

Summer 2005

THE NEWSLETTER OF THE WISCONSIN MYCOLOGICAL SOCIETY

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MESSAGE FROM THE PRESIDENT

Well, once again it's time for our newsletter editors to remind me that my Message From the President is needed. My sincerest thanks go to them for keeping an eye on me. With each passing year since the age of forty my forgetfulness increases. Wait a minute...what was I saying? Oh yeah, the message.

I can hardly believe it's been a year since I became president. My first experience with the winter meetings was a good one. We had some excellent speakers. Following our annual wine and cheese gathering, Steve Nelson led things off with an outstanding presentation on the fungi of Japan. We really started going global this past year as Dan Lindner Czederpiltz wrapped things up with a lecture on his experiences in Belize. Both presentations were fascinating. Our March meeting featured Dr. Darrell Cox, whose much anticipated program on morels was everything we'd hoped and more. My thanks to all, many times over, for a great season of winter meetings!

Lastly, I hate to say it, but it won't be long until the foray season begins. It's a love/hate thing. I love getting out in the woods and visiting with our members and hunting the elusive mushroom. But, as much as I love that, I hate to see the end of another summer approaching. I always get sort of melancholy in the fall. Before that, however, our annual summer picnic is coming up soon. It promises to be a great time and I hope to see you all there. Thanks for a great year!

by Chuck Fonaas

WMS EVENTS

June 25 (Saturday) -- Annual Business Meeting and Picnic. Held at Papa

Steinke's Greenhouse and Farm near Mukwonago. Social starting at 4:00, potluck at 5:00.

July 16 (Saturday) -- Summer Foray. Again at Papa Steinke's Greenhouse and Farm. Caravan to foray location, 9:30 sharp.

July 25 (Monday) Mushroom Dinner at Crazy Water Restaurant, Milwaukee. (\$45)  
Call John Fetzer (414-771-4165) for reservations and more information.

August 27 (Saturday) 2005 Annual Photo Foray at Scuppernong Springs Nature Trail -- South Kettle Moraine, 10:00.

## NAMA FORAY

This year, for the first time ever, the annual North American Mycological Association Foray will be held in Wisconsin. It will be held at UW-La Crosse on July 21-24. NAMA forays are typically jam-packed: During the day there are educational workshops on a variety of mycological topics and forays into the surrounding area, and lectures and entertainment in the evening. This is a wonderful opportunity for Wisconsinites and others in the upper Midwest to attend a national NAMA foray. Hopefully, we will be well-represented there and the weather will cooperate by raining before, and not during, the foray. For more information, please check out Tom Volk's website. For those who aren't able to attend, we will be reporting on the foray in the September newsletter.

## CORRECTION/APOLOGY

In the March 2005 newsletter, we mistakenly credited LeRoy Ciombor for bringing the smoked salmon to our January social. The salmon was in fact contributed by Bob Kaplan. We sincerely apologize for the mixup. Thanks, Bob, for the delicious salmon!

## MARCH 2005 MEETING: MORELS --- Part 2 by Alan Parker

An enthusiastic group of roughly 45 WMS members welcomed Dr. Darrell Cox for a repeat performance. Darrell had presented "Morels of the Midwest -- a Life-long Passion" on 18 March 2003. The 24 March 2005 slide lecture was a continuation of his earlier presentation, and included different slides and newly emerging facts about morel ecology. Morels are of great interest to amateurs for the obvious reason, but also present several challenges to research mycologists. Questions remain about morels forming mycorrhizae, and behavior patterns of mycelia in different species. Then there is the monster question of particular kinds of morels. There is still significant disagreement among morel taxonomists about delimiting species. More diverse DNA studies are underway, and answers may be coming. Of concern in some circles is being able to understand the answers. Biochemical subtleties among species may do little to help those trying to use traditional observations. One could argue that the fundamental question is: do various species taste

different coming out of the frying pan?

The classic association between dead American elm and *Morchella esculenta* is alive and well. There are, however, a number of other morel-woody plant associations coming to light. In other words, certain people are finally giving up some of their secrets. Darrell covered some well-documented observations that confirm the common morel routinely fruits under several different tree species (living trees, which is valuable for obvious reasons). Two other morel-related phenomena that are experiencing diversification are morel festivals and popular morel field guides. The lecture covered some of the more successful morel celebrations in Indiana and Illinois. On display were several popular publications on morels, and rumor has it that at least two more will be appearing shortly.

