

SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
200 Second Avenue North, Seattle, Washington, 98109
April 1976 Number 121

Verpa
bohemica



FIELD TRIPS

Dave Schmitt

April 10 - 11 Rockport, Steelhead County Park.

There are two possible routes, both lined with cottonwood trees for hunting on the way, so get an early start. Also good steelhead fishing (with license) in the Skagit River.

Take the Burlington Exit from I-5 and proceed on State Highway #20 to Rockport. The Steelhead County Park is on your right, toward the river.

or for an alternate route, take the Arlington Exit from I-5 and proceed through Darrington toward Rockport. Steelhead County Park has some hook-ups. There is a fee for all camping.

April 17 Tolt County Campground located one-half mile south of Carnation.

Note this is a one-day trip, since the campground has no shelter (we hope for nice weather, of course, but we cannot depend on it. No potluck.

This area was productive for *Verpa bohemica* last year. Hosts: Monte and Hildegard Hendrickson

May 1 - 2 Thunderbird Park. Five miles east of Monroe on the south side of the Skykomish River, on the Ben Howard Road. Shelter, showers with hot and cold running water, hookups with water, sewer and electricity for the usual fee. There also is a charge for people just staying for a day.

Be sure to cross the river at Monroe.

May 8 - 9 Educational Field Trip led by Dr. James Trappe from the Oregon State University.

The place will be announced in the May issue of Spore Prints. Reserve the dates.

IMPORTANT NOTICE ABOUT FIELDTRIPS H.R.H.

During the week before a scheduled fieldtrip - on Wednesday, Thursday and Friday to be precise - all members of PSMS should read the "PERSONAL" column of the Seattle Post Intelligencer and the Seattle Times, because if (due to the weather) a previously scheduled fieldtrip has to be cancelled, the following message will appear there: "THE SCHEDULED PSMS FIELDTRIP IS CANCELLED". This message will appear ONLY if the fieldtrip has to be CANCELLED. No message will appear if the fieldtrip is held as scheduled. For more details see front page of March 1976 Spore Prints.

CARPOOLING FOR FIELDTRIPS Monte Hendrickson

Again we will try and arrange for carpooling for fieldtrips. But this is a new season and we start from scratch. The rules are as follows: Those members who plan to attend the spring fieldtrips should call Monte Hendrickson (phone 523-2892) and let him know if they can (1) provide rides, or (2) need rides. During the week preceding a fieldtrip the two categories will be "matched up". Of course, we hope that there are more PSMS members who are willing to provide rides. Let's hear from you. It is our hope that all members who would like to go on fieldtrips would have the opportunity to do so.

THE KEY COUNCIL OF THE PACIFIC NORTHWEST

Kit Scates

The Key Council of the Pacific Northwest was originated in 1974 to supply descriptions in usable form of the many kinds of mushrooms growing in this region not found in available handbooks. As interest in mushrooms has grown, and also the number of mushroom clubs, demand for accurate identification has outgrown Dr. Stuntz's supply of extra time. Technical works - monographs - for each genus are too scarce, too complicated and too expensive for most amateurs. By dividing the work and sharing our knowledge, we hope to accomplish the following goals:

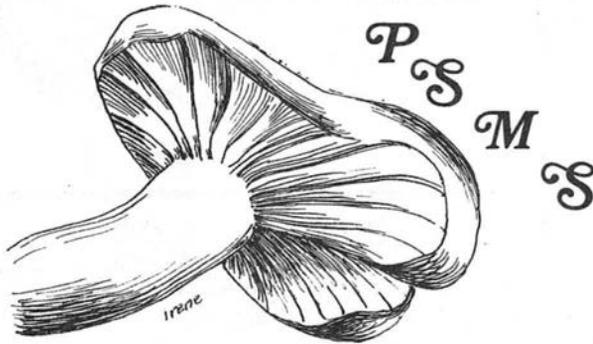
1. To compile an accurate master list of the fungi, and their locations, growing in the Pacific Northwest (Washington, Oregon, Idaho, and western Montana).
2. To prepare macroscopic keys by genus which include PNW mushrooms and exclude species not growing here; to make these keys available at low cost.
3. To acquire accurate color photos of these species.
4. To assist in identification at meetings, field trips, and exhibits, thus taking the pressure off professional mycologists.
5. To make possible cooperative fellowship among mushroom clubs of the region for solving common problems.
6. To have each member become the regional specialist in the genus of his choice and cooperate in national research concerning it.
7. To spearhead an effort to help American amateur mycologists catch up with their European counterparts.

