

SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
200 Second Avenue North, Seattle, Washington, 98109
May 1976 Number 122



CHANGE IN FIELDTRIPS

Fieldtrip Committee

The following fieldtrips have been set for the coming month. Since the weather has been cool and wet, there may have to be further changes, so please read the notice below in regard to last minute changes which will be printed in the Seattle newspapers.

May 1 - 2 Thunderbird Park. This will be the educational fieldtrip this spring. The program follows below. Located five miles east of Monroe on the south side of the Skykomish River on the Ben Howard Road (Be sure to cross the river at Monroe) This is a recreational vehicle park with shelter, showers with hot and cold running water, hookups with water, sewer and electricity. The fee is the customary one for such an arrangement. There also is a charge for people just staying for the day.

May 22 - 23 Crystal Springs Forest Camp.

Go east on I - 90 and take the Stampede Pass Exit (which is about 10 miles east of Snoqualmie Summit) Turn to the right and follow the mushroom signs.

NOTE: There is a possibility that the snow has not melted in that elevation, so that Lake Easton State Park is designated as the alternate location. To get there continue on I - 90 to Easton. The park is on your right.

May 29 - 30 - 31 Clear Lake Fieldtrip

It is located about 7 miles east of White Pass on US #12. Watch for the mushroom signs. We hope to find boletus edulis (which eluded us last year). This is a beautiful area, and the weather is usually very nice. No shelter, and we will have to put up plastic if it should rain.

PROGRAM FOR THE EDUCATIONAL FIELDTRIP TO THUNDERBIRD PARK

Jennie Schmitt

PSMS members will search for fungi on Saturday. After returning to camp, identify your find (with or without help.)

Around 5:30 pm a potluck supper will be held. After the potluck there will be a slide presentation by Howard Melsen on the Spring Mushrooms. Jennie Schmitt will talk about the preparation and preservation of mushrooms. Margaret Dilly will inform us about the morel study and further needs of the morel committee.

The change in the location of the educational fieldtrip was arranged so that members who want to come only on Saturday can easily return home to Seattle.

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.

ALPHABETICAL LIST OF MYCOLOGICAL GROUPS AND KEY COMPOSERS

Kit Scates

AGARICUS - Margaret Dilly; AMANITA - Don Goetz (completed); ARMILLARIA - Judy Roger; BOLETACEAE(SUILLUS & AL) - Kit Scates (completed); CANTHARELLACEAE - Marjorie Mason (completed); CLITOCYBE - George Rafanelli; COLLYBIA - Dr. Helena Kirkwood; COPRINUS - Dr. Fred VanDeBogart; CORTINARIUS - Dr. Daniel E. Stuntz (completed); CYSTODERMA - Reynaldine Sandahl & Nettie Laycock; GOMPHIDIACEAE - Kit Scates (completed); HELVELLACEAE - Herold Treibs & Donna Andersen; HYDNACEAE - Dorothy Henderson; HYGROPHORUS - Dr. Daniel E. Stuntz (completed); INOCYBE - Dr. Daniel E. Stuntz; LACTARIUS - Coleman Leuthy; LENTINUS & LENTINELLUS - Takeo Mochizuki; LEPISTA - Eugene Butler; LEUCOPAXILLUS - Isabelle Waite; LYCOPERDALES - Robert Ramsey; MARASMIUS - Nettie Laycock; MYCENA - Brian Luther; NIDULARIALES - Peggy Fay; OMPHALINA - Brian Luther; PHAEOCOLLYBIA - Christel Goetz (completed); PLEUROTUS & ALLIES - Dorothy Brown; PHOLIOTA - Jennie Schmitt; POLYPORACEAE - Maurice Pare; RAMARIA - Kit Scates; RUSSULA - Ben Woo; STROPHARIACEAE - Paul Stamets; TREMELLACEAE - Joy Spurr; TRICHOLOMA - Charles Volz; TRICHOLOMOPSIS - Elsie Coulter (completed)
ADVISOR: Dr. Daniel E. Stuntz; GUIDE: Dr. Michael Beug; MASTER LIST: Howard & Fay Melsen; PHOTOGRAPHER: Joy Spurr.

ILL FROM MUSHROOMS?

To assist the national effort in tracking mushroom illnesses (see article on last page) it would be helpful if PSMS kept statistics of such occurrences and pinpoint the source (i.e. fungus) causing it. If any PSMS member does become ill, would he/she therefore, call an officer or member of the board and give the details. (We don't mean "trips" ed.)

