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MESSAGE FROM THE PRESIDENT

The summer is over and the fall mushroom season is upon us. This past summer, the weather varied and consequently so did the mushroom picking. In some areas, it was dry and the findings quite sparse. Our summer foray in South Kettle Moraine was extremely dry. No chanterelles or other normal summer edibles were found. In other areas of southeastern Wisconsin, though, there was a lot of midsummer rain and species that are infrequently found, such as *Boletus edulis*, turned in an appearance.

For the WMS, there was a sad note to the summer. Many of you are aware that long-time WMS member and board member Sami Saad passed away suddenly on July 31. His warm personality and many contributions to the WMS will be greatly missed. He was a very special person who took the time to educate all those who were interested and wanted to know more about mushrooms. A club such as ours survives on the contributions, both large and small, of its members.

As I write this, I am enjoying a Labor Day weekend with friends in a cabin "up north". On the way up, we found a nice collection of *Lactarius indigo*. These ended up in a batch of indigo "blueberry" pancakes. The effect was stunning. The taste was mild and mushroomy but the indigo stained the batter blue throughout. Hopefully, this is a good omen and signals the start of an enjoyable fall mushroom season. See you at the fall forays.

Chuck Soden

UPCOMING WMS EVENTS

September 25 - Pike Lake State Park Foray
October 2 - Fred Hainer Memorial Foray at Point Beach State Forest
October 9 - South Kettle Moraine State Forest Foray

All of the above forays will start at 10:00 am. All members should have received flyers giving directions to these forays.

OTHER ANNOUNCEMENTS

Y2K Complacent?: It's time to think about paying your WMS Y2K dues. Keep your membership active, keep those newsletters and foray announcements coming. You can forward your annual dues (\$15) to: John Fetzter, WMS Membership Secretary, 1309 S. 73rd St., West Allis, WI 53214.

Those of you that are currently also members of NAMA should be aware that NAMA is raising its annual dues to \$32, almost double the previous rate of \$17. However, for this coming year, you can still pay at the old rate, if as a club, we get our dues in before December 31. So, IT IS VERY IMPORTANT THAT YOU NAMA MEMBERS GET YOUR DUES IN AS SOON AS POSSIBLE. Please mail a check for \$32 (\$15 WMS + \$17 NAMA) to John Fetzter at the above address BEFORE NOVEMBER 30 so that John can relay the money to NAMA before the end of the year deadline. Those of you that pay later may be asked to pay at the new higher rate.

WMS T-shirts: If anyone is interested in ordering a WMS T-shirt, see me at the forays or contact me at the above address.

ANNUAL PICNIC AND MEETING

26 June 1999

About 25 members enjoyed the WMS annual picnic at Falk Park. It was a great opportunity to mix and mingle, and talk about any late spring or early summer finds. A fantastic spread of potluck dishes were offered to complement the brats, italians and hot dogs. The mosquitoes were ferocious, so not many members ventured into the woods. Those that did found the going tough. The underbrush was very thick.

I'm sorry I don't have more to say regarding the picnic. It is with very mixed emotions that I write this note at all. As many of you may know, Dr. Sami Saad passed away recently. Sami had been a member in good standing for many years. Maybe you have joined him on forays that he led, or lectures he may have given. At the picnic, Sami was our brat chef for several years. Looking back now, it was a great opportunity to visit with Sami, to talk, to laugh, to share some time. You just never know when it might be your last chance. I'm going to miss you, Sami.

As part of the annual picnic, we also have an annual membership meeting. At the meeting, we discuss general club topics (membership, finances, etc.) and set the fall forays. All active members should have already received their fall foray information. The club membership is currently at 191 members. This includes 18 members carried since 1998 without paying, and 49 that have yet to pay their 1999 dues. All non-current members have had two reminders sent, and some have responded with their 1999 dues payment. It was decided that we would drop any non-current members prior to the next mailing. WMS finances are in good shape with a checkbook balance of \$3574.58 as of the picnic date. This is about the same "carryover" from year to year that we have experienced in previous years. If anyone would like a more detailed accounting of this past year's expenses, please contact me and a copy can be made available.