The principal criterion for membership is being "self-propelled" - finding out what needs to be done and doing it without being pushed. Present members come from mushroom clubs throughout the region. We each pick out a genus we are interested in and find out what species have been recorded for the PNW. After we procure a description of each, we analyze their macroscopic characteristics and construct a key using only differences that can be seen with the naked eye or a hand lens. (If two species are alike macroscopically, only then do we utilize microscopic characters.) When the form and format meet group editorial standards, we mimeograph them so that others can give them the acid test of actual use in the field. Our keys are not intended for total beginners who are looking for safe edibles but rather for experienced mushroom lovers who want to identify their finds.

Dr. Stuntz is our adviser.

Keys to 33 genera and families are in various stages of development. Keys to AMANITA, the CANTHARELLACEAE, PHAEOCOLLYBIA, SUILLUS & ALLIES, and TRICHOLOMOPSIS have already gone into trial use. Expected soon are the HELVELLACEAE, the STROPHARIACEAE, LEUCOPAXILLUS, and OMPHALINA.

In a future issue we will present a list of the members of the key council, their addresses and phone numbers, and the genus each chose to study, so that PSMS members can assist them. Through cooperative efforts the job might even be speeded up, and all of us would benefit. Maybe, additional genera could even be taken on by new researchers.



Spore Prints

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 PUGET SOUND MYCOLOGICAL SOCIETY
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 4029 E. Madison, Seattle, Wn., 98102

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ALTERNATES Richard Sieger; Margaret Holzbauer;
 Mitchell McGuinness.

SCIENTIFIC ADVISOR Dr. Daniel E. Stuntz

CALENDAR

- April 10 - 11 Fieldtrip to Steelhead County Park
 April 12 Monday, Membership Meeting, 8:00 pm
 April 17 Fieldtrip to Tolt River County Campground
 April 19 Board Meeting
 April 23 Actual Deadline for Spore Print Material. Send
 all articles, art work, and photos to the Editor,
 c/o 4029 E. Madison, Seattle, Wn., 98102
 May 1 - 2 Fieldtrip to Thunderbird Park
 May 8 - 9 Educational Fieldtrip, location to be announced
 May 10 Monday, Membership Meeting, 8:00 pm

FINANCIAL REPORT FOR THE YEAR ENDING DEC. 1975

Milton Grout

It is a pleasure to report to the Society that our financial condition is good.

In contra distinction to last year, our principal sources of revenue all were good. First and foremost, our membership improved to the 500 level. The annual show was very successful, thanks to a good mushroom season, but more importantly thanks to an unbelievably dedicated number of members who not only performed superbly in executing the show, but braved one of the worst days of the year to bring in an outstanding collection. The show attracted a near record attendance. Book sales and new members also are a by-product of a successful show. Show revenues, book sales and a sustained membership combined to produce a net gain for the year of close to six thousand dollars.

How much of our funds should be retained to provide a strong

Membership Meeting

Monday, April 12, 1976, 8:00 pm., Eames Theater
 Pacific Science Center.

Program: Joy Spurr will give a talk and slide presentation on Mushrooming in Europe. Joy and Roger participated in the NAMA European Foray last fall. It will be interesting to compare how it is done on the other side of the Atlantic.

FINANCIAL INFORMATION (continued from previous column) financial base for the society; how much should go for education or for support of the Science Center; or should revert to the membership is, of course, a matter of opinion. In my view we should maintain a minimum of \$10,000 as a reserve for financing the show, publishing books or pamphlets, or support of the Society generally, if adverse conditions develop.

I believe the dues based upon a membership of 400 - 500 would support all routine Society costs including the bulletin, rental of facilities, fieldtrips, educational and administrative costs. I should call to your attention that the Society has never paid any member for the multitude of service performed.

Once the basic reserve has been attained and maintained, I believe, any excess from sources other than dues, should either revert to membership in the form of forays, research support or educational activities including support of mycological education at our universities.

