



Wisconsin Mycological Society  
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## The Wisconsin Mycological Society NEWSLETTER

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Winter 2008

### We Hope to See YOU at the...

Annual Membership Slide Show  
& Potluck Winter Social

Wednesday, January 14, 2009, 7:00pm

La Follette Park Pavillion, 9418 W. Washington St.,  
West Allis, Wisconsin



It's almost time! Our Annual Winter Social will once again be held at the La Follette Park Pavillion, a block north of Greenfield at 9418 W. Washington St. No doubt you received a flier in the mail a few weeks ago, but if you're like me, reminders are helpful.

Before we start the festivities, there will be a membership "slide" show, so please bring a CDROM with your digital mushroom photos to share with our members. **NOTE** that only a limited number of

images will be shown from all photographers. Anyone can bring photos and they do not need to be identified, the group will try to identify them for you. Please bring an hors d'oeuvre, a favorite snack, or dish to share with our membership. **ALSO NOTE** that one of our veteran members suggested that this year, in the spirit of sustainability, rather than adding more volume to the landfill with disposable plates and utensils, members might bring and use their own non-disposable plates and utensils. Good idea! This is only a suggestion and we will



see how it goes. Chinet paper plates, plastic dinner utensils, and garbage bags will still be provided and at hand. See you there!



## A Message from the President

Greetings,

I hope this message finds everyone well and enjoying the holiday season. The winter of 08-09 is certainly keeping us on our (somewhat frozen) toes. All this snow and cold is probably making many of us look forward to the spring mushroom season already.



In the meantime, we have several great WMS events planned to tide you over. In January, we have our annual slide show/wine & cheese/potluck social. During February, March, and April, we will have some interesting lectures. Britt has been using his wide-ranging mycological connections to find speakers for our winter lecture series. There should be plenty to look forward to in that area.

Even though the recent fall foray season probably seems to be a distant memory now, it might warm us a little now to recall it. I think it went very well. I received several emails from members who especially enjoyed the mushroom/lichen foray to Indian Lake County Park. So, thanks to Diane Derouen, Tom Volk, Marie Trest and Dan Lindner for graciously hosting that event. Also, we tried a new venture this year in teaming up with the Urban Ecology Center in Milwaukee. Our Monches Wood foray was included as part of one of their field-trip events. Fortunately,

we did very well that day and had three tables full of mushrooms to talk about with our visitors. The following day, we displayed mushroom specimens and miscellany, John Steinke gave a lecture, and there were a couple of mushroom hikes, all at the Urban Ecology Center. Many thanks to Dann Wilke (pictured at right, with mom) for working with UEC to organize this event, to John and others who helped out with the event, and to Bill for leading the Monches foray. Thank you also to those who led our other forays this fall – Martin Sendera at Mauthe Lake, Dave Menke at Bristol Woods, Chuck Soden at Point Beach, and Bob Kaplan at Coral Woods.

Even though it is cold and snowy, maybe you can still get out and do some winter mushrooming! Most of us are aware of the winter mushroom, *Flammulina velutipes*, but I recently ran across an article on the web by Gary Lincoff, where he lists 50 mushrooms that can be easily found in winter in Central Park in New York City. You'd think we here in Wisconsin should be able to find at least as many in our woodlands.

Take care. Best wishes for the New Year. *Colleen Vachuska*

*Photo credits: Page 1 and below, taken at the Heaven City morel dinner, courtesy of Judy Kaplan; Peter with hefty morels, taken last spring at S. Kettle Moraine, courtesy of Colleen.*



*Hypomyces papulaesporae* Aug 29 1996 Henwallow Hollow

A *Hypomyces* species that I have never seen illustrated is *Hypomyces lateritus* (Fr.)Tul., which is reported to grow on *Lactarius indigo* and other species. Peck called it *Peckiella hymenioides* when he found it on *L. uvidus* in 1907, and *Hypomyces volemi* when he found it on *L. volemus* in 1900. (So I am not the only one who identifies his *Hypomyces* by what it grows upon.) The picture is of a *Hypomyces* on *L. indigo* which I suspect being this one.



