they arrive at the Exhibit or at the identification table in their natural form and can be identified and/or displayed.

If you have time to go out Friday, October 13, 1978 go to the area assigned to you by Dave Schmitt (phone 255-5286) and collect some specimens of every variety you see, young, old, edible, non-edible, poisonous, woody, etc. You don't need to be able to identify them. Just collect them, and bring them to the Pacific Science Center parking lot (off Roy Street) starting approximately 5 pm Friday, where somebody will take them over.

HELP IS NEEDED FOR ALL TASKS FOR THE EXHIBIT

Winston Hufford

The 15th Annual Exhibit is just a week and a half away, and a lot of the work still has to be done. Below we are printing the various committees which have been set up to do the work and the persons chairing these committees. The chairmen know what has to be done, but they need help. So, if you have the time, please call one or more of the chairmen listed, and volunteer to help.

NOTE: To gain free admission to the Exhibit every PSMS member must show his/her membership card. Don't forget your card at home!

Committee	Chairman	phone
Book Sales	Helen Wasson	243-6173
Clean Up	Dick Leonard	363-8049
Commercial	Jack Orth	523-0586
	Bob Hanna	767-6381
Construction	Rick White	522-7371
Freeze Dry	Dr. Patricia Winter	486-4264
Greenery Collection	Paul Rule	1-794-8987
Hospitality	Grace Jones	772-5024
Hosts and Hostesses	Laurel Hufford	486-4784
Identification	Charles Volz	363-7465
Labeling	Takeo Mochizuki	772-4519
Membership	Joy McKnight	772-5567
Mushroom Collecting	Dave Schmitt	255-5286
Photo & Slide Show	Joy & Roger Spurr	723-2759
Preservation	Jennie Schmitt	255-5286
Publicity	Marlene Friend	783-4316
Security	Ronald Skoor	935-9841
Sorting & Boxes	Jim Bennett	784-6236
Tray Arrangements	Margaret Dilly	782-8511
	Dorothy Henderson	525-9379

Please don't wait until the membership meeting night to sign up. Pick up your phone and call today. Working on the Exhibit is a very rewarding experience. Don't miss it!



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c/o The Pacific Science Center, 200 - 2nd Avenue No.
Seattle, WA 98109. Mail all articles, art or photos to
Hildegard Hendrickson, 2559 NE 96th, Seattle, 98115.

OFFICERS Jennie M. Schmitt, President (255-5286)
Rick White, Vice-President (522-7371)
Earl Harrison, Treasurer (932-1612)
Sally Ann Hansen, Secretary (246-2673)

TRUSTEES Marlene Friend (783-4316) Bob Hanna (767-
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3053) Winston Hufford (486-4784) Paul Jones
(772-5024) LomNee March (885-0375) Dick
Sieger (362-6860) Fred VanDeBogart (362-
2397) Jack Orth (immediate past-president)

ALTERNATES Dennis Krabbenhoft (839-2454) Stan
March (885-0375)

SCIENTIFIC ADVISER Dr. Daniel E. Stuntz

Membership Meeting

Monday, October 9, 1978, 8:00 pm, Eames Theater,
The Pacific Science Center.

Program: Paul Stamets will talk on Strophariaceae. Specifi-
cally he will tell us how to define the genera Stropharia,
Psilocybe, Naematoloma and Panaeolus, using macro- and
microscopic tools. Paul is currently working at Evergreen
State College, and spoke to us at the June 1978 member-
ship meeting.

Dr. Daniel Stuntz will explain the freeze-dry process.
Also shown will be the short, slide-tape lecture on the
non-gilled fungi.

BOARD NEWS

H.R.H.

When President Jennie Schmitt called the September Board
Meeting to order, a quorum was reached when two members
came over from the fall mushroom class, and one member
returned from having staffed the booth at the Puyallup Fair.

The minutes of the August Board Meeting were accepted as
presented. President Schmitt showed the design for this year's
poster for the Exhibit. The posters will be printed this week
(i.e. Board Meeting week) and available for the class next
week, as well as at the field trips. Marlene Friend, Publi-
city Chairman, has ordered 350 posters and the cost is \$124.
The press releases about the Exhibit are out to all the media.
The Bellevue American publication will do an article about
mushrooms, and the reporter wants to go on a field trip.

Winston Hufford, Chairman for the Exhibit, has received a
letter from the Science Center about the set-up of the Show,
and except for a few changes, the preparations are on sche-
dule.

NOTE: All PSMS members will have to show their member-
ship card(s) when entering the Exhibit this year. In the past
only one membership card per family was issued. Now a
family membership receives two membership cards.

Dennis Krabbenhoft had just returned from the Fair and he
reported that the Tacoma Society had brought in specimens
from their week-end field trip. The interest of the public at
the fair was quite good.