PSMS RESULTS OF OPERATIONS FOR THE YEAR ENDING DECEMBER 31, 1975

John Mudge

FUNCTION

Membership dues	\$ 3,933.55	
less - membership expenses	424.08	
- bulletin	1,393.38	
- field trips	101.33	
- general expenses	203.05	\$ 1,811.71
Banquet income	\$ 1,987.50	
less - expenses	1,921.79	\$ 65.71
Exhibit and classes	\$ 4,030.29	
less - annual show expenses	2,456.35	
- donations	1,500.00	
- depreciation	194.48	\$ (120.54)
Book sales; arts & crafts	\$ 5,157.48	
less - cost of sales	2,263.07	\$ 2,894.41
Royalties		865.24
Interest, etc.		335.95
Income		\$ 5,852.48
Equity - beginning of year		12,367.16
Equity - end of year		<u>\$18,219.64</u>

PSMS STATEMENT OF FINANCIAL POSITION

DECEMBER 31, 1975

ASSETS

Cash - checking	\$ 7,908.47	
- savings	7,557.37	\$15,465.84
Scholarship fund		-0-
Inventory		1,843.52
Equipment	1,898.59	
less - depreciation	(1,180.93)	717.66
Library		449.73
TOTAL ASSETS		<u>\$18,476.75</u>

LIABILITIES AND EQUITY

State taxes due	\$ 257.11	
Members' equity		18,219.64
TOTAL LIABILITIES AND EQUITY		<u>\$18,476.75</u>

Due to the earlier publication of Spore Prints last month, no board news were presented. So here we make up for it. Treasurer Mudge presented the financial report which will be published in the April issue of Spore Prints. The remaining business also consisted of financial matters.

The Board voted to donate \$1,100 to the Pacific Science Center. The annual donation is made for the use of the facilities (the Eames Theater for monthly membership meetings, classes and the annual exhibit; meeting rooms for the Board and committees; storage room and mailing address for PSMS) which the Science Center provides. The Board also voted to give Dr. Stuntz a check for \$500 (to be presented at the banquet) toward his first-ever sabbatical. Dr. Stuntz is going to visit five herbaria on the East Coast where he will study the "missing" inocybes needed to complete his research on this genus. In addition, the Board voted to make \$500 available to Dr. Stuntz as a scholarship fund to be dispensed at his discretion.

President Grout read a letter of appreciation from Oak Patch Unlimited (a camp for mentally-retarded adults) for the donation made by PSMS. The money will be added to the fund for building the third cabin. PSMS usually holds its last fieldtrip of the fall season at Oak Patch.

A discussion of the coming banquet and preliminaries about the spring fieldtrips concluded the meeting.

MARCH BOARD NEWS

H.R.H.

The incoming president, Jack Orth, welcomed the new officers and trustees (whose names are listed in the upper left-hand corner of this page). The new, talented, and eager board cooperated and the committee assignments were dispensed in a jiffy. They are: programs: Jerry Cone; education: Earl Harrison; educational materials: Jennie Schmitt; membership: Ronna Randall-Brown; bulletin editor: Hildegard Hendrickson; banquet: Louise Rautenberg; fieldtrips: Dave Schmitt, Martin Hansen and Monte Hendrickson; house: Buzz Walters; photography: Joy Spurr; historian-librarian: Joan Gillen; publicity: Jerry Cone and Bob Hanna; arts and crafts: Fay Melsen; publications: Ken Chaplin; mailing: Virginia and Chuck Kessner; book sales: Helen Wasson; planning committee: Howard Melsen; "key" committee: Kit Scates; membership information: Dr. Patricia Winter and Navarre Orth; morel committee: Margaret Dilly. A complete listing of these committee assignments also appears in the annual roster, which is about to go to press.

At the board meeting there were no committee reports since the "retiring" committee heads were not present.

A discussion about organizational matters and procedures familiarized the nearly completely "new" board with some basics about PSMS.

It was moved and voted to award the outgoing president, Milton Grout, a life-time membership in PSMS. Monte Hendrickson discussed two proposals for changing the by-laws. It was moved and voted to present the two proposals to the membership at the May membership meeting (which will be designated as a Special Meeting). In a nutshell the proposals consist of (a) election of 5 trustees annually for a two year term, so there won't be a nearly complete "turnover" of the board (like this time), and (b) give family memberships two votes (instead of one) for voting purposes.

If any member has strong feelings (one way or the other) about these two issues, be sure to attend the May membership meeting.



The annual meeting and banquet of PSMS is now history. As usual, the food was delicious (with mushrooms in every dish), the center-pieces beautiful and very patriotic, and the camaradery with your fellow PSMS members very pleasant.