*Hypomyces* spp. on *Lactarius indigo* September 23, 2001, Wyalusing State Park



*Humaria hemisphaerica* 17 July 2004, Indian Lake

It has an anomorphic state (that is, a completely different-looking fungus that appears earlier in the life-cycle that has a different name) that turns the hymenium from the translucent “pearly” look of healthy *Humaria* to an opaque chalky white, and is instantly recognizable from several feet away. Its chlamydospores at this stage are quite remarkable. They look like (tiny) clear basketballs covered with about six clear baseballs, each sunk halfway into the bigger ball and equidistant from each other.

A mycologist from Cornell told me in the early 1990s that it was a *Stephanoma* from this description (I have unfortunately mislaid his e-mail), but not that *Stephanoma* was the anomorphic state of this *Hypomyces*, which I found out when *Field Mycology* published a picture of it as *Stephanoma strigosum* **2002**, 3(1), p. 29.



*Hypomyces stephanomatis* on *Humaria hemisphaerica* 14 August 2004, Walking Iron

“White earthtongue mold” *Hypomyces papulaesporae* Rogers & Samuels on **Geoglossum** cookianum is illustrated in *Field Mycology* **2002**, 3(1), 30, which also illustrates a picture of the anomorph *Papulaspora candida* state chlamydospores. We found it once in Great Smoky Mountain National Park.



*Hypomyces stephanomatis* on *Humaria hemisphaerica*

8 July 2000, Walking Iron

2 Aug. 1993, Indian Lake

## Events Calendar

**Wednesday, January 14 Annual Membership Slide Show & Potluck**

7:00pm, La Follette Park Pavillion, 9418 W. Washington St., West Allis, Wisconsin

**Tuesday, February 17 Lecture Series presents: Kenneth Gilberg (Missouri Mycol Soc)**

7:00pm, West Allis Library. Ken will dazzle you with gorgeous slides and oration from “A Life Mushrooming.”

**Thursday, March 12 Lecture Series presents: Steve Nelsen (Wisconsin Mycol Soc)**

7:00pm, West Allis Library. Steve will present “The Mushrooms of Walking Iron County, Wisconsin” (tentative as of this time)

**Thursday, April 21 Lecture Series presents: Bernadette O'Reilly (Duke University)**

7:00pm, West Allis Library. Bernadette, currently a graduate student at Duke University will discuss the latest research with Honey Mushrooms & Aborted Entolomas, among other woodland mushrooms.

**July 31 – August 2 Chanterelle Foray, Lost Lake State Park, Wisconsin (tentative)**

Foray Leader: Britt Bunyard. Weekend overnight foray in cabins. Speakers will include Anna Gerenday of the Minnesota Mycological Society.

## \*\*\*ANNOUNCEMENT\*\*\*

### NEW WEBSITE DEDICATED TO WISCONSIN MUSHROOMS

Dear Wisconsin mycophiles:

Andrew Khitsun would like to let fellow members of the WMS know that he has launched a new website **www.WisconsinMushrooms.com**. All are invited to look at photos posted and possibly identify those that are not identified or are misidentified. Visit early and visit often!



WMS 8th Annual Sami Saad Memorial Foray at Mauthe Lake

The Wisconsin Mycological Society held its first foray of the 2008 fall season at Mauthe Lake State Park near Kewauskum on Saturday, September 6th.

The turn-out was good despite meager rainfall during the preceding week. I didn't do a head count, but I think there was around 20 of us in all. The group included a few new members on their first foray with the WMS, which is always great to see.

After about two hours of walking, talking, and collecting fungi, we congregated at the picnic area to look over our finds and have lunch. As is often the case, a lot more fungi were found by the group as a whole than one would think were out there judging by my nearly empty collecting basket. Makes me wonder how many other fungi escape my attention when out collecting on my own.

