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MESSAGE FROM THE PRESIDENT

Oh, what interesting conversations one encounters, when wearing a WMS sweatshirt. I find myself wearing it more often during these cold winter months. Usually the person in front of me will stare at the logo on the sweatshirt, which is inside a ring of mushrooms and politely ask, "What does mycological mean?" Depending on what whimsical mood I'm in, I've been known to answer, "It's a group of people who have changed their names to Michael."

This ploy didn't work however when I was talking with the head of the Nephrology Clinic at Froederdt Hospital along with several other doctors in attendance. I was visiting my mother, who has been going through some medical problems as of late and the conversation abruptly changed from patient prognosis to wild mushrooms. Nephrology has to do with the kidneys. When nephrology and mycology meet there's usually a mushroom known as an *Amanita* involved. What I had here was a group of doctors keenly involved with mushroom poisonings throughout the state. Extremely important was the special type of dialysis that takes the toxins out of the bloodstream. I'm hoping that this informal education I'm getting can somehow result in a lecture in the future where these lifesaving techniques can be discussed. Avoidance of all poisonous mushrooms is the key, but as members of this society we are sometimes placed in a situation where a friend telephones us, telling us, usually in a panicked voice what has happened after their child, husband or dog ate a wild mushroom. We should be prepared for this. Over the course of several weeks, I've talked frequently with doctors and have received favorable responses about their efforts to save lives. There seems to be a consensus among them that education is uppermost on their list of ways to prevent poisoning. This is what our mushroom society is all about.

Bill Blank

UPCOMING EVENTS March 11th **Slide-Lecture by Dan Lindner** on *Armillaria* and *Entoloma abortivum*: Who's really aborting whom?, Mitchell Park Pavilion, 7:30 p.m.

April 7th **Gourmet Mushroom Dinner at Heaven City Restaurant** (reservations required, but there is still plenty of room; send a check for \$30/person to John Steinke to reserve a delicious evening).

April 23rd **Slide-Lecture by Dr. Alan Parker** on *Morels*, a Spring Ritual in Wisconsin, Mitchell Park Pavilion, 7:30 p.m.

May 3rd Second Annual Illinois Morel Mushroom Championship, Magnolia, Illinois. For more information, call (309)364-3319.

May 17th **Morel Foray** June 21st Annual WMS Business Meeting/Picnic, Falk Park Pavilion.

Members should have received announcements for the March and April lectures and the mushroom dinner. Flyers on the May and June WMS events will be sent out later.

MUSHROOM BOOKS FOR SALE

WMS member Alan Parker has for sale a number of mushroom field guides and also a number of more technical papers and books on fungi. For a list of the 70 some offerings please call (414)542-7688 and leave a message with your name and mailing address. <

TELLURIDE MUSHROOM CONFERENCE

The 17th annual Telluride Mushroom Conference will be held, August 21-24, 1997, in Telluride, Colorado, offering persons attending the NAMA Foray, August 17-21, 1997, in Copper Mountain, an opportunity to extend their Colorado mushroom experience. The Telluride Conference is designed for persons interested in mushroom identification, edible, poisonous, and psychoactive mushrooms, and mushroom cultivation.

Dr. Christian Ratsch, cultural anthropologist of Hamburg, Germany, eminent lecturer and author, will address a plenary session of the Conference on A Quest for the Identity of Soma: the Ethnobotany of the Himalayas.

Gary Lincoff, author of the Audubon Field Guide to North American Mushrooms, will conduct a course on Mushroom Identification; Paul Stamets, author of Growing Gourmet and Medicinal Mushrooms, on Mushroom Cultivation; Andrew Weil, author of Spontaneous Healing, on Mushrooms and Health; John Corbin, cultivation specialist, on Growing Mushrooms on Straw; Linnea Gillman, Past President of the Colorado Mycological Society, on Rocky Mountain Mushrooms; and Emmanuel Salzman, co-editor of Mushroom Poisoning, on Poisonous Mushrooms.

Telluride is an historic Colorado mining town on the western slope of the Rocky Mountain Continental Divide. Daily forays will be led into the nearby forests generally productive of a wide variety of wild mushrooms, particularly edible species.