Many people worked on various aspects of the banquet and must be recognized, but inevitably some are left out, so that we say thank you in a global manner.

Specifically our thanks go to Doris Paduano who arranged the facilities at the Moose Lodge, and to Dr. Patricia Winter who assisted in whatever capacity she was called upon (and that was many, particularly in the critical time). Dr. Winter wants to express her appreciation to Mr. and Mrs. Winston Hufford, Charlie Volz, Louise Rautenberg, Phyllis Jordan and Ben Woo, who did the "legwork" for her.

Louise Rautenberg wants to thank all members who contributed flower arrangements, especially Fay Melsen, Zelma Henn, and Alice Marsteller.

Your editor feels our speaker, Dr. Pellegrini, owed it to his audience to use the microphone, and his talk, even though humorous, was judged by some not of the same high standard as that presented last year by our Dr. Stuntz.

The Tempos livened up the activity level with their catchy tunes and entertained the dancers until late in the night.

MOREL REQUEST

Margaret Dilly

It's almost morel time again and the Morel Committee is still in need of specimens from certain areas. We have no collections from the Coastal Regions, The Columbia River, the Canadian Border, the North Cascades Highway, and the North-East corner of Washington State.

Several new dimensions have been added to the Morel Project, so if you plan to hunt in any of the above named areas, and would like to assist the Morel Committee, please contact either Margaret Dilly (phone 782-8511) or Dorothy Henderson (phone 525-9379) BEFORE you take off.

BITS AND PIECES

H.R.H.

Thanks to Howard Melsen, who in one capacity or other (as trustee, vice president, president (2years) and immediate past president (2 years) has served on the Board continuously since 1969. This is a record which is no jeopardy and shows great interest in and dedication to our society.

The election committee reported that in addition to PSMS ballots it received one from the Swauk Mountain Precinct Democratic Caucus in the 47th Legislative District containing 2 votes for Henry Jackson, 1 for Morris Udall and 2 uncommitted. This ballot was returned to sender.

During the last month PSMS has been contacted from far away for information and advice as inquiries from Juneau and Connecticut show.

Overheard at the banquet, while the person was patiently waiting for the table number to be called: "...now I know why they call it the survivors' banquet."

MEMBERSHIP NEWS

Please note that Ronna Randall-Brown is the new membership chairman. Her phone number is 232-8998 and all membership matters should be referred to her.

New members again are reminded to return the YELLOW sheet to the membership chairman or your registration is not complete.

The 1976 Membership Rosters are about to come off the presses and will be available at the April membership meeting.

DEVELOPMENT OF CLASSIFICATION OF THE
MACROBASIDIOMYCETES Dr. Daniel E. Stuntz

- Fourth Installment -

III. The Modern Period (1920 to the present).

In the first two decades of the 1900's the Friesian classification of agarics still held sway, although attempts to modify it had been made some 40 years earlier. In these two decades, about the last three major mycological floras that would use the Friesian system were published:

- R. Bigeard & H. Guillemin. 1909-1913. Flore des champignons supérieurs de France, Vol. 1-2.
- A. Ricken. 1915. Die Blätterpilze (Agaricaceae) Deutschlands und der angrenzenden Länder, besonders Oesterreichs und der Schweiz.
- C. H. Kauffman. 1918. The Agaricaceae of Michigan.

These were holdouts; the tide of revision had already set in, and could not be reversed.

Turning back to the late 1800's when the foundation for revision was laid down, we find the Friesian dictum that macroscopic features were sufficient to characterize a genus still observed, but mycologists beginning more and more to use spore size and shape in their description of species. Raising the subgenera of *Agaricus* to generic rank had not involved any change in the characterization of the subgenus, but was only a change in nomenclatural status. As more and more species were found and had to be fitted into the Friesian genera, the imperfections of the system began to show up. Uniquely characterized genera such as *Russula*, *Lactarius*, *Cortinarius*, and *Coprinus* presented no difficulties, but in many instances a structural feature supposed to separate genera, as for example attachment of gills or consistency of stipe, turned out to be too variable to be of much use. Anyone who has tried to make a key that will separate infallibly such genera as *Flammula*, *Pholiota*, *Inocybe*, and *Naucoria* in the brown spored group, or *Tricholoma*, *Clitocybe*, *Collybia*, and *Omphalia* in the white spored group, will know what I mean.

