



The Wisconsin Mycological Society NEWSLETTER

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Winter 2013-14



A gorgeous stinkhorn specimen, *Phallus ravenelii*, found by Peg Oberbeck. Just one of many prizes found by WMS members in 2013.

WMS Lecture Series: New Location

The WMS has outgrown its venue for lectures and we will now move to a new location in 2014. Starting in February we will hold Winter Lectures in the **New Berlin Public Library** (15105 Library Lane, New Berlin, WI 53151). Our first lecture will be by Maxine Stone, past President of the Missouri Mycological Society and author. **See the Events Calendar for a list of all upcoming events.**

Plan to Attend the WMS January Social

Well, as predicted, extreme cold has set in for all of Wisconsin, so forget about going outdoors for a while...instead, plan to join us at the **Annual WMS January Social**. It seems like the Social is usually held on the coldest night of the year. But things will be plenty warm and cheery inside. Always plenty of great food and wine (or anything else you want to drink—just bring it!). **And don't forget to bring your best digital photos or slides to show** (try to keep it to a dozen or fewer). Never got a name on that rare mushroom you photographed? Put the experts of the WMS to the test!

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- WHAT'S COMING FOR 2014...A FULL CALENDAR OF EVENTS
- WE HAVE A NEW LOCATION FOR WINTER LECTURES
- A YEAR OF FORAYS, IN REVIEW...2013 WAS A GREAT YEAR!

President's Message

Greetings! With all of the cold and snow we have had lately, it seems hard to believe that just a few months ago, the weather was mild and we were out tromping and shrooming in the woods on the weekends. The good news is that only a few months from now, we can be right back to tromping and shrooming in the woods or our other favorite haunts.

As 2013 comes to a close, we can look back on a successful year of forays. This year, 250 species were collected and identified at our forays. This does not take into account all of the specimens that are not picked, or are picked but are discarded without identification, nor does it include the Northwoods Foray finds. For comparison, here are the species counts for each of the last few years: 2012 – 127 species; 2011 – 180 species; 2010 – 199 species; 2009 – 228 species. So, judging only by the numbers, it really was a successful year. Needless to say, this also does not take into account the exercise, fun, relaxation, and socializing and learning that we get from the forays. It's hard to put a number on those valuable benefits.

Looking at the species list from a foray is an easy way to relive the foray and relearn the species that you saw there. For instance, just seeing a name like *Bondarzewia berkeleyi* or *Chlorosplenium aeruginascens* or *Cyptotrampa chrysopeplum* can be pretty intimidating. But if you look any of these species up, either in a book or online, that will refresh your memory and you will probably recognize it as something you have had the pleasure of seeing before. Many of the mushroom names are pretty fun in and of themselves and just cry out for further investigation. Come now, don't you really want to know what *Perenniporia ohiensis* is? Or *Resinomycena rhododentia*? Or *Aleuria aurantia* – I've always liked that name and it's so fitting for such a beautiful, "aleuring" [sic] fungus.

Quite a few new species were added to our cumulative species list this year. This was

undoubtedly due to a combination of good conditions, good timing, good collecting, and good identification, as well as new names for fungi. Some of the new species added include such charming and distinctive species as *Urnula craterium*, *Pluteus umbrosus* and *Volvariella bombycina*. Many of the new species were added at the Coral Woods Foray. This year, we switched things up and held that foray in late August, rather than the usual early October. Even though weather conditions did not seem ideal at the time, this change of dates made a big difference in the species count for that foray. Seventy-three species were identified at this year's foray, compared to 33 at last year's foray.

This past season, we were also fortunate to have a couple of new or nearly new forays – Glacier Hills County Park and Devil's Lake

State Park. These sites proved worthwhile and I suspect that we will be returning to those locations next fall. However, if there are other new locations that you think would be practical and worthwhile for our group to explore, please let us know, and we will consider them

for future forays.

Before saying good-bye, I'd like to thank all of our foray leaders who made this past season possible – John Dean and Bill Blank with the Spring Foray, John Steinke at the Midsummer Foray, Britt Bunyard at the Northwoods Foray and Devil's Lake State Park, Pat Leacock at the Northwoods Foray and Coral Woods, Judy Kaplan at Coral Woods, Susan Selle at Glacier Hills County Park, John Fetzer at Point Beach State Forest, and Dave Menke at Bigfoot Beach State Park. Thank you all so much for sharing your experience and knowledge, and supporting our society.

To all of you, I wish you a very happy and productive New Year and I look forward to seeing you at our winter events.

Colleen Vachuska

SEE YOU AT THE
JANUARY SOCIAL
AND SLIDE
SHOW!!!

2014 Winter / Spring EVENTS CALENDAR

Wednesday, January 29....Annual Membership Slide Show & Potluck Winter Social
7 pm, Greenfield Park Pavilion, 2028 South 124th Street, Milwaukee, Wisconsin.

2014 Winter Lecture Series...All lectures 7 pm. NOTE: NEW LOCATION—New Berlin Library

Wednesday, February 26..... Maxine Stone, author of *Missouri's Wild Mushrooms*. A fun lecture for all audiences and book signing. You won't want to miss this presentation! Copies of her book will be for sale (*I think they'll go for \$20 or less -Ed.*)

Wednesday, March 19.....Britt A. Bunyard, WMS, "The good, the bad...and the tasty: beneficial and edible parasitic fungi of North America."

Wednesday, April 16.....WMS goes to the movies! Come relax and enjoy...and you will learn something along the way as we feature some of the best mushroom videos by Taylor Lockwood and others.