For further information, contact Fungophile, P.O. Box 480503, Denver, Colorado, 80248-0503. Phone/Fax 303-296-9359. (announcement provided by Emmanuel Salzman)

JANUARY MEETING

The annual WMS slide show and social was held on January 14 this year. The evening began with the drawing among those members who had completed and returned the "20 Answers" quiz on the back of the dues notice, along with their 1997 dues. There were actually two drawings — one among those who had all the answers correct and one among the remaining participants. In the drawing among the "all-correct" group, Kristi Seifert of Madison was selected. In the participation drawing, Larry and Laura Ellis of Mukwonago had their names drawn. These members will receive a field guide of their choice.

After the drawing, six WMS members presented slides. Steve Nelsen showed some slides of mushrooms found in the Smoky Mountains, including some interesting purplish coral fungi. Dave Menke showed a few slides of the Olympic Peninsula from his trip there for the NAMA foray in 1993. Chuck Fonaas, Alan Parker, Peter Vachuska, and John Steinke also showed slides of fungi taken in Wisconsin.

After the slide show, Tula Erskine was honored with the WMS Distinguished Service Award for her many contributions to the club. (An article discussing some of Tula's accomplishments follows this report.) Peter Vachuska presented Tula with a plaque and a Japanese mushroom book with lovely photographs. This is the second time the Distinguished Service Award has been given; two years ago the award was presented to Tom and Marilyn Fifield.

The last part of the evening was the wine and cheese mixer, prepared by Kris Ciombor and Chuck Soden, with contributions and help from other members.

Thanks to everyone who contributed in some way to the slide show and mixer to make the evening a success.

The following article was written for a poster display honoring Tula at the 1995 NAMA foray in Bemidji, Minnesota. At the foray, there was a poster exhibit honoring women who have made significant contributions to amateur mycology.

TULA ERSKINE by Colleen Vachuska

Of all the women in the Wisconsin Mycological Society, none is more deserving to be honored here for her contributions to amateur mycology than Tula Erskine. She has been interested and active in the study of fungi in Wisconsin for over 40 years.

Gertrude (Tula) Erskine was born, grew up, and has lived in Milwaukee, Wisconsin for most of her life. She studied art at Wisconsin State College (now the University of Wisconsin-Milwaukee) and then worked as a high school art teacher and free-lance artist, in addition to being a housewife. Not surprisingly, Tula first became interested in mushrooms through drawing them, but she also developed an interest in trying to understand and identify fungi.

Over the years, Tula has collected in the states of Florida, N. Carolina, Montana, Idaho, Washington, Oregon, Tennessee, Oklahoma, Michigan, Minnesota, and Louisiana, as well as the countries of Czechoslovakia, Germany, Switzerland, France, England, and Scotland. Tula and her husband James spent many hours exploring woods and trying to identify their fungal finds and they acquired a wide knowledge of mycology. They were part of the original Wisconsin Mycological Society (WMS) which existed during the 1960's and 1970's. Tula was the third president of this organization, and she began the practice of the club conducting group field trips. (Prior to this, the club had only lectures and small informal field trips.) The original WMS broke up in the 1970's, but was reincarnated in 1982. Since that time, Tula has been a member of the WMS board of directors and has served as Vice-President since 1986.

In the ensuing years, Tula has contributed to the educational purposes of WMS in a great variety of ways. As a director, Tula has had many creative ideas of things for the club to do and ways to do them, such as having a tree identification foray or having club members draw identification charts for their own use. As a foray leader, each fall Tula conducts the Fred Hainer Foray (named after the first president of WMS) to Point Beach State Forest. She has also helped lead many other forays and been a wealth of identification information at all forays. As an active member, Tula has been very instrumental in organizing the display and the identification of fungi and talking to visitors at our annual WMS-MPM Mushroom Fair. Other ways Tula has given of her time and knowledge to WMS include helping conduct mushroom identification workshops and classes, helping put together an introductory packet for new members, and writing articles for the club newsletter.

Since Tula's expertise is in art, many of her contributions have been in this area. She designed the WMS membership card, the club stationery, and the club sweatshirt. The paintings shown on this poster were prepared by Tula for a mushroom field guide, which unfortunately did not get published. Tula has also displayed her artistic talents at NAMA forays. She won first place one year and in another year second place, in mushroom arrangement contests at annual

NAMA forays in Idaho and Montana. In 1988, she won first place in the T-shirt design contest at the Minnesota NAMA foray. Tula has also incorporated mushrooms into a variety of craft work displayed in her home.