More than 40 species were identified and there were numerous small specimens that went unidentified. Not many edible species were found in worthwhile quantities with the exception of a good collection of *Laetiporus sulphureus*.

Mauthe Lake is known as a good spot to find Black Trumpets (*Craterellus cornucopiodes*), but they weren't up yet. I think the fall mushroom season was just getting started and we could have found some in a week or so. Perhaps we can try our luck a little later in the season next year.

Martin Sendera

2008/09/06 Mauthe Lake Foray Species List

<i>Amanita citrina</i>	<i>Lactarius uvidus</i>
<i>Amanita flavoconia</i>	<i>Laetiporus sulphureus</i>
<i>Amanita fulva</i>	<i>Lentinellus ursinus</i>
<i>Chlorosplenium aeruginascens</i>	<i>Leotia lubrica</i>
<i>Collybia dryophila</i>	<i>Mycena haematopus</i>
<i>Crucibulum laeve</i>	<i>Mycena leaiana</i>
<i>Cryptotrama chrysopepla</i>	<i>Phaeolus schweinitzii</i>
<i>Dacrymyces palmatus</i>	<i>Pholiota squamosus</i>
<i>Ductifera pululahuana</i>	<i>Pleurotus ostreatus</i>
<i>Favolus alveolaris</i>	<i>Plicaturopsis crispa</i>
<i>Fomes fomentarius</i>	<i>Pluteus atromarginatus</i>
<i>Ganoderma applanatum</i>	<i>Pluteus cervinus</i>
<i>Geastrum rufescens</i>	<i>Ramaria sp.</i>
<i>Hemitrichia serpula</i>	<i>Scleroderma areolatum</i>
<i>Hydnellum spongiosipes</i>	<i>Suillus sphaerosporus</i>
<i>Hygrophorus russula</i>	<i>Thelephora terrestris</i>
<i>Hypomyces lactifluorum</i>	<i>Tremella reticulata</i>
<i>Hypsizygus tessulatus</i>	<i>Tricholoma caligatum</i>
<i>Inocybe rimosa</i>	<i>Xerula furfuracea</i>
<i>Ischnoderma resinosum</i>	<i>Xylaria polymorpha</i>
<i>Laccaria laccata</i>	

Some *Hypomyces* species  
By Steven Nelsen

*Hypomyces luteovirens* (Fr)Tul., transferred to **Peckiella** by Maire and to **Byssonectria** by Moravec, infects *Russula* and *Lactarius*, and is quite yellow when young It appears in four mushroom manuals that I have, but I'll show a picture of it anyway.



*Hypomyces luteovirens* September 6 1992, Potawatamie S.P. Door Co.

An easily recognizable species of *Hypomyces* that is keyed in BBF and appears in NM1 as well is *Hypomyces stephanomatis* Rogerson and Samuels, parasitic on *Humaria hemispherica*.





low amounts of the chemicals believed responsible for seed protection. The wild chili pepper *Capsicum chacoense* is naturally polymorphic for the production of capsaicinoids; Tewksbury et al. showed that this variation is directly linked to variation in the damage caused by a fungal pathogen—a species of *Fusarium*—of chili seeds. Moreover, they found that this fungus is the primary cause of predispersal chili seed mortality, and experimentally demonstrated that capsaicinoids protect chili seeds from *Fusarium*. The capsaicinoids seem especially effective at repelling *Fusarium*, as pungent plants had 45-55% less fungal load than nonpungent individuals.

**Is there arsenic or other contaminants in your morels?**

A team of scientists published “Determination of total arsenic in *Pleurotus ostreatus* and *Agaricus brunnescens* fruit bodies using microwave digestion combined with atomic fluorescence spectrometry” in the latest issue of the Chinese journal *Acta Edulis Fungi* (15: 75-78). Some mushrooms are thought to sequester contaminants including heavy metals



and selenium from the environment. Be careful where you pick!