The combination of a popular topic and an enthusiastic presenter made for a fine evening among the morels (and two snakes). The audience thoroughly enjoyed the repeat performance by Dr. Cox. The slides probably generated a few pleasant dreams among those anxiously awaiting another morel season. The one disappointment was that Darrell once again forgot to bring the detailed maps of the 20 best places for collecting morels in Wisconsin.

#### MOREL FORAY by Chuck Soden

The first morel foray held in South Kettle Moraine was a success. We met on May 15th at the beach parking lot in Palmyra and proceeded to the first picking spot. Warren found eight *Morchella semilibera* in good shape. We found probably 6-8 *Morchella esculenta* and an equal amount of black morels. We had one example of *Flammulina velutipes* which is a fine edible if you can find enough of them.

After a quick lunch, we headed for a second picking spot. We found a dozen or so morels, again mixed between black and yellow varieties. Cheryl, who told me she never finds morels, came up with three. Enough for a taste.

This date would have normally been in the middle of the morel season, but after some investigation, we realized it was only the beginning of the season. The cold spring had slowed everything down. Hopefully the first time morel hunters continued to look and try new places, because there was still lots of time to find that elusive morel.

#### APRIL MEETING REPORT: Lecture on an expedition to Belize by Colleen Vachuska

Dan Lindner-Czederpiltz always wanted to go on a tropical foray. And last summer, he was lucky enough to go on such a trip. And at the April 20 WMS meeting, we were lucky enough to hear him regale us with his adventures.

In August 2004, Dan traveled with a group of about a dozen scientists to southern Belize in search of new species of plants and animals. Their

destination was Doyle's Delight, a remote ridge in the Maya Mountains near the Guatemalan border. Doyle's Delight is the highest point in Belize and is so named because of its resemblance to the setting of Arthur Conan Doyle's *The Lost World*. It is sufficiently remote that participants had to be airlifted in by British soldiers. (Belize used to be the British Honduras, and Britain still maintains a military presence.)

Besides Dan, there were two other mycologists on the trip: Dr. Tim Baroni, a biology professor at the State University of New York at Cortland, and Dr. Jean Lodge, a Forest Service mycologist based in Puerto Rico. The mycologists had a daily routine where they spent their mornings in the field collecting specimens. In the afternoon, they would return to their makeshift field lab, a screen tent which provided some respite from the bugs and humidity. Each specimen was measured and described, and then dried.

So, how do the fungi in Belize compare to what we have here? Some of the genera there, such as *Ganoderma*, would be things we would recognize. However, the species and forms vary. For example, Dan was excited to see a stemmed *Hydnochaete*, which is usually a flat fungus. In his talk, Dan commented that there seemed to be very few large mushrooms; most mushrooms found in the area were small, perhaps because there is so much competition. Probably the largest mushroom seen was *Armillaria tabescens*, the honey mushroom. Also, *Russula*, which are very ubiquitous around here, were uncommon in Belize, and those that were present were very small. Another thing Dan noticed was that many of the polypores had very small, almost microscopic pores.

While Dan specializes in corticioids (crust fungi), Drs. Baroni and Lodge specialize in the more classic fungi of agarics and boletes. Because of this difference, Drs. Baroni and Lodge tended to have more 'Aha!' experiences in the field than Dan did where they spotted an interesting specimen which could potentially be a new species. For example, quoting a September *New York Times* article by Bruce Barcott, a journalist along on the trip: "On the second day of the expedition, Dr. Baroni had just lit his midmorning cigar when a shaft of light broke through the trees and highlighted a brilliant yellow *hygrocybe*. 'Jean!' he called out. 'I've just seen one of the biggest mushrooms yet. And it's one of yours!' *Hygrocybes* are one of Dr. Lodge's specialties, so she collected it to take back to her lab in Puerto Rico, where she would have the difficult detective work of going back through the literature and making sure that this mushroom has not previously been described.

On the other hand, Dan moved very slowly through the jungle, and could often be found scraping the bottoms of rotting logs with a penknife in search of new species of crust fungi. "My stuff often looks like old paint splashed on a log," he was quoted in the *NYT* article. Even if he does find something interesting: "The literature on crust fungi is so obscure that it may take me years to figure out whether the stuff I'm cutting off this log is new to science," However, as he noted in his talk, crust fungi does have the advantage of being present all year around.

