

SPORE PRINTS

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

January 1984

Number 198



THINK SURVIVORS BANQUET

THE 20TH ANNUAL SURVIVORS BANQUET H.R.H.

Again we are preparing for our annual Survivors Banquet. It will be held, Friday, March 16, 1984 at the Monroe Center. We will take a slightly different approach than last year when PSMS members performed all tasks themselves. This year the different tasks will be divided: some activities (decorations, hors d'oeuvres, the salad, etc.) will be performed by PSMS members, while the main course and dessert will be professionally catered. Help is still needed on several committees and we encourage you to call the Banquet Chairperson, Edith Godar (821-5147) if you can assist.

Attendance again will be limited to about 200 persons, so it is necessary to get your reservations in early. Price per person for this gala affair and gourmet dinner is \$15. Send your reservations and check to BANQUET, 1906 - 163rd N.E., Bellevue, WA 98008. Please include a self-addressed stamped envelope for mailing the ticket(s) to you. You may also purchase your tickets at the January and February membership meetings. Information only (no tickets) can be obtained by calling Judi Boa at 725-1235.

We also need mushroom donations for the Banquet. Dried or frozen Morels, Boletes, Chanterelles and Matsutake are suitable. The dried mushrooms can be brought to the membership meetings. Call the Banquet Chairperson if you have frozen mushrooms and a pickup will be arranged.

More about the Banquet in February Spore Prints.

FINAL REMINDER TO PAY DUES FOR 1984 MEMBERSHIP

If you have not done so, please send your 1984 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 '83 have their membership paid through December 1984.

Our membership chairman has decals (2 kinds), pins, and patches - all displaying the Society's logo - for sale at the membership meetings. The red nametags can be ordered too.

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

MUSHROOM POISON HITS 14 REFUGEES IN CALIFORNIA

Fourteen Laotian refugees who ate (probably) Amanita phalloides were critically ill in five San Francisco - area hospitals. The press did not report whether any survived.

The victims ate the mushrooms at a party, after they had gone mushroom hunting together. The symptoms appeared about 24 hours after eating, and were diarrhea, vomiting, and stomach cramps. There is no specific treatment or antidote after such a long period of time has elapsed, yet the symptoms are quite delayed.

We are fortunate that finds of this deadly mushroom have been

made at only two locations in Washington. It occurs frequently in other parts of the United States.

TAKE CAUTION WITH HONEY MUSHROOMS H.R.H.

In recent years several reports of people experiencing gastrointestinal upsets after eating Armillaria mellea have appeared. The onset of symptoms (nausea, vomiting, chills, intestinal cramps, stomach ache) usually occurred three hours after ingestion. In some cases the persons eating the honey mushrooms drank alcohol containing beverages; but in some cases this was not the case. All persons affected recovered.

Often the caps of the mushrooms were young and fresh. Researching the cases over several years produced the following information: It was established that the honey mushrooms had not always been thoroughly cooked. In the Northwest the gastro-intestinal upsets seem to occur when the A. mellea was collected under conifers. Do not eat any honeys which have been exposed to frost. Frost seems to alter the chemistry and produce toxins in otherwise safe mushrooms. Also don't eat the honey mushrooms if they have a metallic taste.

Report all gastro-intestinal incidences to the PSMS Board so we all can benefit from our fellow members "upsetting" experiences. We will report on digestive reactions with other mushrooms as they become known.

P.S. to our new members: It is known that people have allergic reactions from eating spring mushrooms, especially the Verpa bohemica (cottonwood morel). All early spring mushrooms should be cooked thoroughly, and it is recommended that Verpa bohemica and Gyromitra species be parboiled, the water poured off, and then prepared in the desired way.



SUMMER DROUGHT SPURS FRENCH TRUFFLE TROUBLES

The Wall Street Journal reported that the dry summer of 1983 in France trifled with the truffles. In Perigord, the main producing area, this year's crop of truffles - those fleshy, edible, potato-shaped fungi that grow underground - is expected to total only about three metric tons, down from 10 tons last year.

In other areas, the drought's effects have been even worse. As a result, producers say, prices have soared. Prices have risen to the equivalent of \$214.80 per kilogram, about 2.2 pounds, from \$143.20 last year. By February, producers say, prices could jump as high as \$238.70 per kilogram.