For an in-depth look at possible arsenic contamination of North American morels (I knew that would get your attention!), see the article by Shavit in the winter issue of FUNGI magazine or at their website ([www.fungimag.com](http://www.fungimag.com)).

**The Horse (Mushroom) Whisperer is a fellow mycophile...albeit a reckless one!**

Several mushroom poisonings made headlines over the summer, but none could top the news that Nicholas Evans, the acclaimed author of the novel *The Horse Whisperer*, fell seriously ill after eating poisonous mushrooms while on holiday in the Scottish Highlands. Evans and family consumed *Cortinarius speciosissimus*, a rare species that can cause renal failure, and fell ill two days later. All wound up in a hospital in Aberdeen, where they received dialysis and other kidney treatment. *The Horse Whisperer*, which sold 15 million copies around the world and was later turned into a blockbuster film, is the most widely known of the author’s works which also include *The Loop*, *The Smoke Jumper* and *The Divide*. Mr. Evans now has a greater appreciation for the mushroom picker’s mantra: all mushrooms are eatable, though some only once!

*At right: these beauties look safe to me...but how to know for sure?*

*[Ed. Note: ALL news items excerpted from the winter issue of FUNGI magazine and courtesy of their kindly Editor-in-Chief.]*

**Mushroom Dinner at Riversite  
September 22, 2008**

Review by Kris Ludin

*Had a great time! I think I ate too much, it was all good, including the wine and conversation.*



On Arrival: Picadillo Stuffed Mushrooms. Good - Loved the almonds and spiciness. I thought a little grated Parmesan or Asiago cheese on top would of made it even been better.

First Course: Crispy Shiitake Thai Sticks with Sweet Chile and Sake Dipping Sauces. Both sauces were excellent. Even though the Sake Dipping Sauce was spicy, it was so good that one person in our party used the sauce to dip their bread into it. The Sweet Chile Sauce perfectly complimented the Crispy Shiitake Thai Sticks.

Second Course: Seared Sea Scallops with Maitake Mushrooms and Creamy Mushroom Sauce. Very Good, Sea scallops were done to perfection. I love the taste and texture of fresh Maitake mushrooms and the mushroom sauce was not overpowering.

Third Course: Roasted Amish Chicken Breast with Golden Chanterelles, Wilted Brussel Sprouts with Country Ham, Wild Rice with Dried Cranberry and Crimini. Chicken was tender, Chanterelles delicious, enough of them to enjoy too. The country ham went very well with the wild rice, cranberry and Crimini. The only thing I would criticize is that the Brussel Sprouts were somewhat bitter, which does happen occasionally. Maybe blanching first would have solved that.

Dessert: Chocolate Caramel Macadamia Nut Tart with Caramel Heath Bar Gelatto. Heavenly - I can't imagine anyone not liking it. Just the right combination of ingredients and using Macadamia nuts put it over the edge.



# MYCOBRIEF

**With the holiday season just over, it's probably prudent to take a look how fungi are shaking up the world of food and beverages...**

## **got mushrooms?**

No doubt you've seen recent findings that cultivated mushrooms contain vitamin D and that with a little zap of light, they can produce significant amounts of the stuff. Research on vitamin D has exploded in recent years, and besides the well known importance to strong teeth and bones, you can add newly discovered health benefits ranging from reduced risk of colon, breast and ovarian cancer to improved cardiovascular health and reduced incidence of Type I diabetes. Trouble is, until now, getting 100 percent of your vitamin D needs from food alone has been hard. There's milk and that's about it, right? A recent issue of *Food Processing* magazine asks *got mushrooms?* Food manufacturing giant Dole Food Co. has announced a patented nutritional breakthrough with the release of whole and sliced Portobella mushrooms with naturally enhanced levels of vitamin D that will provide more than 100 percent of recommended daily requirements *per serving*. (Most mushroom lovers that I know can consume an awful lot of mushrooms in a single serving!) Dole says that light triggers vitamin D generation in mushrooms just as in the human body and that an ordinary flash bulb—similar to the sort used in cameras—boosts the mushrooms' vitamin D content without compromising freshness or food safety.