BITS AND PIECES

We hope Helen Wasson and Dr. Patricia Winter are feeling much better than they did at the time of publication of this issue of Spore Prints.

Thank you, Joy Spurr for the excellent presentation and slides of the European NAMA Foray of 1975 which she presented at the April membership meeting. Hopefully, we will get an encore, for those who missed it, and for another treat to those who saw it.

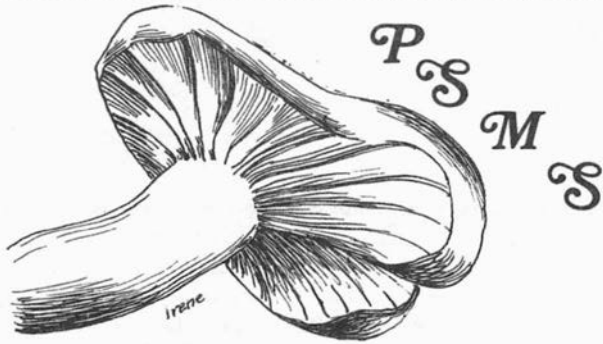
Your editor hopes the other spring mushrooms will appear in greater numbers than the Verpas did.

MOREL REQUEST

Margaret Dilly

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.

Since several new dimensions have been added to the Morel Project, please contact either Margaret Dilly at 782-8511 or Dorothy Henderson at 525-9379 BEFORE you plan to take off and hunt in any of the above areas.



Spore Prints

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SCIENTIFIC ADVISOR Dr. Daniel E. Stuntz

CALENDAR

May 1 - 2 Educational Fieldtrip to Thunderbird Park

May 10 Monday, Special Membership Meeting, 8:00 pm
 (By-law Changes)

May 22 - 23 Fieldtrip to Crystal Springs or alternate location

May 24th Board Meeting

May 28th 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 29 - 30 - 31 Fieldtrip to Clear Lake

ROCKPORT FIELDTRIP REPORT Ruby Carmichael

The Rockport outing, the first of the new spring season, was
 a great success. Almost everyone found Verpas. A total of
 26 species (including on morel) were identified.

Doug and Ruby Carmichael and Harley and June Perkins co-
 hosted. The usual fabulous potluck for approximately 100+
 ended Saturday, when we enjoyed brilliant weather. The
 Bronners, Hansens, Hendricksons, Schmitts and Orths led
 newcomers and novices to the mushrooms. Our thanks to them
 all. Once again the ranger at the park outdid himself making
 us welcome. No better facilities anywhere!

Suggestion! It would be nice if newcomers could go with ex-
 perience members at specified times. Leave from the shelter
 at, say 10 am and 11 am. Our experience members are al-
 ways most generous with their time and knowledge, so this
 perhaps would work. Having specified times, and promise of
 help should encourage new members.

Membership Meeting

Monday, May 10, 1975, 8:00 pm Special Membership Meeting, Eames Theater, Pacific Science Center.

Program: The Board of Trustees voted to present the following two proposals to the PSMS membership which would change the By-laws, as per Article X of the By-laws.

(1) ARTICLE VI, Section 2 would then read:

Tenure. Each member of the Board shall hold office for (2) two years or until a successor shall have been elected. Five of the ten trustees are to be elected each year.

Presently this section of the By-laws reads as follows:

Tenure. Each member of the Board shall hold office for (1) year or until the next annual meeting of the membership and until his successor shall have been elected.

Reason: In two of the last three years there was a nearly complete turnover in the board which made the work of the board harder and if this trend continues could endanger the continuity of the operation of PSMS.

(2) ARTICLE IV, Section 3 would then read:

Voting Rights. Each individual membership shall be entitled to just one vote, and each family membership shall be entitled to just two votes on each matter submitted to a vote of the members, except that complimentary memberships shall have no voting privileges.

Presently this section of the By-laws reads as follows:

Each membership, whether it be individual or family, shall be entitled to just one vote on each matter submitted to a vote of the members, except that complimentary memberships shall have no voting privileges.

Reason: partly to correct an "illegal" situation which occurred when a voting matter has been brought before the general membership and everybody present (whether they held an individual or family membership) usually cast a vote; and partly because this matter has concerned a number of PSMS members and they voiced their preference for the proposed change in the By-laws.

(Ed.: As soon as space permits we will print the complete By-laws in Spore Prints. Your editor supports the proposed changes above.)