Dick Sieger, Field Trip Chairman, reported that very few
members have volunteered for hosts on field trips. Dick's
work commitments will not allow him to attend all field trips
in the future, and if no hosts are available, the field trips
will have to be cancelled. Dick Sieger and his family have
been hosts at all field trips since he has taken over the job
of field trip chairman.

There have been requests for PSMS badges and pins, and
since the supply is exhausted, President Schmitt will ask
Helen Wasson to have some more made.

The dinner with the Enological Society will be held Wed-
nesday, November 15, 1978. Rick White will write a de-
tailed article for Spore Prints. Members of the Enological
Society will come to the Port Townsend Field Trip to help
collect mushrooms for the dinner.

Paul Jones complained that for the September Membership
Meeting the floor of the Eames Theater was not vacuumed,
seven of the nine tables were dirty, and the podium was
covered with a layer of dust. This will be communicated to
the Science Center.

Calendar

Oct. 7 & 8 Fieldtrip to the Dalles Forest Camp

Oct. 9 Monday, Membership Meeting, 8:00 pm

Oct. 14 & 15 The 15th Annual Exhibit

Oct. 16 Monday, Fall Class, 7:00 pm

Oct. 21 & 22 Jefferson County Foray at Port Townsend

Oct. 23 Monday, Fall Class, 7:00 pm

Oct. 23 Monday, Board Meeting, 8:00 pm

Oct. 27 Deadline for Spore Print Material. Send articles,
photos, and art work to the editor at 2559 NE96
Seattle, WA 98115

Oct. 28 & 29 Fieldtrip to Oak Patch

Oct. 30 Monday, Fall Class, 7:00 pm

Nov. 4 & 5 Fieldtrip to Millersylvania State Park

Nov. 6 Monday, Last Fall Class, 7:00 pm

Nov. 13 Monday, Membership Meeting, 8:00 pm

Nov. 15 Wednesday, Joint Dinner of the PSMS and the
Enological Society.

Details about this dinner are on page 3. Be sure
you get your reservations in on time, since it is
first come - first served. This is a first for our
Society, and we are looking forward to it.

The first field trip of the fall season (September 16 & 17th) started out a little wet, but nevertheless was a huge success. The Masonic Park near Granite Falls has always been a favorite of PSMS as there are accommodations there which are not duplicated in any other camp. Where else can one find 300 acres of beautiful woods, meadows and streams with hundreds of campsites, a shelter complete with deep freeze refrigerator and electric hot plate, and electric lights and picnic tables a plenty. Pot luck dinner under these conditions becomes a friendly family style affair. As usual we had a long line-up, but no one, not even the last one in line, could complain about there not being plenty to eat.

The mushroom hunting was excellent to so-so, depending on the choice of territory. Many people came back with full buckets of Chanterelles. Some of the newer members were so exuberant in their picking, that they just pulled them out of the ground and threw them into their buckets - dirt and all (I am glad I didn't have the job of cleaning these fungi).

There were 87 varieties of mushrooms identified, brought in by 94 members, of whom 56 (plus) stayed for pot luck. There were two ten-foot tables covered with specimens. One lovely Sparassus was brought in, and several Boletus edulis, and a few Gypsies. But the strangest fungus was a Bolete with brown tubes and a dark-brown cap - no one could identify this one (help - Dr. Stuntz!). Our thanks go to the identifiers, Charlie Volz and Jennie Schmitt. The generous donation of their time and expertise makes our field trips an enlightening educational experience as well as a social outing.

We also wish to compliment Dick and Agnes Sieger for the responsible way our field trips have been managed. (I must add however, that I think we are over-working our field trip chairman and that he needs relief in the form of more hosts for the remainder of this season. In short - HELP! Call Dick (phone 362-6860) and volunteer to be a host for a field trip).

Hosts for the Masonic Park Field Trip were Jack and Navarre Orth, and Dick and Agnes Sieger (again, as they have hosted every single field trip, since Dick has taken over the job of field trip chairman. That job means he is arranging the trips, but he should not be required to host them as well!)

MYCOLOGICAL SOCIETY - ENOLOGICAL* SOCIETY MUSHROOM DINNER

Rick White

(* Enology = the study of wine).

After several years of thinking about having a mushroom dinner with the Enological Society, we've finally arranged it. It will be held on Wednesday, November 15th, 1978 at Temple de Hirsch (1511 East Pike). It will be a joint effort in all respects - picking and preserving the mushrooms, cooking the dinner, decorating and setting up the hall, serving, and anything else that comes to mind.