At least 30 new species of fungi were found during the expedition, including eight from Tricholomataceae, seven from Entolomataceae, and seven from Hygrophoraceae. A couple of the new species that Dan specifically mentioned: *Daedalia rosea*, a new maze polypore, and *Arthrosporella matolae*, which is covered all over with a greenish powder. This latter fungus was named for Sharon Matola, an important figure in Belize conservation. The story of how Sharon went from being a mycology graduate student to establishing the Belize Zoo was very interesting. While a graduate student, Sharon joined the traveling circus in Mexico to earn money at night while doing field work and collecting fungi during the day. Because of her experience as an animal handler for the circus, Sharon got to know some wildlife photographers (the Fosters), who had a home in Belize. While they were away on a trip, the Fosters allowed Sharon to stay in their home, where they kept a small menagerie of animals. When the Fosters failed to return after many months, Sharon started charging admission, turning the menagerie into the first Belize Zoo.

Though Dan says he has good memories of the trip, he was miserable while he was there. There were tons of insects. His hands were all bit up and swollen. He used a lot of cortisone and benadryl. Expedition members had to walk 45 minutes to get to fresh water. It was extremely humid. Whenever you wanted to take a picture, you always seemed to be standing in water, Dan said. Their lab tent, which provided some protection from insects and humidity, was the only place one could concentrate and get some work done, according to Dan.

After the talk, the audience had a number of questions, and it seemed everyone enjoyed the armchair travel. Thanks, Dan, for the fascinating talk.

## MYCOBRIEFS

by Colleen and Peter Vachuska

\* LIFE ON THE MUSHROOM CIRCUIT: The winter 2005 issue of *On Earth* magazine, published by the Natural Resources Defense Council, contained an interesting article about commercial mushroom picking in the Pacific northwest. In the fall, many pickers come into the area to hunt for the matsutake. The matsutake is rare and valuable in Japan, where blight has destroyed many of the red-pine forests where it once grew. In boom times, buyers have paid as much as \$700 for a single mushroom. In the fall of 2004, when this article was written, buyers were paying between \$3--\$30 per pound for matsutake. Pickers pay \$100/month for permits that will allow them to harvest in four adjacent national forests in Oregon. The Forest Service did a long-term study of the matsutake and determined that the matsutake crop can be sustained so long as the ground isn't exposed by raking. Raked ground dries up and the mushrooms can be damaged. So, pickers who apply for permits are instructed in proper procedures for picking. Matsutake caps must have a diameter of at least 1.5 inches to be harvested. Mushrooms are supposed to be pried loose from the ground, ideally with a thin, metal-pronged weed puller. Spades and shovels are not allowed, and after the mushroom is removed, the hole must be covered up. Over the course of a year, the pickers travel a circuit to follow the fruiting of the mushrooms. Quoting one of the pickers,

"It's not just matsutake. Next month we go to Cape Junction"---on the Oregon coast---"to pick black trumpet and hedgehog mushrooms. Then we go to Washington to pick chanterelles. Some years there's hundreds of us. Some years a thousand. Then we go picking in northern California. Then we break for a month. Then we come back to Oregon to pick beargrass and boletus. Then to Montana to pick morels, and then huckleberries. Then we come back here for matsutake." Though it is an unpredictable living, many pickers say they wouldn't work in the city. They feel free and at home in the forests. The author seemed surprised by the existence of this seemingly sustainable, nomadic lifestyle in the twenty-first century: "... the mushroom pickers work for themselves. They're forest nomads who, as nomads have for thousands of years, know how to make a living from the natural cycle of the seasons. It's a sustainable harvest that takes only the perennial produce of the forest. In this century, in this country, that seems almost miraculous." (Bruce Stutz, "Oregon's Secret Harvest," *On Earth* magazine, winter 2005, pp. 32-37; the entire article is available online)