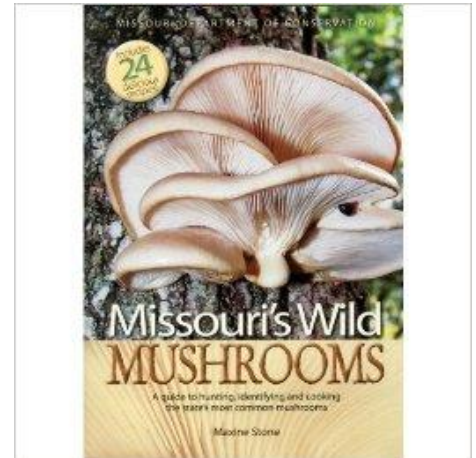
Wednesday, May 7.....Daniel Winkler, Mushroaming.com and the Puget Sound Mycological Society. Daniel will present "Mushrooms and Truffles of the Pacific NW."

Saturday, May 10.....Spring Foray in North Kettle Moraine

Sunday, May 18.....Spring Foray in the Madison area

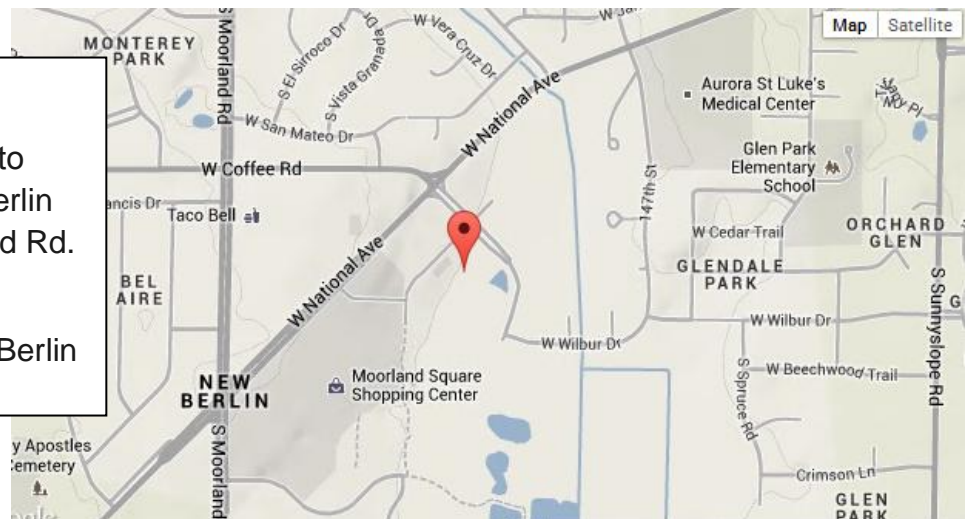
Saturday, June 28.....Annual WMS Picnic, Bunyard Farm Always a great time! More info as the date draws near.

July 24-27 (Thur-Sun).....Annual Northwoods Foray Bigger and better every year! You won't want to miss out this year. Details and registration coming soon...stay tuned!



Where is the New Berlin Public Library? It's easy to find, located in the New Berlin City Center (E. of Moorland Rd. and S. of National Ave.)

15105 Library Lane, New Berlin



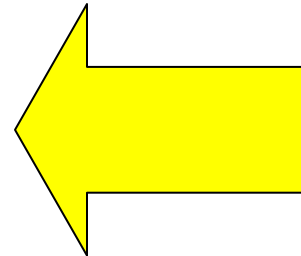
ATTENTION WMS MEMBERS: We Have a New Treasurer! (and your dues are due!)

Wisconsin Mycological Society annual membership dues are collected in December and January. If you have not yet paid, please mail in your dues. Prompt payment of dues helps us better plan Society events.

Unless you have a change in address, email, etc., or if you want to send comments, you do not need to fill out another application form.

To renew membership, just send a check (with your name) made out to WMS for \$20. **If attending the January potluck, please congratulate Peg Oberbeck for becoming the new WMS Treasurer. And then give her your cash or check!**

Or, you can mail your check to:
Peg Oberbeck
WMS Secretary/Treasurer
6707 Maple Terrace
Wauwatosa, WI 53213



Report: 2013 Erskine/Hainer Memorial Foray at Point Beach

It was the first Saturday of October, and time for the WMS Annual Foray to Point Beach State Forest. The day dawned as many others had in late September and early October this year, with fog. It is usually a treat to head north from the Milwaukee metro area and see the fall colors with the rising sun, but that was not to happen on this particular northerly trek—sometimes you couldn't even see the trees!

As is the case with many of my mushroom excursions, you start with breakfast; so we stopped in Two Rivers. Later, we found out that the Cleveland Family Restaurant (a group used to stop here for potato pancakes before it closed a number of years ago) has re-opened as the Wildflower Café. Maybe next year we can check it out. Anybody interested in participating, let me know.

Back to the foray ... we arrived at the entrance to the forest and found a few members already gathered. I checked with the attendant on recent weather, and found that the forest had been dry until the recent rains of the days just prior and not exactly what I wanted to hear. About 25 intrepid members and guests made the trip, and as is usually the case when you put that many people into the woods, you can be surprised at what comes out. We did quite well in the woods; there were plenty of mushrooms to discuss for science, and many edibles that always seem to gather attention. A complete list of the mushrooms found at this and the other forays is included at the end of this newsletter. Thanks to all those that made the trip despite the foggy drive. *—John Fetzer*



Walking Iron Foray Report

This is the first year that we had the Walking Iron Foray without Steve Nelsen, our foray leader who introduced us to the park, and who led the foray for a number of years. He was not feeling up to it this year and allowed Colleen and I to lead in his place. He felt that we have been on this foray for so many years and the route is so simple that we should have no problems. Unfortunately, he underestimated our incompetence as when we walked across the meadow to the narrow entrance that leads

down to the stream, we shifted to the east too much and missed the entrance. Not wanting to look like fools, wandering back and forth, we continued to head east, saying that we would walk the trail in reverse. That actually worked out fairly well. It was a long hike before we got in the woods, and finding the right path that we usually come back up on was a little tricky and mostly accomplished with Bob and Judy Kaplan's help, but accomplished. It was nice to see lots of *Hydnum repandum* right away to fill our baskets with. Then as we proceeded, the mushrooms became more interesting and less edible. There were *Scleroderma* everywhere, and *Boletus parasiticus*, which is a parasite on them, were numerous as well. We saw a large variety of fungi. The only large edible was the *Hydnum*, but there was plenty to talk about later. It was especially nice to see *Hydnum umbilicatum* in addition to *repandum*, so one could point out the clear difference. Of note, there were no *Armillaria* found at all this year. –Peter Vachuska



Boletus parasiticus, a bolete that is always found as a parasite on the earthballs, *Scleroderma* spp.