In addition, Richard Haard will talk on the topic: How should the topic of Hallucinogenic Mushrooms be handled by Mycologists. Richard Haard is a former student of Dr. D. Stuntz; He and his wife have recently published the book: Foraging for Edible Wild Mushrooms (Cloudburst Press, Lt. Brackendale, B.C., 1974).

TOLT RIVER COUNTY PARK FIELDTRIP REPORT M.M.H.

The first one-day fieldtrip of the spring season was attended by 52 PSMS members and guests. It attracted mostly newcomers who were escorted by experienced members to find their first ever Verpas. It was very interesting to observe how difficult those verpas are to spot by newcomers, since they look so much like the cottonwood leaves when they first stick their caps through. The find was not very great, but everybody found a few. The weather started out fine, but turned into a steady drizzle by about mid-afternoon, and everybody was ready to go home. A total of 8 identified and one unidentified species were brought in. Our thanks go to Emma & Ken Chaplin who assisted the hosts.

We feel the one-day, close-to-Seattle fieldtrip had appeal and recommend that more be scheduled in the future.

The ideas expressed in the "Essai taxonomique" were too radical for acceptance in 1900, and had to wait for two decades before they would be properly appreciated. The first major work to make some use of them was "British Basidiomyceteae" (1922) by Carleton Rea. This was an attempt to fit the British Hymenomycetes into a somewhat modified and diluted Patouillardian scheme. A more telling endorsement was "Hyménomycètes de France" (1927) by H. Bourdot and A. Galzin. This publication dealt only with Hymenomycetes other than agarics, but followed the disposition of these fungi in Patouillard's "Essai" to the letter. It still is an important source of information for those fungi.

While the ideas of Fayod and of Patouillard were gaining some recognition, another facet of the growing confusion was being created at the New York Botanical Garden. A group of American taxonomists, including those at that institution, disagreeing with the decision of the International Botanical Congress at Paris in 1905 to start nomenclature of seed plants with Linnaeus (1753) and that of fungi with Persoon in 1801 and Fries in 1821, formulated their own code and published it in 1907. This came to be known as the American Code, and it stated that the valid name of a plant or fungus was the very first one applied to it, providing it was a binomial - in other words, no fixed starting points for nomenclature. This took the search for the first valid name back as far as 1700 or thereabouts and the confusion caused by its application was indescribable. The American mycologist F. S. Earle, an adherent of this code, published in 1909 a new classification of agarics, "The Genera of the North American Gill Fungi" in which he applied the principle of "strict priority" as he called it, proposing 147 genera, many of them pre-Friesian, many from Karsten, and 37 new ones of his own. At the same time the New York Botanical Garden began the publication of "North American Flora", an ambitious project intended to describe all plants found in North America, including northern Mexico and the Caribbean Islands. W. A. Murrill, then mycological curator at the Garden, wrote the parts dealing with the Hymenomycetes, except the genera *Lactarius*, *Russula*, *Marasmius*, *Inocybe*, *Cortinarius*, and *Pholiota*. Also an adherent of the American Code, he devised his own system of classification, adopting many of Earle's genera, many of Karsten's and creating a large number of his own, as well as including the inevitable pre-Friesian ones. The project was terminated for lack of funds at the end of the brown-spored genera, and those with purple-brown or black spores have not so far been added. The curious thing about the classifications of Earle and of Murrill was that although representing an extreme dismemberment of the Friesian system, they took no account of microscopical features at the generic level; at most, spores and cystidia were mentioned in the description of species, if at all. Some of both Earle's and of Murrill's genera have proved to be good natural groups, and have found their way into the modern system.

While this curious chapter of American Mycology was unfolding two more types of data that would find their place in the modern system were being investigated. In 1902 René Maire, one of France's most prestigious mycologists, published the results of his study of nuclear behavior in the Basidiomycetes, and suggested that certain configurations assumed by the nucleus during its division could be used to characterize genera. Thus cytology entered the picture. The next idea to be developed was the usefulness of the reaction of various mushroom structures to certain chemical reagents. As long ago as 1885