Despite the body's natural, sun-triggered ability to produce vitamin D, deficiency remains widespread. Vitamin D deficiency may be on the rise among kids and is particularly acute among seniors and darker skinned ethnicities. Such a nutrient dense, natural source of vitamin D could be a health boon for millions suffering from vitamin D deficiency. Besides being tasty, you already knew mushrooms were good for you. Portobellas are a significant source of seven vitamins and minerals, including well over a third of daily recommended riboflavin, a B vitamin which helps support the body's antioxidant system. Now you can add vitamin D to that list!

## **To fight cancer, say Cheers! to new "BioBeer"**

A team of researchers and students at Rice University in Houston is working to create a beer that could fight cancer and heart disease. Wah?...beer that's *good* for you? A natural component of grapes, pomegranates and red wine called resveratrol recently was determined to be a key reason for the so-called "French Paradox" (which explains why French people have lower rates of heart

disease despite a cuisine known for its cream sauces and decadent cheeses, all loaded with heart-clogging saturated fats). Researchers have found that adding small doses of resveratrol to the diet of middle-aged mice significantly slows their aging and keeps their tiny hearts healthy, even when fed a high fat diet. So red wine's good you...but whither the beer drinker? According to a recent article in *The New York Times* researchers may soon be able to utilize genetic engineering to create a beer that includes resveratrol. The Rice research group, many of whom, ironically, aren't old enough to legally drink beer, came up with the idea of adding resveratrol to beer because the amount of resveratrol in wine was shown to vary in different bottles of wine, as it depends on growing conditions for the grapes and other variables. Through the use of modern technology—and basic mycology—the researchers felt they could design a beer with higher and consistent concentrations of the cancer-fighting chemical. The team is now in the process of developing a genetically modified strain of yeast that will ferment beer and produce resveratrol at the same time. But will it taste? To help with the taste issue, they turned to the Saint Arnold Brewing Co., a craft brewery in Houston, for some good beer-making yeast to use (instead of the usual Petri plate-friendly varieties found kicking around the lab benches at Rice). The research and development phase of the effort could take five years, but at press time the research team was about to enter their "BioBeer" in the annual International Genetically Engineered Machine competition in Cambridge, Massachusetts.

## **Like your food spicy? Well, thank a fungus!**

Joshua Tewksbury and others of the University of Washington have determined that the pungency in chilies may be an adaptive response to selection by a fungal pathogen (*Proceedings of the National Academy of Science* 105[33]: 11808-11). Capsaicin is the compound responsible for the "heat" in chilies. Many of us cannot get enough of this flavor enhancer while others are completely repelled. Turns out, capsaicinoids have likely evolved in plants as a way to repel microbes responsible for seed destruction. In the present study, the researchers used wild chilies to show that the chemical defenses of ripe fruit reflect variation in the risk of microbial attack.

Let's consider for a moment that staple in the diet of so many peoples of the world: the chili pepper. The primary function of a fruit, chilies included, is to attract animals that disperse viable seeds (the baby plants inside the fruit). But the nutritional rewards used to attract beneficial consumers and seed vectors also attract consumers that kill seeds instead of dispersing them. Many of these unwanted consumers are microbes, and microbial defense is commonly invoked to explain the bitter, distasteful, occasionally toxic chemicals found in many ripe and unripe fruits. This explanation has been criticized, however, due to a lack of evidence that microbial consumers influence fruit chemistry in wild populations. To investigate further, the researchers needed a plant species with individuals that varied tremendously in the chemical makeup of their fruits. Specifically, they wanted to use specimens with high and