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### MESSAGE FROM THE PRESIDENT

Wisconsin celebrated a birthday on May 29, 1998. One hundred fifty years of statehood, a sesquicentennial, causes me to wonder how people viewed mushrooms back in 1848. Probably they just sort of looked at them as toadstools. What if we could be transported back into that time with the knowledge we have now? Wow, what a field day of picking we would have! Probably we would refer to that period as the 'good old days' of mushrooming.

Instead, the glory days of mushrooming vary; the "Dutch elm beetle" days for morels for sure and maybe the 1950's for general mushrooming. If you're a newcomer to this sport like I was 14 years ago, the last decade is the most memorable for picking. The past incarnations of the WMS, such as the one in the 1920's and 30's under the direction of the WPA, have yielded some interesting stories. The WMS that existed in the 1960's surely must be seen as a great time for mushrooming.

The apprehension that Wisconsin settlers must have felt when looking in the woods at mushrooms is still with us today. Groups such as ours can offer some good direction for mushroom picking. These are the good old days.

Bill Blank

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### UPCOMING WMS EVENTS

June 28(Sunday) Annual Picnic Business Meeting, Falk Park, South Milwaukee, 4:00 P.M. (announcement mailed previously)

July 25Midsummer Foray — South Kettle Moraine. Led by John Steinke. Come look for chanter-elles and boletes and other summer mushrooms. Meet at 9:30 A.M.

August 16Photography Foray — Scuppernong Trails, South Kettle Moraine. Led by Charles Fonaas and Ray Llanas. This is open to anyone, even if you don't take pictures. Feel free to just come and hike and look at the mushrooms.

September 5Greenbush Foray — North Kettle Moraine. Led by Chuck Soden and Peter Vachuska.

September 12Ciombor Woods Foray — Oxford area. Led by Kris Ciombor. There is the possibility at this time of a second location later in the day.

September 19Monches Woods Foray. Led by Bill Blank.

September 26 Bristol Woods Foray. Led by Dave Menke. Meet at 9:00 A.M.

October 3 South Kettle Moraine Foray. Led by Harold Korslin. For this foray we will be joined by the Illinois Mycological Association.

October 10 Frederick Hainer Annual Foray — Point Beach State Forest. Led by Tula Erskine.

All forays start at 10:00 A.M., except for the July 25th and September 26th forays. Separate announcements will be mailed later with more details.

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### MINNESOTA MYCOLOGICAL SOCIETY CENTENNIAL FORAY

The Minnesota Mycological Society is hosting its centennial foray on July 10–12 at the campus of St. John's University in Collegeville, Minnesota. The MMS was formed in 1898, incorporated in 1899, and has been in continuous existence ever since. They are hoping other mushroom clubs will help them celebrate. St. John's is located on 2,400 acres of woodlands and lakes with 12 miles of foot trails and offers a variety of habitats for mushroom picking. July in Minnesota is the chanterelle season and is also the time when *Boletus edulis* appears. The registration fee is \$96.00 double or \$110.00 single occupancy per person. This includes dormitory housing and meals from Friday dinner through Sunday breakfast. The registration deadline is June 20, with a late fee of \$15 per person after that. For more information, call Anna Gerenday at 612-624-3241 (W) or 612-436-1909 (H).

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### MARCH MEETING

March 24, 1998

The March WMS meeting presented a slide show entitled "Mushrooms, Mosses, Lichens, Liverworts, Clubmosses, and Ferns". This is a good group of organisms to lump together. They are all considered to be somewhat lowly and primitive and are generally ignored or beleaguered. Our speaker, Janice Stiefel, brought home this fact in her introductory remarks when she pointed out that no one had been much interested in these slides before us. Nonetheless, "mushrooms, et. al." comprise a beautiful, fairy tale-like group and Janice's lovely slides also brought this home to her audience.