Secretary's Comment: What would it take to get more members to attend the picnic? The picnic seems to attract about 20-30 people every year, out of a total membership of about 180. I urge each WMS member to think about what we can do to interest more people in attending this annual event. A different time, a different location, a totally different idea. What will it take? Please let you WMS officers know. We want to include more people.

John Fetzner

SUMMER FORAY
24 July 1999

This annual foray was set up so that an opportunity to collect two of the most prized edibles, *Boletus edulis* and *Cantherellus cibarius*, might present itself to the hearty few of this great society. This was not the year. Due to the very dry conditions in my area, any date I picked this year would have been just as bad.

Whenever a person goes on a foray with only one or two species on their shopping list, he or she needs to understand that the chances of failure are very high. This is why it is so great to collect as a society. Someone is always picking a pretty specimen or an unusual one. If the collecting gets slow or even when it is good the comradery is always there. Members can learn about mushrooms, teach about them or just catch up on each other's lives. This summer foray relied heavily on comradery, which in my opinion, carried the day.

Actually, there were many species to be found this day, but almost all were of the small to very small variety. One of these small species was *Arachnion album*. This species looks very much like any small puffball only it never has a distinct mouth opening. It has a very thin peridium and when it is mature the whole fruiting body just falls apart, leaving a small pile of gray sand-like granules filled with spores.

John Steinke

PHOTO FORAY: 14 August 1999

When is an insignificant little lump not an insignificant little lump? When it's found by club president Chuck Soden and it's only the second time this particular type of fungus has been found in our area. *Tremella encephala*, a reddish, jelly-like fungus parasitizes the False Turkeytail (*Stereum*). This find was accomplished on the '99 photo foray, a small but happy gathering that was the beneficiary of some beautiful weather and some interesting (if not edible) finds. This year's foray was held on Saturday, August 14th at the Scuppernong ski/hiking trails in the South Kettle Moraine. Despite the dry weather there were some interesting items on the table after the foray. Among the finds were *Agaricus silvicola*, *Paxillus atrotomentosus*, *Limacella glioderma* and *Lepiota clypeolaria*. Also

found were some Cannonball fungi (Sphaerobolus). These were found by John Steinke and should make for some nice photographs if my close-up equipment does them justice. They are very small, only a few millimeters long, and not the easiest thing to photograph. In the end, the weather was great, we weren't "skunked" and as I've heard said before, it's always a good day for a walk in the woods. Thanks to John Steinke for the delicious melon he served up after the foray.

Chuck Fonaas

MAUTHE LAKE FORAY
11 September 1999

A beautiful sunny morning greeted us as we began the start of the fall forays. The foray leader was at the site early to see how things looked for collecting. It looked like picking might be pretty poor considering how dry the woods and surrounding area were.

After dividing into 2 groups, we all began searching low spots along swamps and in the bottoms of valleys. We were able to walk into areas of swamps that were inaccessible in the past.

The surprise came when we got back to the parking lot to identify our finds. We had many of the more common species: *Hydnum repandum* (two large specimens) and *Hynellum spongipes*. Large yellow caps of *Armillaria mellea* (buttons, honeys) were found and several people had enough for a meal. A beautiful specimen of *Hericium coralloides* was brought in. A *Hygrophorous conicus* which bruises black was found and *Russula brevipes* with its blue green ring on the stalk next to the gills. Excellent edibles *Flammulina velutipes*, *Laetiporus sulphureus* and *Grifola frondosa* were found - but in a very dried state. *Tricholoma caligatum* was found by John Steinke and is a very pretty and striking mushroom. We have found it here before but at no other sites. These specimens were given to the herbarium at UW-Stevens Point.

While cleaning up the mushrooms after the foray we found two very rare and unique mushrooms. One of these was *Camarops Peterii* which can be described as a hard black jelly bean. The spore surface is shiny and wet looking. This has been found in Wisconsin only a very few times. What a find!