The preparation of the dinner will be under the direction of Francois Kissel, chef and owner of three of Seattle's best French restaurants. The menu for the dinner is not yet finalized, since we don't know at the time of this writing, which kind(s) of mushrooms we will collect the most of. However, we expect to have on hors d'oeuvre, a soup, and an entree - maybe two - and a desert, with the appropriate wines for each. The dinner will be served family style with each table taking care of its own needs.

At this point we need lots of mushrooms: Chanterelles and Boletes, and possibly Morels. Francois prefers them frozen

"row", i.e. put them on a tray and let them freeze, and then package them. Next preference is sauteed and then frozen. Dried mushrooms also can be used. Please call Rick White (home phone: 522-7371 or work phone: 442-1226) to indicate your donation. Be generous! We need about 1/3rd pound of each kind of mushrooms per person!! Since we are cooking for 450 people, that means about 450 pounds of mushrooms (fresh weight).

For other volunteer roles - cooking, decorating, serving, etc. - please fill out the enclosed "Volunteer" coupon indicating what you would like to do and when you can be available to do the work. Also fill out the enclosed "Reservation" coupon indicating the number of people in your party. Send these coupons with your payment of \$12 per person to Rick White, 7728 - 17th Avenue N.E., Seattle, WA 98115. We plan to divide the reservations and volunteer roles equally between PSMS and the Enological Society.

As a member of the Enological Society I can attest that similar dinners held in the past have been very enjoyable. We look forward to a big turnout.

BRING FOOD WHEN YOU COME TO THE EXHIBIT

When coming to see the Exhibit, please bring some food (a hot dish, salad, desert, pickles, olives, snacks, etc.) for the people who work so hard getting the Exhibit under way, and for those who work during the Show. Please put your name on the dish(es), pots, pans, etc. Also, if your dish has special requirements as to heating (what temperature? how long?) please tape these instructions on the dish.

BOOK REVIEW: PAPERBACK EDITION OF MUSHROOMS OF NORTH AMERICA BY O.K. MILLER, JR. H.R.H.

We all raved about the color photographs of the large, hard-bound edition of the above mentioned book, in spite of the fact that the first printing had some errors in photo identification. And in the "big" book the photographs were in the back, and the text in the front, and it took a lot of flipping back and forth in order to coordinate the text and pictures.

Then Dr. Miller redid the book in paperback, and the color photos are now mixed in with the text, and the size of the book has been reduced. But none of the material has been left out. The reduction was achieved through thinner paper. A typical quote about the book appeared in a professional mycologists' journal: "The low price, attractive soft binding, high-quality paper and astonishingly fine illustrations will certainly make this the field book of choice for mushroom hunters in this country. No other field guide can touch it for completeness." (Note: The Savory Wild Mushroom, by M. McKenny and Dr. Daniel Stuntz is mostly oriented toward mushrooms growing in the Pacific Northwest. Ed.) The retail price of this book is \$8.95 and it is published by E.P. Dutton. Be sure to get the second printing, which has a white band across the top of the dust-cover; the first printing was recalled for re-issue. Helen Wasson will have this book for sale at the Annual Exhibit.

ASK PERMISSION BEFORE PICKING FIELD MUSHROOMS

The local newspapers have reported that all kinds of persons have been arrested for picking mushrooms on private property. Usually, the sheriff also confiscated the mushrooms and sent them to a lab for testing. Persons possessing mushrooms which have hallucinogenic properties could face narcotics charges. (These people sure ruin our chances for picking Agaricus campestris. Ed.)

Nearly all individuals who frequent the out-of-doors and enjoy rambling walks through woods or grassy areas have at one time or another seen, picked, kicked, or perhaps eaten some kind of wild mushroom. Those with only casual acquaintance with fungi probably haven't the remotest idea of what great number of insects, invertebrate animals, and even other parasitic fungi will inhibit the vast majority of mushrooms. These are mostly tiny insects or various worms, slugs, and snails, with a relative few larger insects or fungi, and they are a normal part of the general environment of the host.

The field collector is only too well aware of the high rate of infestation, and probably all pot hunters have had the experience of slicing a choice mushroom, preparatory for the skillet, and suddenly finding that part of his booty was moving because it had been infested with fast developing fly maggots. A mushroom casually examined in the field may seem devoid of "critters," but after being carried around for some hours in the sun, may then show recently hatched and rapidly growing larvae. There may be only black heads visible or tiny tunnels. Since some of the larvae have light colored heads, they are not readily seen and may be consumed as a relatively minute extra protein portion, probably with no ill effects, for they are easily digestible and are not the type that can be consumed by man and then pass through the intestinal tract alive (e.g., some fleshflies, blowflies, and various screwworm flies).