Janice Stiefel is the editor of the Elkhart Lake Depot Dispatch but has spent much of the past 27 years researching, photographing and lecturing on wild plants, fungi, and insects. Her speciality is butterflies and moths, but she has also won many photography awards at the Milwaukee Public Museum's Mushroom and Wildflower Photographic Competitions. In her program, Janice presented about 140 slides, approximately 2/3 of which were of fungi. She provided an identification for each of her slides and they were all listed on a handout which she distributed to the audience. A few of the i.d.'s seemed questionable, but she went to a great deal of trouble listing the pronunciations of species' names and making up appropriate common names where they were lacking.

Janice's program gave her an opportunity to showcase some of her award-winning slides. Two of her slides were judged "Best of Fair" at the MPM Mushroom Photo Competition in 1995 and 1997. She also shared some of her photography secrets with the audience. It is often difficult to get "below" an already short mushroom, and so Janice sometimes digs up her specimens and takes them back to her atrium to photograph them, creating a spare, but elegant-looking picture. Janice also pointed out how most of her winning slides have been taken with long 30 second exposures, even though as she says, "everybody tells you you don't go over 10 seconds."

Janice's love for nature and wild flora showed through in her slides and her remarks. Other club members who have substantial slide collections are also encouraged to present slide shows and share their work with others.

Colleen Vachuska

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### WISCONSIN MYCOLOGICAL SOCIETY DINNER

Heaven City Restaurant

April 16, 1998

A significant increase in attendance as compared to last year! It must be the talented writings (or ramblings) of the current WMS Food Critic. Around seventy WMS members and friends joined together for another meal based significantly on fungi, prepared by the talented Chef Scott McGlinchey of Heaven City.

Chef McGlinchey presented five courses for our enjoyment, as pretty to the eye as they would be to the palate! As in dinners past, wine could be purchased to fill out each course.

An 'Oyster Mushroom Eggroll with Fried Leek' was served with a sweet and tangy mustard sauce based on East Shore Mustard. East Shore Mustard can be found in many local markets, and originates in Hartland. The crisp eggroll was served in halves, exposing the abundant oyster mushrooms inside. The leeks were slivered, lightly breaded and quick fried for a crunchy green accompaniment to the eggroll. A 1997 Rabbitt Ridge Sauvignon Blanc was chosen to accompany the eggroll.

'Crimini Mushroom and Braised Beef Soup' was served with a 1996 Rabbitt Ridge Merlot. The soup was thick and rich with chunks of beef and plenty of chunked crimini mushrooms (the crimini mushroom is the younger, smaller version of the larger portabella). At first, I thought that the soup bowls were not properly filled. But, after finishing the serving along with a couple slices of bread, this was a savory soup. By the way, the bread served still warm was baked with slivered and chopped mushrooms inside. The bread was superb with the soup.

'Grilled Portabella filled with Black Bean and Pork Chili with Seasonal Greens and Blackberry Vinaigrette' was presented as the salad course. A portabella cap, grilled to impart a wonderful smoky flavor, was "filled" with a thick, hearty chili. The greens were dressed with a tangy blackberry vinaigrette, and topped by a splash of enoki mushrooms. The wine chosen for this course was a 1995 Eberle Cote-du-Robles.

For the main course, a slice of veal was "breaded" with mushroom powder and lightly sauted. On top of the veal were roasted black trumpet mushrooms, the only available "wild mushroom" of the evening. Served with the veal was a shiitake sauce on angel hair pasta and some garlic button mushrooms. A 1996 Rabbitt Ridge Pinot Noir was included with the veal.

Dessert was created by topping a mushroom-laced meringue base, with a "mushroom cap" made of chocolate covered with a port wine sauce. Raspberry mousse provided a garnish to the chocolate and meringue. A 1992 Rosenblum Port Wine accompanied dessert.

After dinner I had the opportunity to speak briefly with Scott McGlinchey. I wanted to know how much time and energy went into the planning and orchestration of a meal of this caliber. I found that the planning starts weeks ahead of time, with the contacting of the suppliers to see just what mushrooms might be available for our dinner. The actual menu can change within days depending on what is actually available. Even when in contact with the fungi supplier, the dinner is still at the mercy of nature. Scott mentioned that if our dinner was just one week earlier, the hedgehog mushroom (*Hydnum repandum*) would have been available, but due to environmental changes (too much rain), the hedgehogs were washed out.