John Steinke began to quiver with excitement when he saw a small *Geastrum*. It was small and the spore case was urn-shaped. After some study we knew this one was beyond our normal ability to identify. We could use any additional help on growing locale or substrate. Yes, I was able to get the specimen into a bag and John in the car before the ranger came back wondering what 2 glassy-eyed guys were doing staring at a little non-descript *geastrum* and showing that much excitement. Not ANOTHER trip to the hospital for help!

Chuck Soden

MYCO-BRIEFS

"Gypsy" mushrooms found to have antiviral properties: The mushroom, *Rozites caperata*, otherwise known as "gypsy", may provide protection against herpes, influenza A, and other viruses, report UW-Madison Medical School researchers. In test tubes, the mushroom prevented herpes simplex 1 and 2 from growing and it lessened the severity of herpes-related eye disease in mice. It also blocked influenza A, chicken pox, and a respiratory virus. According to Curtis Brandt, a medical school professor of ophthalmology, the active part of this mushroom, a compound called RC-183, has been patented. According to Brandt, "This is a novel compound with a structure unlike anything that's ever been described. We're hoping our studies of how it works will reveal new information about the way viruses in general replicate." *Rozites caperata* typically grows among the roots of jack pine trees in places like northern Wisconsin and the state of Washington. The mushroom's properties were initially discovered by clinical virologist Frank Piraino. When Piraino was director of a large urban lab, he experimented with grinding up different kinds of mushrooms that he found around Milwaukee and mixing them with viruses to test the effects. He discovered that the gypsy mushroom had preventive powers, but due to lack of time, he filed away the results. However, when he retired he brought his findings to Brandt. (information obtained from the article, "Native Wisconsin mushroom found to stop herpes", by Patricia Simms, "Waukesha Freeman")

Fungus may join war on drugs: Nearly half (47%) of all marijuana seized in the U.S. is taken in Florida. Most years, drug agents there destroy more than 100,000 plants. Nonetheless, finding the plants is often difficult. Growers often weave their plants among cornstalks, tomato vines and other plants so that they are well-camouflaged. Now, the head of Florida's

Office of Drug Control, Jim McDonough, hopes to use a fungus to stymie the lucrative marijuana business. Plans are to eventually dust suspected areas with a bioengineered, marijuana-eating, soil-borne fungus called *Fusarium oxysporum*.

Though the fungus will not be used until it has been tested in controlled conditions at a Florida test site, the plan has environmentalists worried. "If it isn't executed effectively, it's going to target and kill rare and endangered plants and I feel this can lead to a much bigger problem," says Bill Graves, senior biologist at the University of Florida Research Center in Homestead. Florida has already seen its environment ravaged by supposedly harmless plants that thrived so well in the hot, damp climate that they overwhelmed indigenous plants. There are also concerns that the fungus may mutate and cause disease in other plants or crops. David Strohs, secretary of the Florida EPA, wrote a letter to McDonough in April warning him of the potential dangers. In it he said, "Fusarium species are capable of evolving rapidly. Mutagenicity is by far the most disturbing factor in attempting to use a *Fusarium* species as a bioherbicide. It is difficult, if not possible, to control the spread of *Fusarium* species." The mutated fungi can cause disease in a large number of crops, including tomatoes, peppers, flowers, corn and vine crops, he wrote, and are "normally considered a threat to farmers as a pest, rather than as a pesticide." (information from an article by Rick Bragg, NY Times News Service and reprinted in the "West Bend Daily News", 28 July 1999)

Oldest Ascomycete found: In Scotland, scientists have recently found the oldest ascomycete fossil. The fossil was a small closed fruiting body, growing just beneath the surface of the stem of an early land plant. The fungus resembled many modern fungi. The pycnidium contained asci and paraphyses. The ostiole was lined with periphyses. Each ascus contained 16 and perhaps up to 32 elongate spores.