Here is a list of what we think we found on 9/14/2013.

1. *Amanita citrina*
2. *Amanita rubescens*
3. *Amanita vaginata*
4. *Asterophora lycoperdoides*
5. *Boletus parasiticus*
6. *Cantharellus cinnabarinus*
7. *Clitopilus prunulus*
8. *Craterellus fallax*
9. *Entoloma murrainii*
10. *Fomes fomentarius*
11. *Ganoderma applanatum*
12. *Hydnum repandum*
13. *Hydnum umbilicatum*
14. *Hygrocybe flavescens*
15. *Hypomyces hyalinus*
16. *Inocybe geophylla*
17. *Ischnoderma resinosum*
18. *Laccaria amethystina*
19. *Laccaria bicolor*



Hydnum repandum, one of our two hedgehog mushrooms.

20. *Laccaria laccata*
21. *Lactarius chrysorheus*
22. *Lactarius lignyotus*
23. *Lactarius sp.*
24. *Laetiporus sulphureus*
25. *Leccinum scabrum*
26. *Lenzites betulina*
27. *Marasmius sp.*
28. *Mycena filopes (iodiolens)*
29. *Mycena leaiana*
30. *Paxillus atrotomentosus*
31. *Phellodon albo-nigra*
32. *Piptoporus betulinus*
33. *Russula sp.(red)*
34. *Russula sp.(tan)*
35. *Russula sp.(green areolate)*
36. *Scleroderma citrinum*
37. *Stereum complicatum*
38. *Strobilomyces floccopus*
39. *Trametes hirsuta*
40. *Trametes pubescens*
41. *Trametes versicolor*
42. *Tremella concrescens c.f.*
43. *Trichaptum bifforme*
44. *Tricholoma sulphurescens c.f.*
45. *Tricholomopsis platyphylla (Megacollybia rodmani)*
46. *Xylobolus frustulatus*



Tricholomopsis platyphylla (= *Megacollybia rodmani*), photo by Steve Nelsen. Does it get any prettier?

Glacier Hills County Park Foray

Fall was in the air and the leaves were just beginning to turn color for the first Glacier Hills County Park Foray. It seems like the autumn woods take on a mushroom scent and thoughts turn to mushrooms, big yellow pumpkins and picking apples.

Glacier Hills County Park walking trails wind through the park and provide beautiful views of Holy Hill and Friess Lake. The woods were alive with a variety of mushrooms when fifty plus individuals set off on mainly the red and yellow trail. It had rained during the week helping to increase the mushroom bounty. A few edibles were found, mainly the sought after



Parrots in Wisconsin? *Hygrocybe* (= *Gliophora*) *psittacina*, the parrot mushroom.

Lion's Mane (*Hericium americanus*) and Hen-of-the Woods (*Grifola frondosa*). In addition, a rare Parrot Waxcap (*Hygrocybe* [*Gliophorus*] *psittacinus*) was found. Everyone had a fun time identifying their mushroom finds. We would like to repeat the Glacier Hills Foray next year.

–Susan Selle, species list thanks to Colleen Vachuska

2013/09/21 Glacier Hill C. P.

Agaricus campesteris
Artomyces (Clavicornia) pyxidata
Boletus bicolor
Bulgaria (Galiella) rufa
Calvatia gigantea
Cantharellus cinnabarinus
Cerrina unicolor
Chlorosplenium aeruginascens
Chroogomphus rutulus
Clitocybe sp.
Coprinus atramentarius
Cortinarius atkinsonianus
Crepidotus crocophyllus
Cyptotrama chrysopepla
Dacrymyces palmatus
Daedalea quercina
Exidia glanulosa
Favolus alveolaris
Fomes fomentarius
Galerina marginata
Ganoderma applanatum
Grifola frondosa
Heboloma crustuliniforme
Helvella crispa
Helvella lacunosa
Hericium americanus
Hericium coralloides
Hygrophorus psittacinus
Inocybe geophylla var. lilacina
Inocybe rimosa
Ischnoderma resinsum
Laccaria amethystina
Laccaria laccata
Laetiporus cincinnatus
Lentinellus ursinus
Lenzites betulina
Lepiota cristata
Leucoagaricus naucinus

Lycogala epidendrum
Marasmius sp.
Mycena sp.
Piptoporus betulinus
Pluteus cervinus
Pluteus umbrosus
Polyporus badius
Polyporus elegans (varius)
Polyporus radicata
Polyporus squamosus
Poronidulus (Trametes) chonchifer
Psathyrella sp.
Russula brevipes
Russula crustosa
Sarcoscypha Dudleyi
Scleroderma citrinum
Suillus americanus
Trametes versicolor
Tremella reticulata (Sebacina sparassoidea)
Trichaptum bifforme
Tricholomopsis rutilans
Tyromyces sp
Xerula furfuracea
Xylaria longipes
Xylaria polymorpha



Beautiful Hen-of-the-Woods, *Grifola frondosa*, photo L. Wallner.

Report: Sami Saad Memorial Foray on 9/7/13 at Mauthe Lake

The skies were cloudy at the outset of the Annual Sami Saad Memorial Foray on 9/7/13 at Mauthe Lake in the North Kettle Moraine, but I doubt that the 20-25 people who showed up knew what was in store. As per our usual custom with this foray, we split up into two groups one heading north, one heading south. Our family opted to go north.