SEND IN THOSE TRUFFLES

PSMS is exchanging newsletters with the North American Truffling Society, 805 N.E. Colorado Lake Drive, Corvallis, OR. 97333. NATS encourages the sending of specimens from all parts of the U.S. To mail, wrap the truffles in wax paper or paper toweling, pack in more toweling in a box, and mail to the above address. You will be notified as to genus and species of each find. Dried samples are also welcome.



P.
S.
M.
S.
Spore
Prints

is published monthly, except July and August, by the
PUGET SOUND MYCOLOGICAL SOCIETY
2559 N.E. 96th, Seattle, Washington 98115
Direct all mail to this address

OFFICERS Milton Grout, President, 1984 (1)
John Kunz, Vice-President, 1985 (2)
Ferris Anderson, Treasurer, 1984 (1)
Betty Hamilton, Secretary, 1985 (1)

TRUSTEES Term expires March 1984: Kearney Kozai (1)
Marian Maxwell (1); Richard Pauli (1); Don
Schultz (2); Charles Volz (1).
Term expires March 1985: Ernie Boa (1); Judi
Boa (1); Hildegard Hendrickson (2); Monte
Hendrickson (2); Charlotte Turner-Zila (1).

ALTERNATES: Edward Bush; Sally Ann Hansen; Ron Skoor.

IMMEDIATE PAST PRESIDENT: Carl Hermanson

SCIENTIFIC ADVISER: Dr. Joseph Ammirati

Calendar

Jan. 9 Monday, Beginners Orientation Class, 6:45 pm

Membership Meeting, 8:00 pm

Jan. 16 Monday, Board Meeting, 7:30 pm

Jan. 26 Deadline for Spore Prints material. Send to
Editor, 2559 NE 96th, Seattle, WA 98115

Feb. 13 Monday, Beginners Orientation Class, 6:45

Membership Meeting, 8:00 pm

March 16, Friday, The 20th Annual Survivors Banquet

BEGINNERS CLASS CONTINUES IN JANUARY M.M.H.

The Beginners Orientation Classes held at 6:45 on the day of the regular membership meeting (which starts at 8:00 pm) continue through June. The topic of the January session will be "cleaning, cooking, and preserving" wild mushrooms and will be given by Hildegard Hendrickson. The classes are open to all members, and there is no charge.

WELCOME TO THE FOLLOWING NEW MEMBERS

Walter & Rita Burrows: 883-9850; Jim & Minnie Crozier: 746-5126; Christopher & Karen Hall: 788-6676; Raymond & Claire Harper: 542-2028; Mary Ann Ivons & Jeff Taylor: 794-7199; Alyce Longanecker: 932-5628; Nick & Sonia Mathias: 522-3730; John & Betty Phillips: 778-7411; Thomas Seddon: (503)484-9792; Carl Siegel: 746-3020; Ralph Yoder: 525-0269

Membership Meeting

Monday, January 9, 1984, 8:00 pm in the auditorium of the
MONROE CENTER, 1810 N.W. 65th Street, Seattle.

Program: Gary A. Laursen of the University of Alaska in Fairbanks will be our program speaker. His talk will be about Alaskan Mushrooms. Professor Laursen is the co-author (with Dr. Joseph Ammirati) of Arctic and Alpine Mycology.

It is a rare occasion that we have the opportunity to hear an out-of-state professional mycologist at a membership meeting. (P.S. Your editor is curious whether he will verify the "giant" mushroom tales travelers bring back from Alaska.)

BOARD NEWS

H.R.H.

Due to the onset of our icy weather on December 19th, the Board Meeting for December was cancelled.

NUTRITIONAL INFORMATION ABOUT MUSHROOMS

The October issue of East West Journal's Food Section carried an article about the nutritional information about mushrooms.

"... Apart from new tastes, colors, and textures, what can wild mushrooms add to your diet? With a few exceptions, from the standpoint of conventional, modern nutrition, there is not much outstanding about them. They are low in most vitamins and minerals. The protein content, though higher than most vegetables, is much lower than meat, fish, and dairy food. This is, however, highly assimilable protein. Also, mushrooms are low in fat, and they do contain a significant amount of vitamin D and varying amounts of vitamin B-12. The B-12 content may be of interest to vegetarians because there are few non-animal food sources of that vitamin, which is vital in the development of red blood cells.