Many thanks to Scott McGlinchey and his staff at Heaven City for another memorable evening. Let's all look forward to next year's gathering and make it even larger than this year's.

John Fetzer

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## MOREL FORAY

May 16, 1998

This year marks the fourth year for which the morel foray has been held in the North Kettle Moraine area and the region is starting to suffer from a loss of suitable morel habitat. The Youth Corps area where we originally went is now owned or leased by the YMCA and posted off-limits. Also, the New Fane Trail where we've had so much luck the last few years is now so overrun with morellers that a morel doesn't have a chance to grow to maturity except by hiding in the brambles and even then it's doubtful that it would escape being picked for long. On several days prior to the foray we

surveyed New Fane Trails and each time we found mushroom hunters out.

So this year the foray leaders Chuck Soden and John Fetzer plied hopes in a new area. The area was wonderful habitat for morels with many dead and living elm scattered among pine, as well as apple and ash. There were high lands and lowland ridges, gravel pits, bogs, lakes,..., everything, except (you guessed it) a lot of morels. For all of the fine morel weather and smaller areas where morels had been found, this area, being searched by the 30 or so members who showed up for the foray, produced only about 30 morels for one individual (Warren Siskoff) and a handful for one of our leaders. We all know that there are no guarantees with any mushrooms — but we still hate to be reminded of it. We did have a nice walk in the woods, though, and found a few other mushrooms: *Polyporus squamosus*, *Coprinus micaceus*, *Flammulina velutipes*, as well as some of last year's *Tulostoma*.

This demonstrates the problem that popular wild mushrooms pose in an area that cannot support the demand.

Peter Vachuska

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### MYCOBRIEFS

**UN researches poppy-destroying fungus for use in antidrug effort:** A scientist from a former Soviet germ-warfare lab has told a UN antidrug official about its discovery of a fungus that destroys opium poppies that are used to make heroin. Cherif Kouidri of the UN Drug Control Program reports that scientists at the Institute of Genetics, Plants, and Experimental Biology of the Academy of Sciences of the USSR in Tashkent, Uzbekistan, had been looking for biological agents to “destroy the Kansas wheat crop” when they stumbled upon the fungus. The Soviet lab had been looking for any kind of blighted plant to test for biological weapons when somebody brought in some sick-looking poppies from Russia and the microscopic fungus on them was identified as *Pleospora papaveraceae*. Subsequently, the fungus was found in Uzbekistan and was tested on 42 local crops without ill effects. Now, the UNDCP is preparing to start a 3-year project with the institute to “confirm the story” as Kouidri puts it. They also want to find out if the fungus occurs in Afghanistan, the country that provides the opium for 95 of the heroin in Europe. (Christian Science Monitor, March 18, 1998)

**Fungi and frogs:** A worldwide decline in frog populations has generated much scientific interest in recent years as a cause for this puzzling phenomenon is sought. Now a new fungal player has been discovered. In 1997, herpetologist Karen Lips autopsied a number of dead frogs found at Fortuna Biological Station in Panama and discovered that they were all “harboring massive skin infections of a kind of chytrid fungus.” This fungus is a normal component of the frog's streamside habitat, but this was the first recorded instance of its attacking a vertebrate organism. It has become deadly very fast, however, and so far 8 species of frogs and toads have been eliminated at Fortuna. The chytrid fungus is also believed responsible for a number of similar local extinctions of stream-dwelling frogs and toads in the Monteverde cloud forest in Costa Rica in 1987-88 and at Las Tablas on the Costa Rica – Panama border in 1994. (Worldwatch, May/June 1998)

**Late blight of potato:** The fungus that caused the great potato famine in the 1840's is back wrecking havoc on potato crops worldwide. *Phytophthora infestans* was unknowingly imported to Europe from Mexico sometime before 1800. It thrived in the wet conditions of Ireland where it destroyed crops and caused local famines. These days a combination of treatments such as crop rotation and the fungicide metalaxyl (the most effective fungicide on *P. infestans*) hold the blight in check. But new strains have become resistant to metalaxyl, leaving potato growers concerned