Probably more important though than any of these things are the human contributions Tula has made. Many people come to her house to get their fungal specimens identified, but they also get good company and conversation. Her wide knowledge of botany and enthusiasm make her a joy to be around at forays. Her interest and questioning attitude at forays and other programs provide a good example for all of us. Finally, Tula's spunk, charm, and wide interests make her someone quite memorable.

FEBRUARY MEETING

The February 12 WMS event was a lecture/slide show on yeast by a member of ours, Gunnard Jacobsen, a microbiologist with Universal Foods/Red Star Yeast. Gunnard had given an interesting talk to the club a number of years ago and the WMS board decided to invite him back.

During his talk, Gunnard first gave an overview of what yeast are, some of the properties of how they grow, and some of the most common kinds. A yeast is any fungus that can exist in a single-cell state. Yeast reproduce by budding, in which so-called mother cells form daughter cells. A bud-star is left after each budding and these cannot overlap, so only a certain number of daughter cells are possible from each mother cell.

Our speaker next went through a timetable of events related to yeast, baking, and fermentation. Beer recipes from 6000 B.C. Mesopotamia have been found on tablets. By 4000 B.C., bread ovens were in use in Babylon, and by 1750 B.C., Egyptian bakers were using brewer's yeast. In the modern 1600's-1800's, scientists came to a gradual realization that yeast were responsible for beer fermentation and that they were a form of fungi. In the late 1800's mass yeast production began.

Gunnard then discussed the specific uses of yeast in beer and wine fermentation and in bread-making. Baker's yeast is scientifically known as *Saccharomyces cerevisiae*. In bread-making, yeast utilize sugars to form alcohol and carbon dioxide, the process of which increases dough volume, improves texture, and imparts flavor. There are different strains of yeast specifically suited for no sugar (lean) doughs or for sweet doughs.

There were a number of questions after the talk, and Gunnard knowledgeably answered them all.

MYCO-BRIEFS by Peter Vachuska

- Northern California is experiencing an epidemic of mushroom poisonings. Normally, doctors expect to see 20 cases of wild mushroom poisoning in northern California each year, but this year there were already 9 cases in about the first 10 days. The poisonings are due to the proliferation of *Amanita phalloides*. *A. phalloides* is believed to be an alien species introduced with nursery stock. It was virtually unheard of in northern California until 1979 and is now growing in numbers never before seen on the west coast. Its appearance makes it quite attractive to amateur collectors. For some collectors, there are similarities with species of *Volvariella*. It reportedly has a good taste. *A. phalloides* is responsible for 95 of the deaths due to mushroom poisonings world-wide. The mushroom "produces an extremely potent toxin which binds to proteins in liver cells. The toxin can quickly destroy the liver. The illness may not appear for 6-24 hours. The first symptom of illness is severe diarrhea, but doctors say that by the time symptoms appear, liver damage is already under way." ([San Francisco Chronicle](#), Jan. 9, 1997)
- The U.S. Forest Products Lab in Madison has developed a process in which papermakers can use a fungus to soften and break down lignin in wood chips before grinding and making them into paper. This has the potential to

reduce the energy requirements to mash the wood chips by 30. Since purchased power amounts to 15 of the total cost of production of paper, this will have significant money-saving potential. The initiative started in 1986 when representatives of the paper industry reviewed seven possible projects from the FPL and decided to go with the fungus. Hundreds of fungi were screened by researchers from the laboratory, the University of Wisconsin biotechnology center and the University of Minnesota until the right one, *Ceriporiopsis subvermispora*, was found. By fine tuning the process, researchers have reduced the time needed for the fungus to do its thing from 6 weeks down to 2 weeks and have aspirations of reducing it to 3 days or a week. The fungus breaks down the lignin and also removes pitch. This means less time is spent grinding the wood chips and less damage is done to the cellulose. Side benefits of this are a stronger paper with increased opacity and less see-through, overall a higher quality of paper using less energy.

- The British scientific journal Nature reported in January a breakthrough in cultivating chanterelles. Francisco Camacho of Oregon State University in Corvallis and Eric Danell at the Swedish University of Ag Sciences in Uppsala have developed a method for successfully growing *Cantherellus cibarius* in greenhouse situations. Cultivation of chanterelles is tricky business because they are mycorrhizal mushrooms, i.e., they depend on living tree roots for survival, unlike common cultivated *Agaricus* which lives on dead decaying plant matter. It was thought that chanterelles would only grow in older trees in mature forests. But the researchers achieved their results using seedling pines. This has been the result of 8 years of effort by the researchers and much of the details of the work are still under wraps as a Swedish company examines patent issues and decides how to start commercial production. *Cantherellus cibarius* is a prized mushroom in Europe, where wild populations have diminished in recent years due to air pollution and loss of habitat.
- Species 2000, a worldwide initiative to create an Internet-based index of the world's known species, began last month in Manila, Philippines. The index will consist of a series of databases covering each major group of organisms and will enable users to verify the scientific name, status and classification of every known species of plant, animal, fungus and micro-organism. The service will be made available as part of the Clearing House Mechanism under the United Nations Convention on Biological Diversity.