What is less known is the wide range of symbiotic or parasitic relationships between insects and fungi, as well as the merely mechanical connection where one furnishes food or shelter for the other. Fungi produce spores prolifically which are carried mostly by air currents, but they may also be transmitted by insects, birds, and various other animals, especially rodents. Some, such as the ambrosia beetle and leaf-cutting ants, are entirely dependent upon the fungi they cultivate for food; and many mushroom spores are conveyed through the intestines of flies, beetles, or even in slug slime.

I SPECIFIC INSECTS & OTHER GROUPS

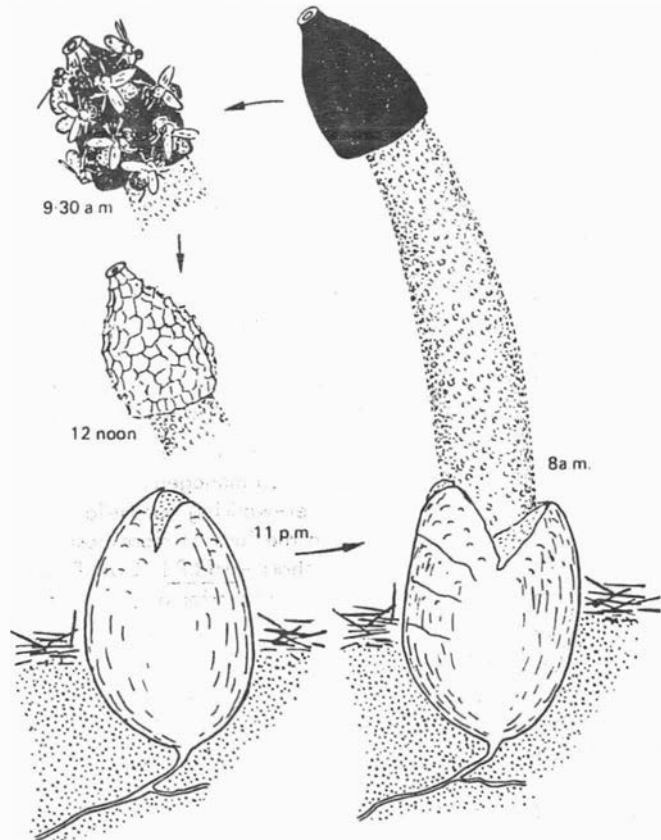
A. Flies and Fungi

The better known fly types which infest both commercial and wild mushrooms are the fungus gnats (Sciarids), manure flies (Phorids), and the gall gnats (Cecids); a number of genera and species are involved here. All are small to tiny and rather delicate flies, and the adults carry fungal spores on their body hairs. The larvae commonly damage mycelium, often sufficiently to cause it to die; and they may burrow into the stem or cap of the host. The gall gnats are especially interesting as a biological phenomenon because they practice so-called "paedogenesis," wherein a single larva produces more living larvae within itself. This is an unusual type of "cloning," and the habit in commercial mushroom beds makes control difficult since the larvae must be regulated within the growing media; a much harder task than killing the adult flies elsewhere.

Insects play an important role in transporting the pycnospores of rust fungi between fruiting bodies. Certain rusts are heterothallic (self-incompatible), which means that they

need to receive a nucleus of the opposite sign (plus or minus), in order to further their development. This they accomplish by producing a sugary and sweet smelling nectar together with their spores, which oozes out of the flask-shaped structures (pycnia) embedded in the host plant, attracting the flies.

The Order Phallales (the stinkhorns) contains more than fifty species and is widespread, mainly in tropical regions. Stinkhorns form a foul-smelling slimy layer over part of the fruiting body which is very alluring to carrion flies. The spores are picked up by the fly's body hairs and mouthparts in feeding and transported to new locations. Blowflies and fleshflies are common types involved in these procedures, and so far as known, except as food, they get no benefit from this relationship.



Phallus impudicus. At 11 p.m. the young fruit-body is at 'egg' stage and the outer papery layer of the peridium has torn exposing the jelly of the middle peridium. Next morning at 8 a.m. the stipe has elongated carrying up the cap with the spore-slime and leaving the peridium as a volva around the base. By 9.30 a.m. the slime is giving out a strong smell and has attracted flies; by noon all the spore-slime has been removed.

Some authors report instances wherein a fly maggot infestation in the lower stem of a mushroom will affect the taste of an uninfested cap. This may be so, but with the many edible mushrooms which I have collected and prepared as food, when the small maggot infestation in the stem base is cut off, it has not seemed to me to detract from or change the taste in any way.

~to be continued~

BITS AND PIECES

Joy and Roger Spurr have returned from their trip to eastern Idaho where they ran the Middle Fork of the Salmon River and visited Glacier-Waterton National Park. In late August and early September they did not find many mushrooms.

No mushrooms for Ken and Emma Chaplin either who are helping their son build a home in Saskatoon, Canada. Ken and Emma have moved to Sequim.