The leaven that was to bring about changes was the increasing use of the microscope during the last three quarters of the 1800's in examining fungi. By about 1830 the microscope, though far from the precision instrument we know today, was sufficiently improved over the crude lenses of the 1700's to show details of structure hitherto unsuspected. The first mycologist to use it extensively in looking at fungi seems to have been A. C. J. Corda, the director of the National Museum in Prague. He taught himself engraving and lithography, and set out to use the microscope to reveal the structure of fungi, and engraving or lithography to depict what he saw. His "*Icones Fungorum hucusque Cognitorum*" was a landmark in mycology, demonstration both the usefulness of the microscope in investigating fungi, and the fact that fungi have an infinite variety of structures to be revealed.

Corda paid relatively little attention to agarics beyond illustrating some details of hymenial structure more clearly than anyone else at that time, and he did not propose any changes in the Friesian system. His main preoccupation was with the microfungi. What he did do for agaricology, however, was to create an interest in examining the microscopical structure of the larger fungi, and this interest was eventually to bring about the investigations that marked the beginning of the modern system.

After 1875, by which time most of the subgenera of *Agaricus* had been made genera, more drastic changes began to be introduced. In "Hattsvampar" (1879) Karsten proposed 22 new ge-

nera of agarics, several of which were characterized principally by some peculiarity of their spores. His contemporaries were not much inclined to accept these innovations. In "*Enchiridion Fungorum in Europa Media et praesertim in Gallia Vigentium*" (1886), Quelet took an opposite tack and in six instances merged two or more Friesian genera into a single genus. The best known of these is *Rhodophyllus*, characterized by its angular pink spores and consisting of all of the pink-spored Friesian genera. He repeated this classification in his last major work, the "*Flore Mycologique de la France*". In the meantime Patouillard began noting shape and ornamentation of spores, and presence of an apical germ pore, as well as cystidia and other specialized hymenial structures. Although he mentioned these structures in his specific descriptions, he proposed no deviation from the Friesian classification in his "*Hymenomycetes d'Europe*" (1887). Thus far microscopical features could not be said to be the basis for the definition of genera, though they were being duly noted. Then in 1889 there appeared a publication that can be considered the actual starting point for the use of microscopical structures in delimiting genera. This was the "*Prodrome d'une histoire naturelle des Agaricines*", by V. Fayod. Fayod, a Swiss mycologist, made by far the most thorough investigation of the microscopical anatomy of agarics, and described and illustrated almost all of the features we use today in the "modern system". He even studied the earliest stages of development of the sporocarp of 43 species of agarics, and detected developmental patterns to which he attributed some importance in estimating relationships between genera. In this he was some 75 years ahead of his time - a similar study by A. F. M. Reijnders appeared only recently; "*Les problèmes du développement des carpophores des Agaricales*" (1963). Taking into account all the data he had gathered, Fayod devised a classification of the agarics that was the first really significant departure from the Friesian system. He recognized 108 genera, including all the Friesian genera, several described by his contemporaries and predecessors, principally Patouillard and Karsten, and 23 segregate genera of his own making. The ensemble he distributed among 27 tribes that were in turn grouped, very unequally as to numbers, in seven series. Series, tribes, and genera all were characterized principally by microscopical features; thus the Friesian genera essentially were redefined or at least emended to place emphasis on their microscopical rather than on their macroscopic characteristics. In an era dominated by the Friesian taxonomic philosophy, such a radical departure was not likely to find much support, and Fayod's "Prodrome" was generally ignored (or condemned) except by a few individuals who could appreciate its worth. Prominent among those who endorsed Fayod's ideas was Patouillard, who himself had already come a certain distance along the same road. In his "*Essai taxonomique sur les familles et les genres des Hyménomycètes*" (1900) his rearrangement of the Friesian classification of the agarics was neither as far-reaching nor as radical as that of Fayod, but it embodied the same philosophy, namely, that genera should be defined by a combination of microscopical and macroscopic features, with the former usually the more important. His most drastic, almost total disruption of the Friesian system was in the *Hymenomycetes* other than the agarics, where his principal interest lay. He was far better known than Fayod, and there has been and still is a tendency to attribute the introduction of microscopical structures into agaric taxonomy principally to him, forgetting Fayod's truly pioneering work. Actually it would be more accurate to say that Fayod was the one who accomplished this for the agarics, and Patouillard the one who did the same for the rest of the *Hymenomycetes*. (continued in May)