Most molecular clock estimates suggest that basidiomycetes and ascomycetes diverged about 500 million years ago. This fossil is dated to be about 400 million years old, which is consistent and may help calibrate these estimates. ("Nature", 17 June 1999)

Colleen & Peter Vachuska

A BIRD'S NEST IN THE HAND

by Dick Grimm

reprinted from "Spore Prints" May 1999

Although many of us are familiar with the "Bird's Nest Fungi" we perhaps don't realize the complexity of this small mushroom.

This interesting little mushroom is considered a Gasteromycete because it has its spores encased inside of a pouch much like the familiar and larger puffballs. In effect, the tiny eggs that one sees resting at the bottom of the small nest could be likened to miniature puffballs. Personally, I like to refer to them as lentils or eggs.

There are two generally encountered genera - *Crucibulum* and *Cyathus*. *Crucibulum* has a shallow "nest" which contains white eggs. *Cyathus*, on the other hand, has a longer and deeper nest that could be likened to an inverted bell or perhaps a vase. The "eggs" in *Cyathus* are black or at least not white. They vary in deeper colors, cream, gray, black, etc.

We find these oddities typically on wood chips, mulch, or dead packed leaf mold. They show themselves usually in clusters of several or many. Before they open and exhibit their eggs, they are simply "blips" of hard whitish mini-mushrooms with very tiny, hard caps. When these caps break open, the little lentils exhibit themselves.

This is only the tip of the iceberg regarding these interesting fungi, however. Actually it is the dispersal of spores that makes them truly a wonder. The spores, which reside within the little egg, are disseminated in a unique way. The nest that holds these little eggs is shaped in a manner (wide at the top, diminishing to a smaller base) that a single drop of rain, splashing into the nest, ejects the egg with enough force to fire the projectile as far as 3 or 4 feet. Whereas this in itself is a unique concept, there is an even more surprising ending to the story. As the projectile (egg) is splashed from the nest, it releases an umbilical (funicular) cord which can reach a length of 4 to 6 inches. This cord has a "gooey", glue-like stickum on the end that grasps the first thing it comes in contact with. Actually, the entire event is much like the throwing of a Mexican bolo. If the sticky end (the hapteron) slaps into a plant, for instance, it sticks fast and the lenticle wraps itself around the plant stem in the bolo-style action. The egg, being heavier than any part of the overall device, ends up hanging down vertically so that when it opens, the spores may be disseminated much like those from the gills of an agaric which are oriented so that the spores drop downward.

If you have these unusual fruitings along your driveway and park within range of this fungal cannon, the exposed exterior of the vehicle could become "goo" coated with mycosplotches, so don't always blame the flies.

The next time you admire the unique style of the little eggs within their nest, you might realize that this is not necessarily a sweet and innocent view of Mother Nature's artistic work. This fungal cannon is a weapon, perhaps not of mass destruction, but a good missile launcher unique among its more glamorous and larger fungi compatriots.

MAKE A MYCETARIUM

by Phil McIntosh

(reprinted from NAMA's "The Mycophile" Nov./Dec. '97)

Ever wish you could bring some primordial mushrooms home from the field and watch them develop? Have you thought about picking up a piece of deer dung and taking it back to see what grows out of it, but didn't because you lacked a good place to incubate it? Well then, you need a mycetarium!

Yes, a mycetarium. I don't know if there is such a word (there is now) but it's certainly appropriate. A mycetarium is simply a place to keep fungi so they can be observed and studied. Sure it's just a modification of the plastic bag trick, but better.

My first mycetarium was an old crate-like box with a heavy sheet of plastic for a lid. When I found a piece of wood with some interesting specimen growing on it, I would bring it back to the house and put it in this mycetarium and watch it. Naturally the piece of wood couldn't be too big or heavy. That was not usually a problem, since most decaying pieces of wood are easily broken up so only the part of interest need be carried home. A little judicious spraying with distilled water keeps the specimen fresh and active for many days after the rain and humidity have departed, even during warm parts of the year. Some fungi are just too small to easily collect without damage and this technique allows them to be observed over a period of days on their natural substrates.