\* **FUNGAL EXTRACT SHOWS ANTIVIRAL ACTIVITY:** A specially prepared extract from *Fomitopsis officinalis*, a wood conk also called brown trunk rot or Agarikon, has shown potent activity against certain viruses. In recent years, the National Institutes of Health and U.S. Army Medical Research Institute of Infectious Diseases have been conducting a joint biodefense antiviral screening program to test for substances which show activity against viruses that could be used as weapons. Paul Stamets, of Fungi Perfecti in Kamilche Point, Washington, has prepared over 100 strains of medicinal mushroom extracts for testing as part of this NIH/USAMRIID program. Several of the *F. officinalis* samples that he prepared have shown potent activity against vaccinia and cowpox, which are in the same family as the smallpox virus. Testing in animals is planned for the near future. In the past year, only about 10 of the thousands of samples tested in the program showed sufficient activity to warrant animal testing, and of these, two were samples from *F. officinalis*. It is also worth noting that Stamets' samples are the only natural product extracts tested through this program that have shown very active antipox activity. According to Stamets, only compounds derived using his approach show antiviral activity; simple extracts from teas or infusions are not active. Thus, harvesting these rare conks from the woods will not provide any therapeutic benefits and could hinder their reproduction. *F. officinalis* is extinct or nearly so in Europe and Asia, but can still be found in the old-growth forests of the Pacific northwest, particularly on larch trees. (Business Wire, March 25, 2005)

\* **REDUCING AFLATOXINS:** In many parts of the world the problem of fungus attacking staple crops still has a major influence on people's health. In western Africa, for example, nearly the entire population shows evidence of aflatoxin exposure in their blood. These aflatoxins are produced by fungi that are common under hot moist conditions attacking their peanut harvest. The fungus can be reduced, however, with techniques as simple as hand-sorting out moldy peanuts, drying the peanuts on mats rather than directly on the ground and not storing them in plastic, but rather more

breathable containers. Epidemiologist Chris Wild, of the University of Leeds in the UK, developed a set of such techniques and with the help of the government of Guinea got 300 subsistence farmers to employ them. Blood samples from these farmers taken five months after the harvest showed only 43% of the aflatoxin exposure of others. This demonstration, that with simple techniques, fungal born contamination can be greatly reduced, was published in the June 4th, 2005 Lancet. (Science News, June 11th, 2005)

BOLETUS: Section BOLETUS Subsection LURIDI  
by Steve Nelsen

I am always pleased to find a Boletus in Subsection Luridi, which is one of the most easily recognized groups of Boletes. They are colorful, and actually easy to identify (to subsection only!) without a microscope. Luridi was already recognized as a group of species by Fries in his classic *Systema Mycologicum* of 1821. It has species in which the pore mouths are colored orange-to-red-to-brown even when young, which all of us can figure out without straining. Even better, Smith and Thiers (*Boletes of Michigan*, 1971) recognize three easily defined groups, to which they give the technical name of Stirps (Note: Smith comments elsewhere that "a stirps is a central species and its satellites. It bears the name of the central species and indicates that the author considers all of the species to be clearly related by descent. The category is not recognized by the official rules of nomenclature, so that no record of the use of the name needs to be kept." My pet peeve about modern mushroom books is that they usually dump species and often even genera in alphabetical order. This makes it likely that plants that are closely related will be discussed far apart, and keeps the reader from figuring out what characters are being considered important for classification. Authors using alphabetical order are doing their readers a dis-service by failing to tackle an important part of their job.). It is somewhere between extremely difficult and impossible for an amateur to wade through Smith and Thiers' highly technical distinctions between the new and old species. Besides extensive microscopic examination, one frequently should have color tests with potassium hydroxide, ammonia, and ferrous sulfate and Meltzer's solution, sometimes on microscopic features. Nevertheless, amateurs can at least reasonably easily determine without using a microscope which Stirps we have when a Boletus of Subsection Luridi has been found.

1. Stirps VERMICULOSOIDES: pore mouths dark to yellow brown. Four species in Michigan, *vermiculosus*, described by Peck in 1873, and three species first published in the 1971 monograph, *vermiculosoides*, *subgraveolens*, and *fagicola*.

Walking Iron Dane County Park west of Mazomanie regularly has a Stirps *Vermiculosoides* species; I think that it is *B. vermiculosoides*, from what Smith and Thiers say. It has been found in the large oak opening along Marsh Creek about half the years since we first saw it in 1998. In 2004 we only saw buttons, twice.

