

Spore-Addict Times



The Newsletter of the Pikes Peak Mycological Society

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MONTHLY MEETING:

WHEN? Monday, June 22, 2009 – The fourth Monday of the month.

WHAT TIME? 6:30 pm; the meeting will come to order at 7:00 pm.

WHERE? Pikes Peak National Bank, 2401 W. Colorado Ave. (across from Bancroft Park). Enter at the door on Colorado Ave., just west of the bank door. There you will find stairs and an elevator. You may use either. The room is on the second floor near the head of the stairs.

WEBSITE: <http://www.pikespeakmushrooms.com/>

PROGRAM:

A NAMA Educational Program:
"Guide to the Major Genera of Gilled Mushrooms: The Light Spored Mushrooms I: Pluteaceae, Pleurotaceae, Entolomataceae, Marasmiaceae and Others"

This program covers the best edible and most poisonous mushrooms from roughly half of the major genera of light spored mushrooms.

Goodies after the meeting will be provided by Jeannene Havelka and Eva Mattedi.

President's Notes: by Judy Willey

Yesterday, June 10, I had a profound (3a characterized by intensity of feeling or quality) experience on a hike up Big Foot road on Pikes Peak. A cascading vertical water fall, numerous polypores, two *Agaricus campestris*, wild strawberries galore, and a potential area of future fungi await us at 8500 up to 8900 feet. It was cool (in more ways than one!) 47 °F with misty thundering surroundings and a picturesque spectacular view of the north face of Pikes Peak. A little rain and finally hail to the President at the end. And it smelled so good with those moist earthy scents. I believe that that wet will give way to the heat and we will be blessed with fruiting. I look forward to that and seeing you all at our next meeting.

PLEASE PAY YOUR DUES:

In accordance with the By-laws, dues, in the amount of \$15.00, are due and payable on or before the April monthly meeting. If you still have not paid, please pay at the June meeting or mail the payment to PPMS, PO Box 39, Colorado Springs, CO 80901-0039. Thanks!

FORAY REPORT:

May 30th 2009: Ten of us (including 2 newcomers to PPMS) gathered at the Red Rocks Safeway parking lot at 8:30 a.m. All had either been contacted by e-mail or personal phone call. All club forays will be scheduled like this. Our eager forayers found only 6 small morels, 2 L.B.Ms, and some dubious polypors. We did come across 6 Calypso orchids (unaccompanied by morels). It was a beautiful day on Rampart Range Road. Rain and warmer temperatures have brought out city mushrooms galore. Many are identified in "Mushrooms of Colorado". By Esther Price.

FORAY SCHEDULE

To go on any of the forays simply call the leader to find out where and what time to meet. You must have your dues paid for the current year and you must have a signed liability waiver on file to go on forays. **If you want to lead a foray call Esther Price at 632-5880. Esther is also the contact for ad hoc forays. Check with her to see if anyone has decided to go on an ad hoc foray that does not appear on the schedule.** Some forays will probably be to unscouted areas. Foray leaders do not guarantee success.

The Snowbanker's trip, usually held in June, has not been scheduled as yet. The date will depend upon the snowmelt.

There will be a joint foray with the Denver club this summer. The date is not yet determined.

ON EATING RAW MUSHROOMS

By David Campbell From MSSF's Mycena News

There seems to be an ongoing temptation amongst mycophagists and chefs to serve mushrooms raw or barely cooked. Generally speaking, this is not the best of ideas.

The mycochitin composition of mushroom cell walls, as opposed to cellulose walls of plant cells, is difficult for humans to digest. Our stomachs resent indigestible items, and often forcibly reject them without further ado. The cooking process helps break down fungal cell walls, rendering mushroom flesh not only more readily digestible, but also releasing significant nutritional value contained within the cells.