The principal dietary contribution of mushrooms lies in their high enzyme content. Indeed, the words fungus and enzyme are close to being synonymous. Mushroom enzymes, like those found in miso, tamari, pickles, and other fermented foods, powerfully assist in the digestion of the foods they are combined with, thus greatly increasing the total amount of nutritional elements that actually get into the bloodstream. And, once these mushroom enzymes themselves get into the bloodstream, they relentlessly pursue the role that nature has bestowed upon them - the role of breaking things down. There they break down fat, calcified fat, and combinations of calcified fat and protein in the arteries, organs, and tissues....

MICROWAVING COPRINUS COMATUS Mycophile

Place Shaggy Manes in microwave oven until they start to break-down and give up water; remove, then refrigerate. The process of autodigestion (inking) is stopped by this method.

BOOK REVIEW

Jennie Schmitt

This book review is a continuing series which reviews the books which PSMS has for sale for its members.

THE MUSHROOM HUNTER'S FIELD GUIDE, all color & enlarged edition, by Alexander H. Smith and Nancy Smith Weber, 316 pp., 290 color illustrations, 282 species. Univ. of Michigan Press, 1980; \$16.30

This book is actually the 3rd edition of a very useful and popular field guide. The first two editions contained only black

and white photographs. This all color and enlarged edition follows the same format, including the illustrations in the text so that they coincide with the descriptions. No matter where you live in the United States, the book will be a great addition to your library.

The descriptions give a little more detail than former editions. The analysis of the meaning of the mushroom names will in lots of ways help you to remember the name.

All the major groups of basidiomycetes are represented, with agarics predominating. Twenty-five ascomycetes are also described. Both, the beginner and the advanced mycologist can benefit from perusing the book.

The final section on "Hints for the mushroom collector" answers questions that are asked by old and new mycophagists; Where do you find mushrooms? Best edibles for the beginner. Tree associations. Some of the better edible mushrooms. A list of selected books on mushrooms (only fairly recent studies, in English, are included). The book has an index arranged in alphabetical order by genera.

See Judi Boa for information on how to get a copy of this book.

BOOK REVIEW Brian S. Luther
THE MUSHROOM HUNT by Robert Porter, E.P. Dutton, Inc.
1983. 98 pp. 48 color plates, 33 b & w illustrations.

Some time ago I received a flier from the University Bookstore which included a note that this book was scheduled for publication in early 1983. I anxiously waited for its arrival, only to be sorely disappointed.

This book consists of 17 chapters in which the author rambles about this mushroom and that mushroom with very loose/informal and mostly unhelpful or irrelevant descriptive comments. Throughout the book one finds color plates and black & white illustrations (figures) which are the original work of the author. Many of the color plates are pretty good and will be self-evident to anyone looking at this book, but none, in my estimation, are truly excellent, and some are really quite unacceptable.

In the Preface the author states that "The art in this book is taken from live specimens and reproduced at their true scale". On Plate 48 (p.82) Psilocybe cubensis is shown as being almost the same size as P. semilanceata and Panaeolus foeniculii. Nonsense, P. cubensis in nature is a significantly larger mushroom, which I have seen many times in the Southeastern United States. Also in the Preface, the author emphasizes that he included illustrations of specimens that were "odd, a few of them old - just as the hunter might come across them in nature". If the author didn't have enough illustrations, then why didn't he look around and do more collecting in order to find better and more representative specimens for his plates. Abnormalities and variations can always be learned later, but this confuses the amateur/beginner. The author claims that you can use his book and "Sharpen your eye for the field and find America's choicest mushrooms". I'm afraid that an amateur who reads this book will get such a false impression of the most commonly encountered forms of some of these mushrooms that he/she would really have to "sharpen their eyes" to identify any. I cannot agree with Orson Miller's statement (printed on the back of the book) that "these paintings provide us with the depth and essence of each fungus". Several examples and my comments follow.