A FLASHERS POINT OF VIEW Flash vs. Natural Light Photography by Chuck Fonaas

Unquestionably, I have always preferred artificial light when photographing fungi. It gives the shot a nature portrait "feel." In addition, the expanded depth of field and contrast lend to very sharp detail. I find this to be beneficial in obtaining a good natural history photograph with recognizable taxonomic detail.

A photographer acquaintance of mine prefers natural light. Both methods produce good results and it probably comes down to personal preference and requirements more than anything else. I believe he is more of a scientist where I am more involved with the artistic end of things, and although my natural history knowledge is fairly thorough, it is strictly amateur. Perhaps for the scientist there is a certain advantage to natural light.

I must admit that in light of our conversations I have given natural light a second look. There is a certain softness and subtleness to it that really captures the feel of the woodland undergrowth. Occasionally, the dappled light will play beautifully off a specimen and a small tripod can help immeasurably at a time such as this. There are several low level or table-top type tripods available that are quite inexpensive. This type of tripod also gives you a low, chipmunk's eye view of your specimen. Although this is not the natural line of sight for the foraging human it provides a more complete view of the entire organism with regard to both art and science.

When photographing natural light subjects at or near ground level in often dimly lit woodland conditions your shutter speed is likely to be slow and your aperture is likely to be large and a resulting loss of depth of field and contrast should be expected. This is not always bad as it can "soften" the picture often with pleasing results. This can, however, obscure details.

One method of improving on the situation is to use a reflector. They now have some compact, store bought ones

available or you can use a simple piece of white cardboard. Higher speed is an alternative and the newer films are reputed to offer much more clarity than the older, grainy films.

Close-up flash photography while perhaps not capturing the entire natural “feel” gives you greater detail of the subject and its surroundings. It gives you greater color intensity and a study in detail otherwise available only under close examination. For me, this is the ultimate — to see the living specimen in all its glory (perhaps enhanced just a bit by the flash).

In my opinion, the only way to come close to this using natural light is to use very slow shutter speeds and a cable release. At very slow speeds even the smallest breeze can cause movement that can ruin your picture.

When using a flash for macro-photography use a small, low-powered unit. Auto-exposure is not only not necessary but may be a detriment at close range. Put everything on manual. Experiment with a roll of film to gauge your results since your flash guide will not help inside three feet or so. A good f-stop to start at is f-16 but experiment with everything from f-11 to the smallest f-stop you have. Good films to use are ISO64 slide or ISO 100 print film. These will work for both natural and artificial light although you may want to try something faster for natural light.

To eliminate unnatural shadows that may obscure important details use a side-mount flash bracket (the straight kind without a handle) and a flash cord. A flash mounted too high such as on a hot shoe or handle-mount bracket will result in shadows being cast directly downward obscuring details of things such as stipe, veil, undergrowth, etc. Using a side-mount bracket will give you more natural-looking shadows while at the same time shedding more light on detail.

Whether you prefer natural or artificial light, remember, fungi photography and nature photography in general is often a fusion of art and science. The finished product depends entirely on your perspective.