Initially, things seemed pretty uneventful. Though the woods seemed damp, there did not seem to be much in the way of fungi. This may have been due to the relatively hot and dry weather for a week, followed by rain only the night before. As we proceeded, the environment started to seem less and less normal as the woods became darker and darker – really too dark to see what few mushrooms were there. Occasionally, we would feel a drop of rain, but only a drop. Likewise, every now and then we would hear some rumbling from the sky.

Given all of this portent, we decided to turn around and head back to the parking lot after being out in the woods for only about an hour. We barely made it back and got into our car before the ominous skies turned to what we had been expecting all along – rain! Though it was rather early for the foray to end, we decided to leave our initial rendezvous point and drive to the picnic area where we planned to lay out our mushrooms. We did that, but there was no one there yet. We also checked out the shelter, but that was occupied. So, we decided to sit in our car for a while and wait, hoping that soon the rain would let up long enough for us to lay out our finds. Gradually, other forayers in other cars did the same. Jim Selle suggested we eat our lunch in the car and wait some more for the rain to let up – that we did too.

Finally, lo and behold, Tina Samuels and her friend David and a few others decided enough waiting around – let's just brave the rain and lay our stuff out. With this inspiring example, others followed suit. Soon, there was a small crowd of people donning umbrellas, jackets, and rain ponchos and gathering around the table.

Though our side of the woods did not seem to produce too much, people who walked the other direction seemed to have better luck. Ultimately, our table, though probably small by comparison with a more typical Mauthe Lake Foray, seemed to capture much of the diversity that we have come to expect with this foray. Some of the better finds included a large Berkeley's polypore *Bondarzewia berkeleyi*, a beautiful but uncommon *Volvariella bombycina*, and a perfect specimen of the deadly *Amanita bisporigera*. There was even one *Hygrophorus russula* on the table. This is a good-sized pretty mushroom with pinkish tones that we used to find in considerable quantity at Mauthe Lake, but have not found as much of in recent years.

The rain ebbed and flowed, with periods of deluge interspersed with a bit more gentle rains, but never actually stopped. The usual recording of species was put off, as was probably a lot of the picture-taking. Nonetheless, through the downpour, we continued to examine specimens and share opinions. By 1:15 pm, most of us had decided to disperse. The table of mushrooms was cleared and forayers were on their way home, plenty wet for sure, but filled with some good mushroom memories.

–Colleen Vachuska



Hygrophorus russula.

Reflections on Recent North American Mushroom Poisonings

By Michael W. Beug, PhD, Chair NAMA Toxicology Committee
beugm@evergreen.edu

This article is from the latest newsletter of the North American Mycological Association, NAMA.

Amatoxin Cases

As of November 2013, there have only been eight reports this year of humans consuming deadly species of *Amanita*, and we have not heard of any deaths. However, in 2012 newspaper reports and/or Poison Case Registry Reports alerted us to 35 individuals poisoned by deadly species of *Amanita* with one death in each of two Canadian cases and three deaths in one incident at a California senior care facility. After hospitalization, thirty of the individuals (all from the U.S.) were enrolled for Dr. Todd Mitchell's experimental treatment protocol – all thirty individuals in the experimental protocol survived, including one person who consumed a very, very large meal of *Amanita phalloides* (see *McIlvainea* vol. 22 online at www.namyco.org for the complete 2012 NAMAToxicology Committee report). In Canada, not only is the experimental protocol not available, but also in one death underlying health issues in the affected individual (colitis) meant that the doctors failed to recognize the case as mushroom poisoning, treated the individual for his diarrhea and cramps and sent him home. Two days later, he reported to the hospital with fulminant hepatic failure. He died 8 days after his mushroom meal. The poison center was never notified and best treatment practices for amatoxin poisoning were not employed. The mushrooms were identified post mortem as "*Amanita virosa*." In the other Canadian case, mushroom poisoning was again initially not recognized. The patient, an alcoholic, was initially treated as a cardiac patient, but there was a rapid progression to multi-organ failure and death. A relative later found and discarded the remains of a cooked mushroom dish that was in the victim's refrigerator. While no attempt was ever made to identify the mushrooms, the symptoms were consistent with amatoxin poisonings.

All three deaths in the United States resulted from a single case in California where a caregiver at a residential care facility made a soup from mushrooms collected on the grounds. One elderly tenant had refused the dinner and was not ill, alerting investigators to the soup as the cause of the illnesses. The mushrooms were never positively identified, but descriptions by the caregiver implicate either *Amanita phalloides* or *Amanita ocreata* [West Coast Destroying Angel -Ed.]. Three of the five elderly residents who consumed the soup succumbed from the effects of amatoxins. The first death occurred three days after the meal. Two additional deaths occurred before Dr. Todd Mitchell was contacted and treatment following the experimental protocol was initiated for the two surviving elderly women. A woman in her 90s recovered from the poisoning symptoms with use of aggressive rehydration alone but then died 20 days later due to other causes. Press accounts attributed her death to mushroom poisoning. A second woman survived after treatment including Legalon SIL (Todd Mitchell, personal communication). The caregiver also consumed the soup and survived, though her treatment is unknown.

For 2013 so far, there have been two cases in upstate New York involving ingestion of amatoxins. The hospital physicians followed the experimental protocol of Dr. Mitchell and Legalon – SIL was employed as a part of the treatment. There was complete recovery. The experimental protocol was also successfully employed in one case in Victoria, BC and three cases in Seattle. All survived using hydration and SIL alone, including one whose INR (a measure of blood clotting time) peaked at >6 (Todd Mitchell, personal communication). In October 2013, a Portland, Oregon case involved ingestion of *Amanita phalloides*. There is no

information available as to severity of the poisoning or treatment, with the poison center citing patient confidentiality laws. However, we do know that there was complete recovery. In one other 2013 case, we again have limited information. Hospital physicians treated the amatoxin ingestion with penicillin and N-acetyl-cysteine, an approved protocol that does not require the physicians to get hospital board approval for an experimental treatment. While there was a successful outcome, neither penicillin nor N-acetyl-cysteine have been shown to have a positive effect and success in this case is properly attributed to aggressive rehydration therapy.