Further, many mushrooms considered edible contain irritating or toxic components readily destroyed or eliminated by cooking. Therefore, common and valid mycophagal wisdom dictates that all edible mushrooms should be cooked prior to consumption. Exceptions are made only if one has specific knowledge that a particular pristine species is safe to eat raw. With these few natural exceptions, the "pristine" part becomes especially important. Environmental or microbial contaminations to the mushroom flesh may pose potential health hazards. By dramatic example, a few free-spirited youths in Hawaii a few years ago blithely consumed blue-staining *Psilocybes* as they went collecting from cow patties. What a downer it must have been a short while later, when the doctor told them they had nematodes! Bear in mind, there is much yet to be learned about eating mushrooms; wild or tame, cooked or raw ... the research is in progress, and we the mycophagists are, by default, the guinea pigs. What we know of mushroom edibility is primarily the result of shared anecdotal information, as compiled and recorded over the course of human history. Hardly do we rest on hard science or a complete body of knowledge when we decide whether or not to eat a given fungus. In fact, another good general reason for cooking one's mushrooms is the blind stab it represents at protecting us from the unknown.

The list of edible mushrooms considered safe for raw consumption is quite short. Even species commonly eaten raw, especially the ubiquitous button mushroom, *Agaricus bisporus*, have their drawbacks. Buttons and many other edible mushrooms contain various hydrazines, a group

of chemical compounds generally considered carcinogenic. For the most part, these compounds are heat sensitive, readily volatilized and expunged from the fungal flesh by proper cooking. This basic understanding is employed by some more adventurous mycophagists to justify eating the false morel, *Gyromitra esculenta*, a deadly poisonous mushroom according to every published description I've read. Those who so indulge in this species believe the hydrazine compounds present (naturally occurring gyromitrin converts to mono-methyl-hydrazine, or MMH when heated) to be effectively removed, at least to a large degree, by thorough cooking, provided one stands well clear of the fumes during the cooking process. The more conservative mycophagists consider this practice questionable, at best, and argue that gyromitrin is never completely eliminated, that there may well be harmful cumulative factors associated with repeat false morel consumption I say, "To each his own," in decisions such as this, cautioning only that the innocent and unaware should never be arbitrarily included in mycophagal experimentation. The kicker with *Agaricus* species, including the buttons, is that one of their primary hydrazine components, along with gyromitrin, is "agaritine," a substance somewhat resistant to cooking heat, with a significant percentage (25-75%) of agaritine material typically remaining after being subjected to various methods of cooking. So, the question as far as avoiding hydrazines in *Agaricus* is concerned, actually becomes whether to eat members of this genus at all.

We need to keep in mind that lab tests and subsequent conclusions drawn concerning carcinogenic or mutagenic health hazards of hydrazine involve massive doses of isolated extracts administered to mice in a concentrated time frame. Similarly disturbing test results are likely to be found with many substances present in many, many foods humans commonly eat without suffering or even worrying about any particular health concern. The relatively unblemished human history of consuming edible *Agaricus* species suggests we may continue to do so. The science may suggest we should not over indulge, but we already knew that. As I know of no one stricken by cancer or any other malady as particular result of eating *Agaricus*, and since the genus includes some of the most delectable of all edibles, there are several wild *Agaricus* species

that remain firmly ensconced on my preferred edibles list.

Unfortunately, the button mushroom industry routinely promotes the use of their product raw, especially on salads, perpetuating the myth that mushrooms need not be cooked. I presume such promotion to be a profit driven policy. A recent Poison Control Center response incident with *Gyromitra montanum* purchased at a Whole Foods store demonstrated the broader danger of public misconception about the safety of eating store-bought mushrooms raw. The blithe and unwitting "victim" reportedly took a nice chomp from her just purchased bull's nose as she walked out of the store! As far as I know, this mushroom contains hydrazine compounds that may be quite similar to those found in *Gyromitra esculenta*, but in sufficiently reduced concentrations to be listed in many published mushroom guides as edible, if cooked. In this case, the immediate effects induced by consumption of the raw *Gyromitra* flesh easily trumped any long-term health concerns.