Now I have two eight-gallon aquariums adapted for this purpose. I leave them outside and can move them around the yard to take advantage of the shade, or to move them in and out of the rain. When the humidity is high, no cover is needed, although they have mesh screen tops, left over from their reptile keeping days. A piece of plastic helps keep the humidity up during dry spells.

Using these mycetariums, I am able to observe the development of mushrooms from the primordial stage through senescence, on just about any substrate. This adds a dimension to the study of fungi that can't be had by picking sporocarps and taking them home wrapped in wax paper. It doesn't cost much to make a mycetarium. You can probably make one for almost nothing using wood you already have. I like the aquariums because you can see inside them better.

NEW FIELD GUIDE: MUSHROOMS OF NORTHEAST NORTH AMERICA by George Barron

A new regional field guide called "Mushrooms of Northeast North America" by George Barron is out. It is not the immense book that the recent book by Fischer, Bessette, and Bessette with nearly the same title "Mushrooms of Northeastern North America" is. In fact, it is quite the opposite. While Fischer et.al.'s book has 582 pages and 650 very small photos, Barron's book has 336 pages and 875 very nice larger photos. While the Fischer book keys out most of its 1500 species, Barron groups his 609 species into large groups (slime molds, sac fungi, . . ., brown-spored mushrooms, light-spored mushrooms), all nicely color-coded on the top margins, but with only a few keys and then only to genera. Both books cover roughly the same region - west to Minnesota and south to Illinois and all points east. But while the Fischer book is aimed mostly at the serious amateur, Barron's book is accessible to anyone.

Two things make this book stand out. First the photos are beautiful. Most are nature "field guide" shots, showing the fungus in its habitat with one or two specimens turned over or cut to show the underside or special features. There is great diverseness to the photography: a beautiful shot of *Pleurotus ostreatus* fruiting all the way up around the trunk of a dead tree, the small girl with the giant puffball. The closeup photograph of small cup fungi and slime molds is outstanding. This brings up the second feature which stands out to me: the diversity & choice of fungi included. Twenty-eight slime molds are shown. Sixty-two species of bracket fungi are listed; (there is even a key to genera of bracket fungi.) It is proving to be a good source of photos of fungi that most other books skip. For example at the NAMA Regional Foray in Minnesota this past summer, Barron's book was the only book that had a photo of the *Crinipellis*

setipes found.

What really makes this book special, I think, is its blend of a good field guide and a very human feel to it. It has the look and feel of David Arora's book, "All that the Rain Promises ... and more". But that was not a field guide; this is. Barron's book talks about each species in a nontechnical manner and has little sections where other fungal topics are discussed (Penicillium blue mold of foodstuffs, allergy-causing fungi, the role of fungi in the ecosystem, photographing fungi) as well as drawings and micrographs explaining the structure and life cycles of fungi. The entire book is very readable either as one big meal or in smaller bites.

"Mushrooms of Northeast North America" is published by Lone Pine Publishing of Canada and so may not be on your bookstore shelves. However, most bookstores would be more than happy to order it for you. The price is a reasonable \$19.95 (paperback) or slightly less when ordered (depending on postage fees) over the internet via Amazon or Barnes & Noble. This one should definitely be on your bookshelf.

Peter Vachuska

RECIPE: PLEUROTUS CASSEROLE
contributed by Greta Menke

2 pounds sliced onions
4 pounds chicken pieces
2 pints sliced pleurotus (oyster mushrooms)
1 teaspoon salt
1/2 teaspoon curry powder
1/4 teaspoon turmeric
1 bottle red port wine

Slice onions into a roaster. Add chicken and pleurotus pieces. Sprinkle with seasonings. Add wine. Bake covered in a 400 degree oven for 60 minutes. Remove lid, turn oven off, and leave for another 60 minutes.