My take-away lesson from extensive conversations with Dr. Mitchell and many other physicians is that in cases of moderate ingestion of amatoxins, aggressive rehydration therapy alone will lead to complete recovery. At the next stage of severity, injectable silimarin (i.e. Legalon-SLIR) is called for. Here it is important to note that milk thistle extract, available at most pharmacies and taken orally, is ineffective since it is not absorbed and thus not able to protect the liver function. Finally, in the most severe cases where liver functions are severely affected, blood clotting is severely depressed, and kidneys are threatened, percutaneous cholecystostomy should be considered in addition to other therapies. Hopefully, by using these practices as outlined in the “Prevention and Treatment of Amatoxin Induced Hepatic Failure with Intravenous Silibinin (LegalonR SIL): A Nationwide Open Clinical Trial,” deaths from amatoxin ingestion will become a rare event and severely ill patients will be spared the trauma and life-long expense of a liver transplant.

In dogs, there were six deaths from apparent amatoxins in 2012 and five reported cases involving dog deaths so far this year. While *Amanita* species are most often involved, one 2012 case and one 2013 case involved a dog death as the result of ingestion of *Galerina marginata* (= *Galerina autumnalis*). [A few days ago on Facebook, Tom Volk reported, with photos, of a very recent dog death in Wisconsin resulting from ingestion of large amounts of mushrooms, apparently *Amanita muscaria* and / or *A. pantherina* which Tom noted neither are normally considered deadly; he also noted that there was a very good possibility that other things could have contributed to the death. Important to note that dangerous mushrooms are around outside their normal growing season. -Ed.] Readers should be aware that some of the small *Lepiota* species (e.g. *Lepiota subincarnata* = *Lepiota josserandii*) can be lethal to both dogs and humans. Human cases of *Galerina marginata* ingestion are usually linked to confusing this brown-spores species with the somewhat larger white-spored mushrooms in the *Armillaria mellea* complex. On several occasions, *Galerina marginata* has been mistaken for purple-black spored *Psilocybe* species, some of which are very similar in size, coloration and habitat to *Galerina marginata*.

Poisoning Incidents not Involving Amatoxins

While I have made no attempt yet to summarize the poisoning cases of 2013, in 2012 there were reports dealing with 75 people (70 incidents) suffering non-life-threatening conditions after consuming mushrooms. Thanks to the work of Marilyn Shaw, the numbers reflect detailed reporting for the region covered by the Rocky Mountain Poison and Drug Center (Colorado, Hawaii, Idaho, Montana, and Nevada). We also have detailed reporting from Michigan thanks to the cooperation of Susan Smolinske at the Children’s Hospital of Michigan Poison Center. Her volunteer intern, Hanady Nasser-Beydoun, prepared a spreadsheet for us of all symptomatic mushroom poisoning cases that their center had handled. For the rest of the country, we know that reporting is very incomplete, so our numbers really cannot be used to indicate whether poisoning incidents are increasing or decreasing with time or whether poisoning incidents are more common in one region than another.

Notably for 2012 and again in 2013 we have received a significant number of reports of adverse reactions to hallucinogens. [Oh crap. –Ed.] In both years *Psilocybe* ingestion has resulted in cases where the patient became combative.

Chlorophyllum molybdites accounted for 12, possibly 13, of the reports of adverse reactions to mushrooms in 2013, but has not been reported in cases yet for 2013. Often the victim had only consumed one bite raw. Cooking seems to decrease the severity of the symptoms, but even cooked *C. molybdites* can cause significant gastric upset. One husband (an MD) treated his wife at home using Gatorade after finding the hospital to be of little or no help. Two other individuals self-medicated with Gatorade to replace electrolytes lost from excessive vomiting and diarrhea after consuming *C. molybdites*.

Adverse reactions to morels accounted for 10 of the 2012 reports and a couple of the 2013 cases. One case involved raw morels, the other cases involved cooked morels. One case involved alcohol with the meal. Whether that individual can eat morels without alcohol was not established. For some people, it is unwise to consume alcohol with a meal of morels, though a significant majority of individuals can enjoy a beer or wine with a morel meal. It is becoming increasingly clear that some people can develop sensitivity to morels and suffer gastric distress after a morel meal when they had previously eaten morels for years without incident. We have even received the first report of life threatening anaphylactic shock from morels. The affected individual had previously eaten morels for years without adverse effect.

Five individuals in three separate incidents were sickened by puffballs, both *Calvatia* species and *Lycoperdon* species. Puffballs are normally only a problem if they are no longer pure white inside. However, in these cases, victims said that they had consumed mushrooms that had not yet started to mature and darken inside. While there have been no puffball poisonings reports so far for 2013, we have had several reports of short-term, but violent, human poisonings from mistakenly consuming species of *Scleroderma*. In one case, a *Scleroderma* species was mistaken for a truffle and in at least one other case it was mistaken for a puffball. Here it is important to remember that while a young *Scleroderma* specimen may be white inside, it will be very firm and not soft like a marshmallow. The inside of all edible puffballs will both look and feel like a marshmallow. For suspected truffles, it is important to realize that even an edible species will be of no interest for the table unless the smell is delightful. If the suspected truffle does not have a delightful odor (usually cheesy-garlic, but sometimes pineapple, earthy-licorice or other strong, pleasant odors) it is not worth eating. In 2013 we have so far also seen many dog poisonings because of *Scleroderma* ingestion. For dogs (and pigs at least), consumption of *Sclerodermas* can be lethal. Also biting into a mature puffball can lead to lycoperdonosis, a pneumonia-like lung infection.