PHOLIOTA TERRESTRIS, A RARE SPECIES IN THE MIDWEST by Steve Nelsen

September 1995 was disastrously dry near Madison, and Adrienne and I found almost no fresh mushrooms on September 17 when we were collecting at the Madison School Forest in the Town of Verona (Dane County). Much to our disappointment, neither honey mushrooms nor the abortive *Entolomas* which are infected by them, both of which usually abound in the oak forest there, had started yet because of the dry weather. We were overjoyed to find a couple of striking clusters of beautiful and large mushrooms with brown scales on their caps and stems growing on the ground within about 5 feet of the stump of a large long-dead tree (probably an oak). We were even more pleased to find a few clusters of younger specimens of the same species in a similar habitat about half a mile away (especially because we found almost nothing in between). We have collected at the School Forest at least twenty times in September without seeing this species before, and it is noticeable enough that it would seem unlikely that we would miss it if it had been there often. It proved to be *Pholiota terrestris* Overholts, first described in 1924. The bible for *Pholiota*, Smith and Hesler [A. H. Smith and L. R. Hesler, *North American Species of Pholiota*, Lubrecht and Cramer: Monticello, New York, 1968.], says it is fairly common in the Pacific northwest (CA, OR, WA, ID, and BC) and known but rare in the Midwest. [S H examined just two midwestern collections, one from Michigan (by Smith), and one from Wisconsin by E. W. Harper, who reported it in 1913 as *Pholiota terriginea* Fr. (a species Moser, 1978, says has been transferred to *Inocybe* by Kuhner). Smith examined Harper's specimens and determined them to be *Ph. terrestris*.] Its closest relative is the much more common *Ph. squarrosoides*, which has lighter-colored (and apparently thicker) scales and grows on logs. S H place them in the same stirps [A stirps is a central species and its satellites, thought by an author to be related by descent. It is not recognized by the official rules of nomenclature, so no one needs pay attention to what anyone else says about them. Smith likes stirpes, and always groups species into them in his monographs. This appears very useful, as it is usually difficult to tell species in the same stirps apart. I am almost always pleased if I can identify something to the level of one of Smith's stirps. To give the flavor for sorting through a Smith monograph, stirps *Squarrosoides* contains the above two species, one described by Peck in 1913 from NY, NJ and MO but not uncovered by Smith and Hesler in all the time they researched their monograph, four species newly described in the monograph (and to which which I have not seen a reference since), and a species Murrill described in 1917 as a *Hebeloma* which Smith examined and decided was really a *Pholiota*.] and says that this stirps contains the best edible species in the genus (p. 192), so we

cooked up a batch. These beautiful mushrooms fried up to a rather unpleasant-looking and insipid to evil-tasting mass; we agree with Smith, Smith and Weber's pronouncement that they should be "not rated highly". [A. H. Smith, H. V. Smith, and N. S. Weber, *How to Know the Gilled Mushrooms*, W. C. Brown: Dubuque, 1979, p. 242. Given the information in ref. 3, the statement on p. 192 appears to mean (at best) that *squarrasoides* is good, although SSW describe it only as "mildly" poisonous to some people but it has been generally rated as an edible species', hardly a ringing endorsement! McIlvaine can always be counted on for more enthusiasm: "Its caps [*squarrasoides*] are of the very best." (C. McIlvaine and R. H. Macadam, *One Thousand American Fungi*, Dover: New York, 1973 [reprint of 1902] p. 274).]

RECIPE: BEEF MUSHROOM BORSCHT by Joanne Pasek

A fine Russian lady born in Russia taught me that Borscht is not always made with beets, but it is a hearty soup or stew made with soured or cultured milk, using surplus milk before refrigeration.

- 1 pound lean boneless beef chuck or pork, cut into 1-inch cubes
- 1 tsp salt
- 1/4 tsp freshly ground pepper
- 1 Tbsp vegetable oil
- 3 1/2 cups chopped onion
- 4 cups sliced honeys or other wild mushrooms
- 1 pound carrots, sliced
- 3 (13 3/4 oz) cans beef broth
- 3 cups water
- pinch of nutmeg and cloves (optional)
- 1 pound potatoes, cleaned and cut into 1-inch pieces
- 1 small head cabbage, chopped, 5 cups more or less
- 1 cup diced celery
- 1/3 cup red wine vinegar
- 1/2 cup sour cream or 1 cup plain low-fat yogurt

1. Season meat with salt and pepper. Heat oil in large Dutch oven over medium heat. Add meat and cook till browned on all sides, about 4 minutes. Transfer to bowl with slotted spoon. Add onions and mushrooms to Dutch oven and cook till onions are translucent, about 5-7 minutes.

2. Return meat to Dutch oven with carrots, broth, water, and spices if wanted. Bring to a boil, reduce heat, cover and simmer 1-1/2 hours or until all is tender.

3. Add potatoes, cabbage, and celery. Bring to a boil. Reduce heat and simmer 30 minutes. Stir in vinegar.

4. Stir sour cream or yogurt in a bowl. Add a little hot meat juice and stir. Repeat until dairy product is warm. Gently stir into Borscht and heat. Avoid boiling as dairy products can curdle. Serve with bread on the side.

(Makes eight servings.)