Cooking of mushrooms generally reduces the likelihood of gastro-intestinal irritation, and allergenic reaction. Popular comestibles such as morels (*Morchella* sp.), hedgehogs (*Hydnum repandum*) and oyster mushrooms (*Pleurotus* sp.) will almost certainly make one ill if eaten raw. Chanterelles (*Cantharellus cibarius*, *formosus*, etc.) are generally considered stomach irritants in the raw. King boletes (*Boletus edulis*) are known to cause many people gastro disturbance even when cooked, but are nonetheless popular raw in the hard-button stage. Diners served a raw porcini salad are well advised to eat just a tat ... or else. Some small and/or gooey mushrooms are often eaten raw, mostly because they hardly lend themselves to cooking. The witch's butters (*Tremella mesenterica*, *T. foliacea*, *Dacromyces palmatus*) and toothed jellies (*Pseudohydnum gelatinosum*, *Phlogiotis heilvelloides*) are good examples of fungi commonly eaten "as is," sans ill reported effect, or at least I've heard no dire reports. Part of the safety in occasionally consuming oddball species such as these is we never really eat all that much. In fact, the key to safe consumption of any and all mushrooms, aside from proper ID and sufficient cooking, is moderation. Somewhat ironically, given the nefarious reputation of the genus at large, the most readily digestible, or at least most innocuous, mushroom

to eat raw, by my experience, is the coccoli (*Amanita lanei*). I generally eat these mushrooms raw because they so remind me of oysters (mollusks, not the fungus), in that the more you cook them, the less desirable they become. In all fairness, I should mention that I do chemically cook my coccoli salad with lemon juice marinade... I have never suffered any discomfort, nor have I heard complaints from those who have consumed my "coccoli ceviche." Of course, you are not likely to see edible *Amanita* specimens for sale in the market, nor should you, methinks. Our markets and the public both lack the knowledge and sophistication to safely trade a product so easily confused with its lethal cousins!

Other methods of chemical cooking, aside from citric acid, involve brining or pickling. I lack personal experience with this form of mushroom processing, but I have heard and read it is used to apparently satisfactory effect in many cultures, notably Russia, where many kinds of freshly collected *Russula* and *Lactarius* species are reportedly tossed collectively into the brine barrel, to be directly retrieved and munched later. Of interest with this method is that some of these species so prepared are considered poisonous when cooked by conventional heat application. As stated above, cooking with heat destroys many toxins and irritants found in mushrooms. Toxins present in various red sponged species of the genus *Boletus*, for instance, may allegedly be neutralized with prolonged cooking. Ibotenic acid and related toxic compounds present in *Amanita muscaria* are not heat-sensitive, but are soluble in boiling water. This mushroom may be rendered edible by properly leaching the mushroom toxins into boiling water, tossing the water, and eating what's left of the mushroom. I have been party to this process several times while participating in David Arora's annual Mendocino seminars, where we often served properly processed fly agaric, sliced and boiled, to the assembled throng, free from toxic effect.

Make no mistake, however. Deadly amanitin toxins present in the death cap and destroying angel (*Amanita phalloides*, *A. ocreata*, etc.) are oblivious to heat and leaching processes, retaining their virulent properties regardless of cooking methods applied. Cooking or not makes no difference with these toadstools; they remain fully capable of killing any sad soul who egregiously partakes, regardless.

Photo Gallery:



A group photo from the May 9th foray to Beaver Creek. Photo from Pat Gaffney.



Can you see it.....Morel found by Esther.....At least 4 folks found 1-2 morels! (May 30)



Inspecting a geocache box during the May 9th foray. For more information about geocaching go to <http://www.geocaching.com/>



Identification session (May 30)



A group photo from the May 30th foray to Rampart Range Road. Photo by Pat Gustavson.



Pat Gustavson: I found such a nice cluster of Pleurotus this morning.....cut a cluster to eat tonight.....under the leaf litter was an old Chinese Elm stump.....Pleurotus seems to be doing well here!