Five 2012 cases and a few 2013 cases involved purchased mushrooms. Cases can involve individual sensitivity to a specific normally edible species (notably *Pleurotus ostreatus*, *Lentinula edodes* (shiitake), and *Agaricus bisporus* (crimini)). In 2013 there have been several more reports of flagellate dermatitis caused by consumption of raw or undercooked shiitake. One 2012 case was troubling since it involved sale of the poisonous species, *Omphalotus illudens*, by an unreliable wild crafter. [Unreliable? I guess so! –Ed.] The chef at the restaurant where the mushrooms had been purchased sampled the dish before placing it on the menu, so only he became ill. A brand new (12/16/2013) poisoning report is particularly disturbing since it involved a bag of purchased porcini mushrooms that caused such severe gastro-intestinal distress that the victim generally did not care whether she lived or died. Examination of the remaining material in the bag revealed a piece of mushroom with gills. We will never know what caused

the woman's distress - was she allergic to king boletes (porcini), or was there a toxic gilled mushroom in the bag, or did the harvester mistakenly pick and sell *Boletus huronensis* or another toxic bolete somewhat similar to a king bolete? Clearly there should have been nothing with gills in the bag.

New and old lessons

Lesson #1: What you see after a poisoning is not necessarily what was actually eaten.

In 2012 and again in 2013 there was a mysterious case involving kidney failure. Kidney failure due to mushroom ingestion is exceptionally rare, having been reported in the past only for *Amanita smithiana* in the Pacific Northwest and one case due to *Cortinarius orellanosus* in Michigan. We know nothing about the cause of kidney failure in the 2012 case, but the 2013 case has been extensively investigated and will be reported on in full in *McIlvainea* vol 23 in 2014. The patient believed that any white-gilled mushroom was safe to eat and had collected a wide range of white-gilled mushrooms including several *Russula* species, *Leucoagaricus*, and deadly *Amanita* species. I learned several lessons from this story. One lesson is that identification of mushrooms from photos only tells you what was not eaten. So was any *Amanita* consumed – you will have to wait to learn that answer. The critical thing to know now is that the patient suffered rhabdomyolysis-induced kidney failure. The mystery was even more intriguing because while kidney failure due to mushroom ingestion is very rare, rhabdomyolysis had never been reported in North America due to a mushroom ingestion. Vomiting and diarrhea caused electrolyte loss. The patient was on statins, which as a result of electrolyte loss, triggered rhabdomyolysis which in turned triggered kidney failure. Drugs other than statins (e.g. colchicine) can have the same effect. Any severe GI distress, not just mushroom ingestion can cause this cascade of events.

Lesson #2: Atropine

One dog death was attributed to consumption of *Amanita muscaria*. The dog was given two doses of atropine as part of the treatment. However, atropine is strongly contraindicated with poisonings involving mushrooms in the *Amanita muscaria* group, the *Amanita pantherina* group and *Amanita aprica* where muscimol and ibotenic acid, muscarine is primary the toxin (Beug and Shaw, 2009).

Lesson #3: The Internet

The problem of untrained individuals using the internet (or for that manner a book or other source) to identify mushrooms on their own came to light when a woman wrote that her dog was poisoned by what she had confirmed was *Amanita pantherina* and that the symptoms matched poisoning by ibotenic acid and muscimol. However, the reported symptoms actually matched lycoperdonosis. This was confirmed when a picture of the mushroom was sent in. It was an old *Lycoperdon*. The correspondent confirmed that when the dog bit into the mushroom, a cloud of dark green spores arose. The symptoms had been caused by inhalation of that cloud of spores.

Lesson #4: Medicinal Mushroom Caution

We have had a couple of reports in recent years about individuals becoming ill from medicinal mushroom teas. One clear problem is gathering any black growth on a tree, assuming that it is Chaga. So far, at least two individuals have suffered significant discomfort from their

medicinal tea. In at least one case, they appear to have gathered *Apiosporina morbosa* [black knot of cherry –Ed.]. I also wish to remind readers of the 2012 *McIlvainea* article on polyporic acid (Beug, 2012 and included on pages 10-11 in this issue of *The Mycophile*). Not all polypores are safe to boil and consume as a tea. You also might want to be very careful about purchasing Chinese medicinal mushrooms. In late October 2013, I was in the field collecting with David Arora and he told me about visiting mushroom markets in Kunming, China and seeing toxic species of *Amanita*, etc. for sale. When he queried the vendors, he learned that purchasers would include these in mushroom blends, presumably assuming that no one will get a dangerous dose if mixed with enough non-poisonous material!

References

Beug, M. 2012. Polyporic Acid in Fungi. *McIlvainea* 21.

Beug, M. 2013. 2012 NAMA Toxicology Committee Report. *McIlvainea* 22.

Beug, M. and M. Shaw. 2009. Animal Poisoning by *Amanita pantherina* and *Amanita muscaria*: A Commentary. *McIlvainea* 18: 37-39.

Fall Finds of Baiba Rozite

Baiba is always sharing excellent finds with me, sometimes seeking an ID, sometimes just to share her enjoyment of mushrooms. Here we have a lovely cluster of *Pholiota aurivella* (note that it's slimy with most of its scales flattened against the cap) emerging from wood. Below are photos of very common Trichs found among pines. Likely the edible *Tricholoma terreum* ("the mouse") but make certain as there are a few Trichs that are similar—some toxic.