The fungus *P. infestans* comes in two mating types called A1 and A2. Either type can reproduce asexually, but in order to mate sexually both types must be present. For some reason the type carried to Europe during the late sixteenth century was type A1, with A2 never leaving its Mexican homeland. Without the increased variability that sexual mating provides, *P. infestans* succumbed to metalaxyl. But in the 1970's, with large potato shipments from Mexico to Europe, type A2 spread itself. From there it spread to the rest of the world. Since that time it has evolved strains resistant to the fungicide most commonly used on it. Although there are other fungicides that can be used on it with some effectiveness if applied before it takes hold, the best strategy in combating the blight may be in developing strains of potatoes resistant to *P. infestans*. Resistant strains do exist in Mexico, but do not yet meet requirements of yield and some food industry requirements for sugars and starch. The fungus should not be a problem in dry states but can quickly destroy potato fields during wet conditions. (Scientific American, June 1998)

**Foxy fungi tarnish old books:** Rust colored splotches often mar the pages of books from the 19th century and earlier. In the late 1970s, electron microscope pictures of these splotches revealed the presence of fungi. The coloring phenomenon, called foxing, apparently stems from metabolic by-products of such paper-digesting organisms.

Now, polymerase chain reaction (PCR) analysis has helped identify some of the fungi causing these reddish blots. Raymond E. Sullivan of Rutgers University in New Brunswick, N.J., and his colleagues used PCR to look for fungal DNA in 10 books, each more than a century old and spoiled by foxing. In a few foxed areas, but not in unmarked pages of the same books, the researchers detected DNA fragments that they identified as belonging to members of the fungal genus *Aspergillus*. ( John Travis, Taken from Science News, June 6, 1998)

Colleen Vachuska

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### AN ENTOMOLOGICAL PERSPECTIVE

The following is a letter from Mycologist, The International Journal of Mycology (published for the British Mycological Society) February 1998. The editors of this newsletter feel that it offers a fresh viewpoint on fungi and their role in the ecosystem.

#### **Fungus collecting: a threat to insect populations**

As an entomologist I am pleased to see in the pages of the *Mycologist* (vol.11: 27-28, 89-90) that the effects of fungus collecting are being evaluated by mycologists. I would like to add an extra dimension.

In Britain there are about 1000 species of invertebrates that require fungi during their life cycle. Many of these are dependent on fruiting bodies in the size range that people collect. For instance there are 529 species of fungus gnats on the British list so far (most breed in fungi), plus various craneflies, hoverflies, fruit flies and many other flies. Several hundred species of beetles are fungus specialists, plus various moths, parasitic wasps of larvae, and so the list could continue.

Some of these invertebrates are specific to particular fungus species or a narrow taxonomic group of fungi. Others have a wider scope of host fungi, but still within limits. Some have a narrow season. What is clear in the field is that any individual fungus fruiting body may only contain one or a few species. To maintain a species-rich invertebrate fauna requires both a diverse fungus flora and a plentiful supply of fruiting bodies.

Thus intensive and regular diligent harvesting of wild fungus fruiting bodies, whether for personal or commercial purposes, must place invertebrate biodiversity at risk on the sites concerned. The most suitable sites for fungus collecting will often be those that are (or were) best for invertebrates. Apart from the collection of edible fungi, reports reach me of deliberate smashing up of inedible fungi together with those infested by 'maggots', and also of total collecting blitzes pending selection by culinary specialists: unwanted fungi are dumped, any insect larvae having little chance of completing development once their home is disturbed.

Whether or not collecting fungi affects the long term survival of fungus species, it is evident that a rich dependent invertebrate fauna cannot maintain itself on the left-overs from intensive fungus collecting. We are also surely concerned with maintaining ecological community structures.