the French mycologist E. Boudier used the blue reaction of an iodine solution on the tip of the ascus, in setting up his new classification of the Discomycetes (Cup Fungi). In 1887 a similar reaction of the basidiospores of certain Hymenomycetes was noted simultaneously and independently by Patouillard and by another French mycologist, L. Rolland. Another reagent, sulfovanillin, that turns *Russula* cystidia blue, was announced in 1907 by I. Arnould and A. Goris (who were never heard from again). René Maire, discussing the infrageneric classification of *Russula* in 1910, advocated the use of sulfovanillin, tincture of guaiac, and potassium hydroxide as supplemental data to microscopical features. Finally, a full-scale use of chemical reactions was proposed by the Czechoslovakian mycologists V. Melzer and J. Zvara in their monograph of *Russula*, "České Holubinky" (1927), written in Czech, but (fortunately) with a French summary published a year later in the bulletin of the Mycological Society of France. They used Melzer's solution, the iodine solution we use today, to reveal the ornamentation of the spores, and seven of the ten reagents now employed to test the color reactions of the pileal flesh. Thus, by the end of the 1920's all the elements of the modern classification were in place, but unassembled and awaiting the mycologist who would synthesize the fragments into a coherent whole. In due course this function was performed, for the agarics at least, by Rolf Singer.

Singer started out as a *Russula* specialist, in competition with the other *Russula* specialist of his time, Julius Schaeffer (they did not get along at all well together, to put it mildly). He soon broadened his horizons, however, and began assembling data for a new classification of the agarics. In 1936 he had left Germany to live in Leningrad, fleeing from the ominous situation with the Nazis that was developing in his native Bavaria. In that year the first of three instalments of his "Das System der Agaricales" appeared in the German periodical *Annales Mycologici*. Before the second and third instalments could be published, in 1942 and 1943 respectively, Singer had left Leningrad and come to Boston, where for a few years he was employed at the Farlow Mycological Herbarium of Harvard University. Sometime in the 1940's he obtained a position in the Instituto Miguel Lillo in Tucumán, Argentina, and later (1950's) in the University of Buenos Aires. Since the issues of *Annales Mycologici* that contained "Das System der Agaricales" were extremely difficult to obtain, Singer decided to revise the work and publish it as one volume, in English. It appeared in 1951 (dated 1949) as volume 22 of the periodical *Lilloa*, and in less than a decade was out of print. A second revised edition was published in 1962 and that in turn has been out of print for three years. Singer has finished a new third revision, that is expected to come off the press any time now.

The "Agaricales in Modern Taxonomy" has done for modern agaric taxonomy what Fries' *Systema* did in 1821 - evaluated and codified the scattered, often fragmentary or contradictory information that had been accumulating since the 1880's, and made from it a system that works, providing one is willing to make the observations necessary for running the keys. Full use is made of chemical tests, cytological data, and above all, microscopical structure, in characterizing the families and genera. Genera are accepted from many previous works, principally those of Patouillard, Fayod, Murrill, and Karsten; and of course, there are also many new genera created by Singer. To be sure, it is more difficult to cope with some 200 or more genera of the "Singer system" than with the 55 of Fries, but distinctions between genera have been in most cases made much sharper (less ambiguous) by the use of microscopical structures

Continuation of Dr. Stuntz' article from page 3.

and chemical tests. There are those who think Singer has gone much too far in recognizing or making segregate genera, especially in the white-spored group, and it may be that he has. His system, like any other taxonomic scheme, must stand the test of time and usage. No doubt, it will undergo revisions in its turn in coming years, or even serve as a portion of some future radically different approach.

It is interesting to realize that the Hymenomyces other than the agarics (the Aphyllophorales) are just now at the beginning of the process of sweeping revision that the agarics have recently undergone. The late Dr. M.A. Donk of Leiden, Holland, started things in 1931 with a resumption and extension of the revision begun in 1900 by Patouillard, and now a whole school of mycologists, North American and European, is busily engaged in furthering Donk's work. That, however, is another chapter - and this account is already too long.

THE NATIONAL FUNGUS COLLECTIONS

The following article is reprinted (with permission) from the USDA publication FOOD AND HOME NOTES, Jan. 19, 1976.

The National Fungus Collections located at the USDA's Agricultural Research Center, Beltsville, Maryland has over 850,000 mycological herbarium specimens, probably is the largest and oldest collection in this country - and quite possibly the world. The collection is a combination of specimens from the Smithsonian Institution, Museum of Natural History and the USDA.

USDA mycologists, in addition to their basic research, are constantly expanding fungus collections and making information files up-to-date in order to provide taxonomic information to the general public. The reference literature, also is in the same place, ranks among the best in the world according to Dr. Paul Lentz, Chief of the Mycology Laboratory for the USDA.