Plate 2 (p.4) Lactarius piperatus. Identification is question-

able: the gills are not crowded together anywhere nearly enough for that species. Plate 3 (p.5) This is not Leotia lubrica, but rather a completely different species, L. atrovirens. Also on Plate 3, the illustration of Discina perlata is so bad that it is not recognizable as a fungus of any sort, without the use of a great deal of imagination. Plate 6 (p.8) Tricholomopsis platyphylla. Doubtful identification, and/or extremely poor color rendition; certainly not recognizable as the species claimed. On Plate 10 (p.12) the author failed to provide a name for the parasite on the Russula at the bottom of the page. It is certainly Peckiella viridis (Hypomyces luteovirens). Plate 44 (p.78) The fungus labelled Inocybe fastigiata is obviously a Conocybe of some sort. Many of the mushrooms illustrated throughout the book are not mentioned in the text, and many that are mentioned in the text are not illustrated. Not all the plates are paintings or drawings; photographs of 5 spore prints are provided in Plate 7 (p.9).

Under Chapter 12 "Chanterelles" the author has, unfortunately, perpetuated an erroneous practice of placing Gomphus in the Cantharellaceae, where it absolutely does not belong. Except for the outward macroscopic similarity, the genus Gomphus and Cantharellus are miles apart.

The author does convey an extraordinary aesthetic appreciation or sensitivity for fungi, exemplified by the following comments: "Mushrooms, however, are beautiful in their own right and can be appreciated for this quality alone. To come upon a crop of wild mushrooms in the woods or fields is reward enough, even if they can't be eaten".

This book is softbound and similar to the style of a Dover book. The paper used for the text is of fairly good quality and the plates are on enameled paper. For an introductory book, it is most unfortunate that the author has not provided the reader with any kind of a bibliography. The book does have some merit, but not as an identification guide. Even so, the reader should be able to assimilate some practical information from it. There is a two-page chart in the front of the book (not paginated) which compares a few generalized characters of some of the common genera and families of fleshy fungi.

There are people, I'm sure, who will enjoy the author's Henry David Thoreau-like, less formal writing style. However, his lack of continuity and depth of information will be a real big distraction and disappointment to those wanting more detail. The author has, in effect, produced a mushroom identification storybook.

FOOD FOR THE GODS - AND HOW TO AVOID IT
by Arthur Gryfe, M.D., F.R.C.P.(C), Toronto Mycol.Soc.

A short historical overview of mushroom poisoning.

Mushrooms have been part of the human diet since ancient times. Reports of cases of mycetismus (mushroom poisoning) are abundant in European medical literature, and well over onethousand incidents, hundreds of these resulting in death, have been recorded from the 18th to the early 20th century. Nor were the Japanese spared. Almost 500 cases with a mortality rate of over 20 percent, were reported in the nine years between 1879 and 1887. As North Americans became aware of esculent fungi in the early 20th century, they too began to suffer the consequences of misidentification.

Early Greek and Roman writers indulged in incredible stories of poisonings, incidental and intentional, and told of even more incredible anti dotes and fanciful explanations of mushroom toxicity. (continued on page 4)

In the earliest documented cases in the 5th century B.C., Euripides, the Greek poet, described how a mother and her three children succumbed to fatal mycetism. Modern writers have mistakenly attributed these deaths to Euripides' own family.

The Roman Emperor Claudius was the victim of the most famous case of mushroom poisoning. The tale of his murder at the hands of his wife, Agrippina, has been told, retold and mistold. Agrippina, who had already dispatched two previous husbands (one of whom had fathered her son, Nero, one of the greatest scourges of history) had waged a reign of terror, murdering large numbers of Rome's elite. Many died only because they had been unfortunate enough to partake of a feast prepared by Agrippina and intended for a single victim.

When time was up for Claudius, *Amanita phalloides*, one of Agrippina's favorite weapons, was added to Claudius' favorite meal of *Amanita caesarea*. The emperor, being in a drunken stupor, threw it all up again, and Agrippina had to hastily summon the court physician for assistance in finishing off Claudius, using poisonous gourd colocynth.

Upon the death of Claudius, Nero became emperor, and as was a common Roman custom, the Senate deified Claudius. Thus Nero was prompted to declare that since mushrooms had resulted in the deification of Claudius, they must indeed be food for the gods.

Eventually, Nero murdered his mother. Pliny the Elder, who devoted himself to recording and explaining all wisdom of ancient Rome, not being a fan of mushrooms, Agrippina or Nero, summed up his feelings with, "by their (mushrooms) means poison was administered to the emperor Tiberius Claudius by his wife Agrippina, by which deed she inflicted another poison on the world, and especially on herself, in the person of her son Nero."