SAMI SAAD 1939-1999
by Dr. Alan Parker

Dr. Sami Saad, age 60, died on July 31, 1999 at his home in Elm Grove. Dr. Saad was born in Beirut, Lebanon, on 10 June, 1939. He completed his B. S. and M. S. degrees in Beirut at American University, and earned his Ph. D. degree at the University of Wisconsin-Madison. Sami's doctoral degree was in the field of plant pathology; in addition, he had a broad background in microbiology, fungi, and botany. Dr. Saad joined the faculty of UW-Washington County in West Bend in 1971 and held the position of Professor in the Department of Biological Sciences at the time of his death. Among the courses he taught at West Bend were microbiology, general biology, majors and non-majors botany, ethnobotany, survey of the plant kingdom, fungi and human affairs, and topics in plant pathology. He also taught many workshops on edible and poisonous mushrooms (and other fleshy fungi) and was very active in the Wisconsin Mycological Society. He is survived by his wife Rose and two daughters, Marissa and Nicole.

I should like to add some personal reflections to the above summary. I joined the UW-Colleges (formerly the Centers) in the fall of 1976 as a botanist/mycologist. Our Department of Biological Sciences is scattered around the state at 13 campuses, and we only meet as a department twice a year. I first met Sami in the fall of 1976, and I was very pleased to find someone who shared common interests in plant diseases and fungi. Our friendship developed slowly because we only saw each other twice a year. All of that changed in 1982. Tom and Marilyn Fifield spearheaded the reactivation of the Wisconsin Mycological Society in that year, and Sami and I became charter members of both the Society and the Board of Directors. Sami served the Society with unlimited enthusiasm and energy in a wide variety of capacities. He was a three-term president, never missed a board meeting, led forays, and promoted amateur mycology wherever he went. His cheerful smile, warm greeting, and always present handshake will be remembered by all that he encountered.

For many years the traditional WMS foray to Mauthe Lake was "Sami's Foray"; it was a given that he would be the leader. He thoroughly enjoyed hosting this event and helping many beginners with post-foray identifications during lunch. His input at WMS board meetings was especially valuable. He had a wonderful knack of keeping people focused when we were in the process of aimless wandering. It's hard to imagine future meetings without Dr. Saad; there will be an emptiness that will be impossible to fill.

The last time I saw Sami was at the Society's annual meeting and picnic on 26 June 1999. With tongs in hand, he was grilling brats and greeting all

as he cooked. A young boy, a member's grandson, came up to the grill and asked Sami if he was Mexican. After Sami and I stopped laughing, what followed was a wonderful example of Sami's love for education and children. With a little help from me, Sami gave the young fellow a warm and stimulating 5-minute lesson in cultural geography. One that truly loves teaching never passes up an opportunity! I shall never forget that brief moment that so much reflects Sami's approach to life. As Diana and I departed after dinner, Sami was actively maintaining order and focus as the board meeting proceeded.

As a professional educator, Dr. Saad instilled an appreciation of the biological complexities of life in thousands of students. He did this with exceptional enthusiasm, excellent skills and methods, and the highest of standards. Over the years I had opportunities to talk with a number of his students - they had the highest regard for Dr. Saad and ranked his treatment of students as superior. In other words, he was a great teacher.

Although teaching in the Colleges is almost endlessly demanding, Sami also found time to conduct noteworthy research on new and progressively more serious plant diseases in Wisconsin. He maintained strong professional ties with the Department of Plant Pathology at UW-Madison. He also put his training in plant pathology to good use by spending his summers inspecting nurseries for the state agriculture department.

It is inconceivable to cover even a small fraction of Dr. Saad's accomplishments and relationships in this brief note. Sami truly loved life, lived each day to the fullest, and was totally devoted to his wife and two daughters. His teaching career was outstanding. In my ongoing attempt to define the meaning of life, Sami made a very significant contribution. Those of us who have had the good fortune of knowing Dr. Saad will have wonderful memories, but will have a loss of friendship that is impossible to replace.

The End