At the present time a "poison fungi center" a coordinating center for the country, is being organized by the USDA at Beltsville. A manual is being prepared on poisonous mushrooms containing complete descriptions - appearance of fungi, habitat, their toxic effects to man and symptoms of such poison. The project, or manual, will appeal to the novice, the layman, but also will offer technical information so that the medical profession can have it for reference.

An International Mycological Congress is planned for the summer of 1977 in Tampa, Florida, and the USDA's Agricultural Research Service is sponsoring a symposium on poisonous mushrooms during the Congress.

Fungus identification also is very important to the field of agriculture because fungi account for thousands of plant diseases in the United States. Another important aspect of the interest in mushroom identification is the increased incidence of hallucinatory reactions to some fungi which means that mycologists often assist drug enforcement units. The coordinating center could offer immediate identification to such problems from poisonous fungi.



LOST TABLE ARRANGEMENTS FROM THE BANQUET L.R.

I have had returned 3 table arrangements that managed to go home to the wrong house after the banquet. They are:

- (1) pink artificial flowers in green rectangular vase;
- (2) a straw basket with large yellow mushroom and straw flowers;
- (3) a landscape on wood with a pier and a seagull.

Please call Louise Rautenberg (LI 2 - 5109) if you own any of these arrangements.

WHAT HAPPENS ON A FIELDTRIP

M.M.H.

Due to the many calls received in the past few weeks, particularly from new PSMS members, we are reporting what happens on a fieldtrip.

First of all, these meetings are very informal (except educational forays). Come and go when you please. Many members and their guests with recreational vehicles, tents, etc. arrive Friday evening and stay till Sunday afternoon (or longer). Some people come for one day only Saturday or Sunday. (We recommend the Saturday for better prospects for hunting and the potluck).

When you arrive at the destination, a host and hostess welcome you with coffee and cookies. Everybody should, please, upon arriving sign the Fieldtrip Attendance Register and indicate whether they plan to stay for the potluck. It also helps us to find out if the chosen sites are desirable and/or convenient (for scheduling future fieldtrips).

It is recommended that newcomers arrive before 11 am. since experienced members always are ready and willing to take newcomers in tow.

It has recently been suggested that groups should leave the fieldtrip site at 9, at 10 and at 11, so that newcomers can plan on having a guide. If you arrive later than 11 am, the hosts can tell you approximately where you most likely will find the mushroom(s) of the day, but you will have to find them alone.

On a fieldtrip participants are encouraged to bring in every different mushroom that they find, because an expert will identify them all (and you can then go back and pick the ones you left if it is a worthwhile one). But most of all, you add to your knowledge about fungi by seeing, feeling, smelling and tasting the many specimens which your fellow PSMS members have brought in.

After a good (or bad) day of collecting, you return to the camp, tired and eagerly await the delicious pot-luck dinner. Every fieldtrip participant contributes a dish; it can be a hot dish, a salad, a dessert (enough to feed the contributors' own family). Every dish in the potluck is gourmet, since every cook brings her(his) favorite recipe (patented, of course). After dinner we sit around the campfire, tell mushroom- and other tales, and enjoy great fellowship.

The sites chosen for fieldtrips accommodate recreational vehicles, tents, etc. and have the necessary facilities.

MEMBERSHIP

Ronna Randall-Brown

The 1976 Membership Roster again will be available at the May membership meeting. Please pick up your copy (if you have not done so in April).

If anyone is listed incorrectly in the new roster (name, address phone number, etc.) please send the correct membership information to the membership chairman, Ronna Randall-Brown, 4201 - 78th S.E., Mercer Island, 98040 or call her at 232-8998, so that the corrections can be made.

PHONE NUMBER CORRECTION: RAUTENBERG - 542 - 5109

WELCOME TO THE FOLLOWING NEW MEMBERS AND/OR RENEWALS:

Mr. & Mrs. Donald F. Carlton - 6001 - 140th NE, #D-262, Redmond, 98062; Stephanie Coontz, Route 4, Box 260 Olympia, 98502 (1-352-9435); Irene Nelson - 2306 - 51st SW., Seattle, 98116; Alfred & Janet Newell - 20526 - 79th W., Edmonds, 98020; Bill Ostrowski - 4315 - 162 Pl. SE., Bothell; Ray & Judy Reed - 11214 SE 196, Renton, 98055; Julie Venn 3390 - 53rd SE., Auburn, 98002 (TE 3 - 4490).

Address changes: Fred Rossiter 639 Whitworth, Seattle, 98055