Complete Mushroom List for the Year 2013

Forays:

2013/05/04 Monches Woods Spring Foray,0
 2013/07/27 Summer Foray S. Kettle, Co. S,1
 2013/08/24 Coral Woods (IL),2
 2013/09/07 Mauthe Lake R. A.,3

2013/09/14 Walking Iron C. P.,4
 2013/09/21 Glacier Hill C. P.,5
 2013/09/28 Devil's Lake S. P.,6
 2013/10/05 Point Beach S. F.,7
 2012/10/12 Bigfoot Beach State Park,8

Fungi:

1 Agaricus campestris,3,5
 2 Agrocybe erebia,2
 3 Aleuria aurantia,6
 4 Amanita brunnescens,7
 5 Amanita bisporigera,1,3,6,7
 6 Amanita citrina,4,7
 7 Amanita flavoconia,7
 8 Amanita fulva,1,3
 9 Amanita muscaria,7
 10 Amanita rubescens,1,4
 11 Amanita vaginata,1,4,7
 12 Antrodia sp.,2
 13 Apiosporina morbosa,1,8
 14 Armillaria gallica,2,8
 15 Armillaria mellea,3,8
 16 Artomyces (Clavicornia) pyxidata,2,5,6
 17 Asterophora lycoperdoides,4
 18 Auriscalpium vulgare,0
 19 Bisporella citrina,8
 20 Bjerkandra adusta,1,3
 21 Boletus badius,1
 22 Boletus bicolor,5,6
 23 Boletus pallidus,1
 24 Boletus parasiticus,4
 25 Bondarzewia berkeleyi,3
 26 Bovista pila,8
 27 Bovista plumbea,8
 28 Bulgaria (Galiella) rufa,1,2,5
 29 Calvatia gigantea,2,3,5,6,7,8
 30 Camarops petersii,3,6
 31 Cantharellus cibarius,6
 32 Cantharellus cinnabarinus,4,5
 33 Cantharellus sp.,2
 34 Cantharellus tubaeformis,7
 35 Cerrina unicolor,2,5
 36 Chlorosplenium aeruginascens,5
 37 Chroogomphus rutulus,5
 38 Clavaria vermicularis,3
 39 Climacodon septentrionale,2,6
 40 Clitocybe clavipes,7
 41 Clitocybe nuda,6,7
 42 Clitocybe sp.,5

43 Clitopilus prunulus,4
 44 Coltricia perennis,1
 45 Coprinus atramentarius,5,8
 46 Coprinellus micaceus,8
 47 Cortinarius atkinsonianus,5
 48 Cortinarius distans,1
 49 Cortinarius sp.,2,3,8
 50 Craterellus fallax,4
 51 Crepidotus applanatus,6,8
 52 Crepidotus crocophyllus,5,6
 53 Crucibulum laeve,1
 54 Cyathus striatus,2
 55 Cytotrama chrysopepla,5,7
 56 Dacrymyces palmatus,0,5,7
 57 Daedalea quercina,0,1,2,3,5,8
 58 Daedalea vernicosa,2
 59 Daedaleopsis confragosa,3,6,8
 60 Daldinia concentrica,6
 61 Datronia stereoides,2
 62 Ductifera pululahuana,3,6
 63 Entoloma abortivum,2
 64 Entoloma murraini,4
 65 Exidia glanulosa,0,5
 66 Favolus alveolaris,0,1,5,6,7
 67 Flammulina velutipes,6
 68 Fomes fomentarius,3,4,5,6
 69 Galerina marginata,5,8
 70 Ganoderma appplanatum,0,1,2,3,4,5,6,7,8
 71 Ganoderma tsugae,7
 72 Gloeoporus dichrous,2
 73 Grifola frondosa,3,5,6,8
 74 Gymnopilus sp.,2,7
 75 Gymnopus (Collybia) dryophila,1
 76 Gyrodon merulioides,6
 77 Gyroporus purpurinus,1
 78 Hapalopilus (Phyllotopsis) nidulans,1,2,7
 79 Haplotrichum sp. (brown mold),2
 80 Hebeloma sp.,8
 81 Heboloma crustuliniforme,5
 82 Helvella crispa,5,7
 83 Helvella lacunosa,5
 84 Helvella macropus c.f.,7

85 Hemistropharia (Pholiota) albocrenulata,2
 86 Hericium americanus,3,5,7
 87 Hericium coralloides,2,5
 88 Hydnellum spongiosipes,1,3
 89 Hydnum repandum,4
 90 Hydnum umbilicatum,4,7
 91 Hygrocybe conicus,1,7
 92 Hygrocybe flavescens /chlorophanous complex,4
 93 Hygrocybe sp.,3
 94 Hygrophoropsis aurantiacum,6,7
 95 Hygrophorus occidentalis,2
 96 Hygrophorus praetensis,6
 97 Hygrophorus psittacinus,5
 98 Hygrophorus russula,3
 99 Hymenochaete rubiginosa,2
 100 Hypocrea sp.,2
 101 Hypomyces hyalinus,1,4
 102 Hypomyces lactifluorum,1
 103 Hypsizygos ulmarius,8
 104 Inocybe albidisca,2
 105 Inocybe geophylla,4
 106 Inocybe geophylla var. lilacina,5
 107 Inocybe pyriodora,3
 108 Inocybe rimosa,5
 109 Inocybe sp.,2,7,8
 110 Inonotus tomentosus,3
 111 Irpex lacteus,0,1
 112 Ischnoderma resinosum,3,4,5,8
 113 Jafnea semitosta,3
 114 Laccaria amethystina,4,5
 115 Laccaria bicolor,4
 116 Laccaria laccata,1,4,5,7,8
 117 Laccaria ochropurpurea,6
 118 Laccaria sp.,2
 119 Lactarius chrysorheus,4
 120 Lactarius deliciosus,7
 121 Lactarius lignyotus,4,7
 122 Lactarius psammicola,1
 123 Lactarius rufus,1
 124 Lactarius sp.,4,8
 125 Lactarius subpurpureus,7