Mushrooms generally were maligned by the ancients and unpalatable antidotes were prescribed for anyone unwise enough to eat them. In the 3rd century B.C., the physician Diphilus began some of the old wives' (old husbands'?) tales for differentiating between edible and non-edible species. He claimed "the wholesome kinds are easily peeled, are smoothed and readily broken, such as grow on elms and pines; the unwholesome kinds are black, livid and hard and remain hard after boiling". His emetic antidote, "a draught of honey and water, or honey and vinegar, or soda and vinegar; after the draught the patient should vomit", was copied or modified, for centuries.

In the 2nd century B.C., the Greek physician-naturalist, Nikander, published the revelation that the toxic qualities of mushrooms resulted from their exposure to vipers, dirty rags and rusty iron, a concept that was perpetuated for centuries. Nikander referred to all species as "the evil ferment of the earth" and his antidote, which became the benchmark for his successors almost to modern times, deserves quoting. He prescribed "many-coated heads of cabbage, or cut from around the twisting stems of the rue or old copper particles which have long accumulated, or pound clematis into dust with vinegar or soda, and the leaf of cress which grows in gardens, with the medic plant and pungent mustard, and burn wine-lees into ashes or the dung of domestic fowl; then putting your finger in your throat to make you sick, vomit forth the baneful pest". Various ingredients of this disgusting concoction were prescribed by other notables of ancient times,

including Dioscorides, Celsus, Pliny, and Galen. Some also suggested additional detoxifying agents, especially pears.

Pliny, in a moment of self-contradiction, attributed some medicinal benefits to mushrooms in treating afflictions such as: fluxes from the bowels and fleshy excrescences of the anus, blemishes on women's faces, sore eyes, headaches, foul ulcers and eruptions of the head and bites inflicted by dogs." Quite a scope, but probably all useless. The 16th and 17th century English herbalists, John Gerard and Nicholas Culpeper were very blunt in their condemnation. According to the former, "some are very venomous and full of poison, others not so noisome; and neither of them are very wholesome meate". He also stated that "fusse balls, pucke fusse, and bulfists" (all synonyms for puffballs) may cause "a kind of blindness which is called poor-blinde or sandblinde". Culpeper dispensed with the lot in one sentence. "Whether these be roots or no, it matters not much; for my part I know but little need of them, either in food or physic".

In 1837, an English physician, Charles David Badham, leapt to the defense of mushrooms. He attacked the ancients and his contemporaries for being narrow-minded about the "esculent funguses" although he described in accurate detail the clinical and autopsy findings of mycetism. His treatment, however, was copied from the ancients except for the addition of bleeding as a last resort.

In 1740, when Charles VI, the last of the male Hapsburg Holy Roman Emperors, died after a meal of mushrooms, his daughter, Maria Theresa, ascended to the throne. A series of personal and political tragedies followed culminating in the Wars of Austrian Succession after Frederick The Great seized Silesia. All of Europe was in turmoil for years to come and Voltaire was moved to comment that, "a pot of mushrooms changed the history of Europe".

As recently as the 20th century, a suave Parisian, Henri Girard, succeeded in convincing wealthy Frenchmen to name him as beneficiary in their wills, then with the help of his wife and his mistress, used *Amanitas* to hasten their deaths in order to claim their fortunes. His undoing came about because his mushroom collector, "Le Pere Theo", was inconsistent in his identifications and many intended victims survived. The testimony of these survivors, and that of turncoat Theo, resulted in the imprisonment of Girard and his ultimate death from tuberculosis.

The most difficult chore in sifting through the literature on mycetism is to determine which species are actually being referred to. Pliny used "boletus" when it appears he meant "*Amanita*". Others used "amanita" and "agaricus" interchangeably, and so on. It is interesting that the man most instrumental in causing the greatest confusion in mycological terminology was the greatest taxonomist of all, Carl Linnaeus. This eminent 18th century physician-botanist organized botany into the binomial nomenclature used extensively today, but his section on mycology unfortunately was a shambles.

In spite of this and other pitfalls, the study of mushroom poisoning is usually fun. The anecdotes which we read each month in the various bulletins from the mycological clubs will be viewed in the future as strange historical episodes. As for our treatments for mycetism, I'm not certain that they are better than those of our ancestors, but at least they are less disgusting.