Alan Stubbs Biodiversity Challenge group, 181 Broadway, Peterborough PE1 4DS

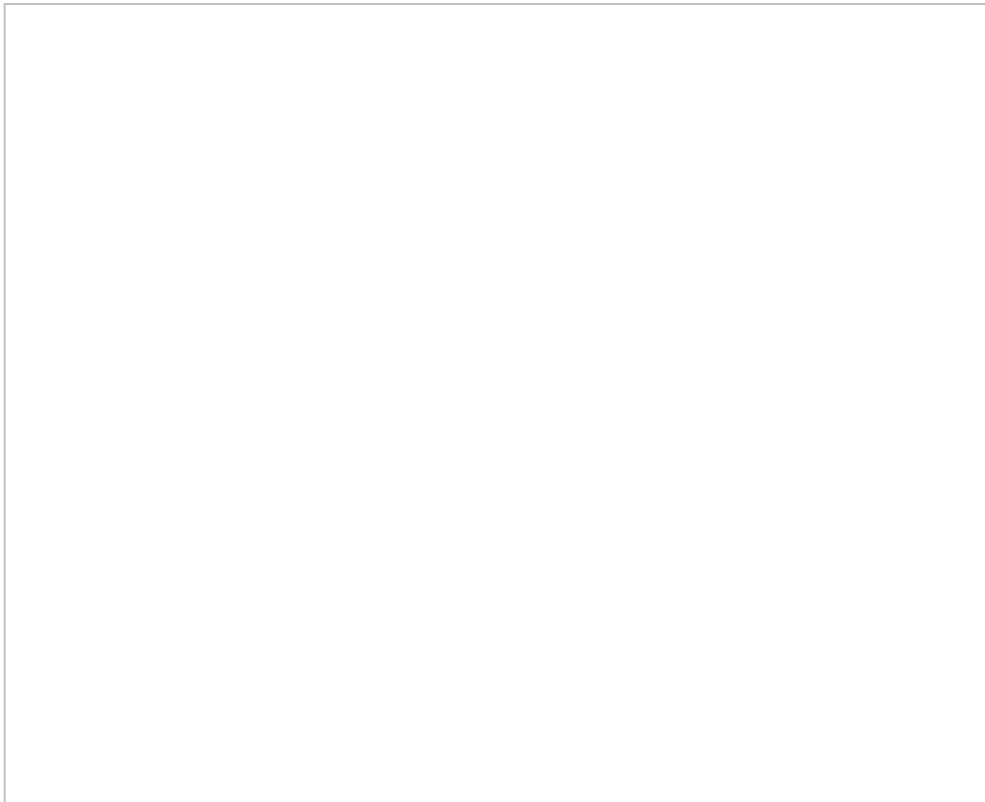
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### EVER SEEN A GUTTULATION DROP?

by Steve Nelsen

As usual, Adrienne found the most striking mushroom we saw during a week's vacation in Great Smokey Mountains National Park (GSMNP) last August, while trudging up a hill on the Metcalf Bottoms trail. They were a small (cap under 2 cm), still white-capped and light-spined *Hydnellum* having the general shape of a small *Clitocybe clavipes*. Each had a spectacularly bright red transparent lump that looked like a spoonful of jelly at least half the cap diameter in the center of its cap, except for a slightly older pair that had grown together and had no lump. These mushrooms could be carefully laid on their sides without disturbing the "jelly", but tipping them further poured off the red stuff as a