126 *Lactarius subvellereus*
var.subdistans,2
127 *Lactarius tomentosus*,7
128 *Laetiporus*
cincinnatus,0,1,5,6
129 *Laetiporus*
sulphureus,2,3,4,6,7
130 *Leccinum aurantiacum*,7
131 *Leccinum scabrum*,4,7
132 *Lentinellus ursinus*,2,5,6,7
133 *Lenzites betulina*,4,5
134 *Lepiota acutesquamosa*,6,7
135 *Lepiota cristata*,5,6,8
136 *Lepiota rhachodes*,8
137 *Leucoagaricus*
naucinus,5,6,7,8
138 *Leucopholiota decorosa*,6
139 *Lycogala*
epidendrum,5,6,7,8
140 *Lycoperdon perlatum*,6,7
141 *Lyophyllum decastes*,7
142 *Marasmius delectans*,1
143 *Marasmius rotula*,7
144 *Marasmius scorodonius*,7
145 *Marasmius* sp.,4,5,7
146 *Marasmius* sp.(garlic
odor),1
147 *Melanophyllum*
echinatum,6
148 *Mutinus caninus*,8
149 *Mycena filopes*
(iodiolens),2,4
150 *Mycena galericulata*,2
151 *Mycena haematopus*,2
152 *Mycena inclinata*,2
153 *Mycena leaiana*,4,6
154 *Mycena luteo-pallens*,6
155 *Mycena* sp.,5
156 *Naematoloma fasciculare*,7
157 *Naematoloma*
sublateritium,7
158 *Omphalotus olearius*,1
159 *Pachyella clyptea*,3
160 *Panellus serotinus*,6,7
161 *Panellus stipticus*,0
162 *Paneolus* sp.,1
163 *Paxillus*
atrotomentosus,1,3,4
164 *Peniophora rufa*,0
165 *Perenniporia ohiensis*,2
166 *Peziza* sp.,2,7
167 *Phaeolus schweinitzii*,1,3
168 *Phellinus gilvus*,8
169 *Phellodon albo-nigra*,4
170 *Phlebia tremellosa*,7
171 *Pholiota adiposa*,8
172 *Pholiota aurivella*,6
173 *Pholiota* sp.,7
174 *Piptoporus betulinus*,4,5,6
175 *Pleurotus pulmonarius*,2
176 *Plicaturopsis crispa*,3
177 *Pluteus cervinus*,2,3,5,6,8
178 *Pluteus salicinus*,2
179 *Pluteus* sp.,2
180 *Pluteus umbrosus*,5
181 *Polyporus alveolaris*,2,3
182 *Polyporus badius*,0,5,6,8
183 *Polyporus elegans*
(varius),1,2,3,5,6
184 *Polyporus radicata*,1,2,5,8
185 *Polyporus*
squamosus,0,3,5,6,8
186 *Poronidulus* (*Trametes*)
chonchifer,0,1,2,5
187 *Postia caesia*,2
188 *Psathyrella* sp.,1,2,3,5
189 *Psathyrella velutina*,6,8
190 *Pseudoclitocybe*
cyathiformis,2
191 *Pseudohydnum*
gelatinosum,7
192 *Pycnoporus cinnabarinus*,1
193 *Ramaria flava*,3
194 *Resinomycena*
rhododentia,2
195 *Russula brevipes*,5
196 *Russula crustosa*,5
197 *Russula foetentula*,2
198 *Russula fragrantissima*,1
199 *Russula rubescens*,2
200 *Russula* spp.,2
201 *Russula* sp. (blackening),1
202 *Russula* sp.(red),3,4,7,8
203 *Russula* sp.(tan),3,4
204 *Russula* sp.(green
areolate),4
205 *Sarcoscypha Dudleyi*,5
206 *Sarcoscypha occidentalis*,1
207 *Schizophyllum*
commune,0,2,3,6
208 *Scleroderma*
areolatum,1,2,6
209 *Scleroderma*
citrinum,1,4,5,6,8
210 *Scutellinia scutellata*,6,8
211 *Sebacina* sp.,2
212 *Spinellus fusiger*,2
213 *Stemonitis* sp.,6
214 *Stereum complicatum*,2,4,6
215 *Stereum ostrea*,1,2,3,6
216 *Stereum hirsutum*,2
217 *Strobilomyces*
floccopus,1,3,4
218 *Stropharia squamosa*,6
219 *Suillus americanus*,5,7
220 *Suillus granulatus*,6,7
221 *Suillus pictus* (spragueii),7
222 *Trametes elegans*,3
223 *Trametes hirsuta*,1,2,4
224 *Trametes pubescens*,1,4
225 *Trametes*
versicolor,0,2,4,5,6
226 *Tremella concrescens* c.f.,4
227 *Tremella foliacea*,3
228 *Tremella mesenterica*,1
229 *Tremella reticulata*
(*Sebacina sparassoidea*),2,5
230 *Tremellodendron*
pallidum,2
231 *Trichaptum abietinum*,1
232 *Trichaptum*
biforme,0,1,2,3,4,5,6
233 *Tricholoma sejunctum*,7
234 *Tricholoma sulphurescens*,4
235 *Tricholoma* sp.,7,8
236 *Tricholomopsis*
(*Megacollybia*) *platyphylla*,4
237 *Tricholomopsis rutilans*,5,6
238 *Tubifera ferruginosa*,6
239 *Tylopilus felleus*,1,7
240 *Tyromyces caesius*,6,7,8
241 *Tyromyces chioneus*,2,3
242 *Tyromyces* sp,1,5
243 *Urnula craterium*,0
244 *Volvariella bombycina*,3
245 *Xeromphalina campanella*,3
246 *Xerula furfuracea*,1,5
247 *Hymenopellis* (*Xerula*)
megalospora,2,3
248 *Xylaria longipes*,1,2,3,5,8
249 *Xylaria polymorpha*,2,3,5,6
250 *Xylobolus frustulatus*,3,4



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