Newsworthy (or Not):



Photo by Renee Bennett

Sweet Nothings – from “Audubon” May-June 2009
You can fool some of the bees all of the time, a fact on which the Calypso orchid – a.k.a., “fairy slipper” - depends. This diminutive wildflower – among the earliest bloomers in the northern coniferous forests of Eurasia, Canada, and the United States - has no nectar. But its purple-striped, yellow-fringed lower petal looks like something out of a candy store. There are always enough gullible bees to fall for the ruse. They enter hungry and emerge disappointed and covered with pollen, which, having learned nothing, they transfer to the next Calypso orchid. The plant is named for Homer's sea nymph-famed for her beauty – who, lusting after Odysseus, detained him and his crew for seven years on the isle of Ogygia. Calypso orchids obtain nutrients from decomposing conifer needles via a partnership with fungi, so they'll die if you try to transplant them.

Morel Dilema – from “Missouri Conservationist”
There's an art to hunting morels. Unlike hunting for deer or doves, you can't just find a comfortable seat and wait for your quarry to come to you. Good morelers – if we can call them that – log plenty of miles. They also know where to walk.

Morels can grow almost anywhere, but they are more likely to be found in sandy soils and in woodlands and forests. They often grow near riverbanks and dead trees. A burned area is likely to contain morels the following spring. Cottonwood trees and old orchards also are prime hunting grounds.

Morels are fickle in that they don't always come up where you expect them, or even in the same places where you found them the year before. Some experts speculate they produce fruiting bodies only when the nutrients they need to grow become scarce or when the spreading underground structure encounters resistance, such as a path, riverbank or different soil.

As in all hunting, make sure of your quarry. Morels have look-alikes that can make you sick. Study field guides to learn to confidently recognize edible morels. Find more information about morel mushrooms at the Conservation Department's Web site at <http://www.MissouriConservation.org/8361>.

Website Developments

The website committee has begun its deliberations, but has very little to report. The new club contact email address is now displayed on the website and has generated some inquiries. Our new contact information and website URL has been updated on NAMA website – check it out at <http://www.namyco.org/>

PPMS Logo Contest Ongoing

There have been no new logo designs submitted for consideration as of press time. Remember – there is a \$25 award for the winning entry! So put your thinking caps on and send in those cards, letters or emails.

What's Cookin'

Walleyes & Morels:

- Walleye filets in a glass bread pan, well seasoned.
- Morel halves with garlic powder on top.
- Shave liberal amount of good Wisconsin butter on top and cover with foil.
- bake 35-40 min. at 350.
- Wash down with Point Special beer and hope heaven will be this good!

The Pikes Peak Mycological Society, a nonprofit organization dedicated to the advancement of mycology, publishes Spore-Addict Times monthly from April-October. Membership is open to anyone wanting to study mycology. Annual dues are \$15 for individual and family memberships. **Submission of ideas, articles, reviews, letters, artwork and recipes are welcome.**

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May's Mystery Mushroom was *Clitocybe nuda*.
Remember, there is a \$5 award to the winning entry.

MYSTERY MUSHROOM

by Pat Gustavson

I am a late bloomer....but, provide great delight when discovered....not only visually but to the taste buds when cooked! I can be found on the ground under conifers....all alone or in good numbers. At first when spied, you may think I am someone else but, on closer inspection...there is no question who I am. Cap is 3-9 cm across, margins often wavy...at first inrolled, smooth, dry and sometimes cracking into scales as I age . I could be flesh colored to pale or dull orange. My spore print is white....no gills just spines.

Who am I?

The Spore-Addict times is the official newsletter of the Pikes Peak Mycological Society (PPMS) and is published monthly April – October. All articles appearing in this newsletter may be freely reproduced, unless otherwise noted, for use in other newsletters provided the source and author are acknowledged. We consider this to be a reciprocal agreement for clubs that send their newsletter to us unless we are advised to the contrary.

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