2. Stirps LURIDI: stem reticulate (from a slight to prominent veil of tissue

forming a netted pattern): six species in Michigan, *luridus* (European, attributed to Schaeffer, but described by Fries in 1821), *frostii* (attributed to Russell, published by Frost in 1874), and four species first published in the 1971 monograph, *holoroseus*, *eberwhitei*, *rubroflamneus*, and *vinaceobasis*.

The most common *Stirps Luridi* species is *B. frostii*, which is in most handbooks, and can hardly be confused with other species. It is reasonably common at Walking Iron (both in the oak opening and behind the moss patches as Trail 2 first reaches the level of Marsh Creek) and also at the Rowan Creek area nearest Poynette, on Pine Island. Although I have seen nobody deny that *B. frostii* is edible, Smith strongly cautions against eating any *Stirps Luridi* species.

Adrienne and I were especially pleased to find what appears to be the European species, *B. luridus*, in Door County this September at three different places in Newport State Park, on the Europe Bay, Upland, and Sugarwoods trails. As Smith and Thiers note, the cap color is variable, the base color of the stem is yellow, often developing various red tones, and the stem is reticulate on some portion. The whole plant also easily turns blue upon touching or cutting, about as rapidly and intensely as the most common *Bolete* in Wisconsin, *B. pulverulentus*.

I discussed the difference between European and American ideas about *Bolete* edibility in Subsection *Luridi* previously (WMS Newsletter, 17/4, December 2000). Disturbingly, what is called *B. luridus* in Europe is a good edible, but in the U.S. it is poisonous: In the most recent monograph, Bessette, Roody and Bessette, *North American Boletes*, published in 2000, *B. luridus* is "poisonous, causing gastrointestinal distress." (but *B. frostii* is edible). This appears to require that European and American *B. luridus* are not the same species, although I have seen no mycologist state this. The alternative is that Europeans are different enough from Americans that one man's meat is another man's poison, which seems untenable.

As discussed in detail earlier, (WMS Newsletter, 17/2, June 2000), we once found what I believe to be *vinaceobasis* at Mauthe Lake (Ice Age Trail to the right of the first parking lot, on the hillside down to the creek to the right of the trail after it first crosses the creek).

3. *Stirps SUBVELUTIPES*: stipe not reticulate (although the pruina [tiny dark "spot-like" projections on the stem] may be arranged on some as to show the outline of a reticulum): seven species in Michigan: *erythropus* (Fries, *Consp. Fung. Esc.* 1821), *subvelutipes* (Peck, 1889), *spraguei* (Frost, 1874), and four species first published in the 1971 monograph, *roseobadius*, *rufocinnamomeus*, *subluridellus*, and *pseudo-olivaceus*.

The species we have seen in this group I am calling *B. subvelutipes*, which looks rather like *luridus* without reticulations on the stem (and there are other differences; I cannot distinguish properly between Smith and Thiers' seven species in *Stirps Subvelutipes*).

## TWO RECIPES

from Alberto Greselin via John Komosa

Vesse-de-loup (French for puffballs) (recipe from Alberto's grandmother):

Peel and slice puffballs into thin slices. Soak in slightly salty water and lemon for 1/2 hour. Strain and pat dry with a cloth. Dust lightly with slightly salted flour. Slow fry in butter with salt and pepper and a few drops of lemon juice. Heavenly!!

Matsutake sott'olio (packed in oil): Clean mushrooms and cut into pieces. Boil a vat of acidified water by adding lemon juice, wine vinegar, salt and pepper to taste, for 5 minutes. Take them out gently to drain. Then add salt and pepper to taste, pesto and a touch of red wine and a good bit of canola and olive oil. Put them in Mason jars and sterilize 15 minutes in boiling water.

Alberto Greselin is a Canadian friend of John Komosa. John relays the following story: "Last year, when we heard the chanterelles were out in force, by Alberto, my wife and I packed our car with provisions, took our Jack Russell terrier `Koko' along, and we drove to Montreal. Spent a wonderful two days there picking our share of golden chanties, and then drove back home non-stop 15 hours to prepare our find! Yahoo! That's what you call passion for mushrooms! Others call it goofiness... "

## RECIPES NEEDED

The editors are looking for wild mushroom recipes. If you would like to share your favorite recipes, send them to us at Colleen and Peter Vachuska, 440 North Street, West Bend, WI 53090 or email [pvachuska@nconnect.net](mailto:pvachuska@nconnect.net)

END