watery fluid. The red lumps weren't jelly-like at all, but apparently mostly water, containing something giving it high surface tension but not very high viscosity. Similar red drops are called 'guttulation drops' by Breitenbach and Kranzlin (BK), Fungi of Switzerland, Vol. 2. They never define this term, but my dictionary says that 'guttulate' comes from the Latin 'gutta' (drop), and simply means "drop-shaped". These red "drop-drops" occur on some *Hydnellum* species while the cap is still white and growing. They disappear later, and are often not even mentioned. They do not occur in herbarium specimens, which appear to me to be of more practical significance to professional mycologists than fresh material, because they can be examined and compared with each other at will. All *Hydnellum* species for which I have seen red drops mentioned are in the Section *Velutina* discussed in BK (Americans apparently don't use it; Smith and Smith, How to Know the Non-gilled Fleshy Fungi, have these species as part of Stirps *Spongiosus*). Nomenclature is exceptionally arcane in *Hydnellum*, as discussed in benumbing detail by Baird (B), Stipitate Hydnums of the Southern Appalachian Mountains. I've seen no one mention red drops for *H. scrobiculatum* (Fr.)Karst. (B lists 18 synonyms) or *concrescens* (Pers.)Banker (B lists 10 synonyms) of this group, and our species does not resemble pictures of them. *H. ferrugenium* (Fr.:Fr.) Karst. is illustrated with red drops in all 6 European pictures I have, but it has never been reported from GSMNP (B looked at two herbarium specimens from North Carolina, but found no fresh material; their shape is also different from our mushrooms). Maas Geesteranus equated *H. pineticola* K. Harrison with *ferrugenium*, although B says that Harrison had a photograph that he published as *spongiosipes* but later labelled in pen as really being *pineticola*. Smith and Smith say the drops of *pineticola* are pink instead of red. *H. spongiosipes* (Peck)Pouzar has red drops (illustrated only by BK of the five pictures I have). Species with a burning acrid taste and red drops include *H. peckii* Banker apud Peck (illustrated with drops in four of the six illustrations I have) and *H. diabolus* Banker. Curiously, *diabolus* is the only species for which B mentions red drops. I have seen no photographs of it. Although Maas Geesteranus equated *peckii* and *diabolus*, Americans don't agree, and say that *peckii* occurs in the north and west (it has not been reported from the southeast), and only *diabolus* of this pair occurs in the southeast. None of these species is typically nearly as slender as the mushroom we saw, although B especially cautions that morphology is very variable in this group. In no illustration I have seen is a single large drop present for any species, but I suspect this is just because our find was unusual in having a concave hollow in which drops could run together. Our plants were too young to show spores, and we probably never will know exactly what it was. The taste was mild, and it may be *spongiosipes*, which at least is common in GSMNP and lacks a hot taste. On the other hand, neither illustrations nor fresh material of *spongiosipes* that we have seen elsewhere (it occurs in Wisconsin, but I've never seen it with the red drops) look much at all like what we found.



*Photo by Steve Nelsen.*

**RECIPE:**  
**MUSHROOM CHEESE POTATO GRATIN**

by Joanne Pasek

- 2 pounds all-purpose potatoes, peeled and thinly sliced
- 1/2 cup minced precooked mushrooms
- 1-1/2 cups coarsely shredded fontina cheese (6 ounces)
- 1/2 cup crumbled fresh goat cheese (4 ounces)
- 1/4 cup grated Parmesan cheese
- pinch of freshly ground pepper
- 2 tablespoons all-purpose flour
- 1 teaspoon salt
- 1 cup heavy cream
- 1 cup chicken broth

Preheat oven to 350 degrees. Butter a shallow 2 quart baking dish. In dish, spread half of the potato slices, overlapping them.

In a small bowl, combine the mushrooms, the fontina and goat cheeses, parmesan, and the pepper. Sprinkle half of this cheese mixture over the potato layer in the dish. Cover with remaining potato slices, overlapping them.

In a bowl, whisk together the flour, salt and cream (milk could be used), and broth. Pour the mixture over the potato layer; top with the remaining cheese mixture.

Cover tightly with foil. Bake 1 hour. Uncover and bake an additional 25 minutes or until the top is lightly browned and thickened and the potatoes are tender. Let stand a minimum of 20 minutes before serving.

Serves 8.

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**ED PASEK**  
**1920–1998**

Ed Pasek, longtime WMS member and contributor to our newsletter, passed away on June 1st, 1998, after a bout with colon cancer.

Ed was a hunter, fisherman and a well-rounded naturalist with a great love of the outdoors. He was always enthusiastic about our club and hunting mushrooms and loved to share his stories. He generously volunteered his time and energy with other environmental organizations and was recognized as one of Washington County's 'Most Admired Senior Citizens' several years back.

Ed was also an artist and several of his drawings have graced the cover of this newsletter. Below is a sample of his work. Though disabled, he attacked his art and life with a passion that was impressive.

His wife Joanne as well as children and grandchildren survive him. Joanne is very active in the WMS. Each issue she faithfully shares an original recipe with us. With Joanne, the society mourns the loss of an energetic and generous man.