

MushRumors

The Newsletter of the Northwest Mushroomers Association

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May - June, 2009

Morel Madness 2009: A Great First Act for Mushroomers Old and New for Another Year of Fungal Wonders

This year our annual Morel Madness Weekend was May 8th -10th. Twenty three club members participated, including quite a few who had just recently joined, providing a memorable and joyous start to their careers as official mushroom hunters.

As in other recent years, we stayed at Tall Timber Presbyterian Camp located north of Lake Wenatchee. It is situated in a beautiful cirque with mountains on three sides and the White River on the south side. The weather this year was warm and pleasant, but not too hot, and fortunately there were few mosquitoes.

photo by Linda Haynes



Hard at work identifying the catch of the day

That was the good news. Unfortunately, we were a little too early for an abundant morel harvest. Our group did manage to find enough morels for everyone to get a chance to try them mixed in with their scrambled eggs for breakfast on Sunday.

photo by Larry Baxter

A few members also tried some of the more abundant verpas in their eggs. (Digestive outcomes unknown.)

Jerry Haynes and Bob Clemmons were our breakfast chefs this year, and did a great job assembling the scrumptious scrambles.



Definitely NOT for the birds

Margaret Dilly, with the help of some other knowledgeable club members, identified other mushroom species that were also collected during the weekend.

A good time was also had when we all got together on Saturday evening. In addition to an abundant choice of food for the potluck, there were some challenging (perhaps frustrating) rounds of 'Jenga' (a game where players remove blocks from a tower and try to replace them on top without knocking it over).'

photo by Linda Haynes



Good, but not for eating!

GILLED FUNGI (13 species)

Agrocybe praecox
Clitocybe albirhiza
Clitocybe glacialis (Lyophyllum montanum)
Clitocybe squamulosa var. montana
Coprinus lagopus group
Cortinarius spp.
Hygrophorus purpureus
Mycena overholtzii
Nolanea verna
Pholiota carbonaria
Psathyrella carbonicola
Tricholoma odorum

NONGILLED (13 species)

Calvatia fumosa
Cryptoporus volvatus
Discina perlata
Fomitopsis pinicola
Guepiniopsis alpina
Gyromitra esculenta
Gyromitra montana (gigas)
Lentinellus montanus
Morchella elata
Morchella crassipes
Sarcosoma mexicana
Verpa bohemica
Verpa conica

The weather was perfect for the foray, warm and sunny after a few days of rain, and the turnout was good. Folks separated into several groups to search the campground, the two trails up to Fragrance Lake and the top of the mountain. It was not long before the group I was in (attempting the northern trail to Fragrance Lake) sent up whoops of joy at the sighting of a good crop of oyster mushrooms, conveniently located on a fallen log a few yards from the trail. Although we searched fairly thoroughly, the fungi were few and far between, but we found some impressive displays of Turkey Tail (*Trametes versicolor*), some of which we collected, chewing on a sample after hearing of its medicinal properties last Thursday from Greg Hovander. A group of students and their teacher from Seattle stopped to ask about our collections and were interested in the ecology of the fungi.

Back at the picnic shelter, the finds were displayed, and included a monster *Discina perlata* (Pig's Ear) and several buttons of *Amanita pantherina*. Fein was busy cooking up a pot of delicious soup, and the goodies appeared for the potluck. Fein also made some tea of the *Trametes versicolor*, for those curious about the taste of it (mildly mushroomy).

Those collections that I was able to identify were:

Amanita pantherina (DC: Fr.) Krombh.
Clitocybe sinopica (Fr.) P. Kumm. (not *albirhiza* as I first thought)
Clitocybe sp.
Cryptoporus volvatus (Peck) Shear
Coprinopsis cf. *lagopus* (Fr.: Fr.) Redhead, Vilgalys & Moncalvo
Dacrymyces chrysospermus Berk. & M.A. Curtis (= *Dacrymyces palmatus*)
Discina perlata (Fr.) Fr.
Entoloma sp.
Fomitopsis cajanderi (P. Karst.) Kotl. et Pouzar
Galerina cf. *pseudobadipes* Joss.
Ganoderma applanatum (Pers.) Pat.
Inocybe geophylla (Fr.) P. Kumm.
Inocybe cf. *substricta* Kauffman
Inocybe cf. *subcarpta* Kuehner & Boursier
Mycena galericulata (Scop.: Fr.) Gray
Mycena haematopus (Pers.: Fr.) P. Kumm.
Nolanea holoconiota Largent & Thiers
Nolanea verna (S. Lundell) Kotl. & Pouzar
Pleurotus ostreatus (Fr.) P. Kumm.
Pluteus cervinus (Fr.) P. Kumm.
Polyporus badius (Pers.: Gray) Schwein.
Trametes versicolor (L.: Fr.) Pilat
Trichaptum abietinum (Dicks.: Fr.) Ryvarden
Xeromphalina campanella (Fr.) Kuehner & Maire

Note. If you are wondering why the letters "cf." appear before the species epithet, this is a handy-dandy way of saying that I am not quite sure of my identification. It comes from the Latin word "confer", meaning compare, according to Wikipedia.

Techniques of microscopic identification of mushrooms

By Fred Rhoades

Course # Bio 217M QUARTER/YEAR: Fall 2009

Instructor: Fred M. Rhoades

Email: fmrhoades@comcast.net

Phone: 733-9149

Welcome... Learn and practice the common techniques of microscopic examination of mushrooms: examine tissues and spores, use stains, measure microscopic structures, hone your microscopic technique. \$75 for the 8 sessions. Optional 1 credit in Biology (\$50 extra fee). 8 meetings, Wednesdays 7-9:30 pm from September 30 to November 18, 2009. Open to anyone with some previous mushroom identification experience.

Course Description:

This course is for advanced mushroomers who want to go a step further in working with their identifications or to gain an understanding of the techniques used so as to further their appreciation of the world of mushroom-producing fungi. There is an option to receive 1 hour credit for an \$50 extra fee. The general areas covered will include theory and application of correct microscope use, analyzing the structure of tissues in mushrooms, describing and measuring spores and other microscopic structures, and the use of common stains and preparation techniques. The course will consist of eight 2 1/2-hour sessions in a WWU lab equipped with both dissecting and compound microscopes.

There will be no exams. Students are expected to collect and identify at least two species during the previous week and bring material for microscopic study. Other material will be provided by the instructor to illustrate the diversity of structures, etc. introduced in 30 minute introductory lectures. Most of the time will be spent working with microscopes and examining demonstration materials and personal collections.

Recommended Text and Materials:

Largent, D. J. David Johnson, and Roy Watling. 1977. How to Identify Mushrooms III: Microscopic Features. Mad River Press. Eureka, CA. New and used copies available at Amazon.com.

Online resources:

Kuo, M. (2006, February). Using a microscope to study mushrooms. MushroomExpert.Com, www.mushroomexpert.com/microscope.html>Davidson, Michael W. and Mortimer Abramowitz. (2009, May). Optical Microscopy. Olympic Microscopy Resource Center. Download the pdf file at: www.olympusmicro.com/primer/opticalmicroscopy.html

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The Northwest Mushroomers Association meets at the Bellingham Public Library, 210 Central Ave., Bellingham, in the Lecture Room, at 7:00 pm on the second Thursday of the months April, May, and June and September, October, and November.

Note: This year's April and November meetings will be held at the ReStore, 2309 Meridian St. We will inform you in advance of any changes of venue. Membership dues are \$15 for individuals and families and the special price of \$10 for students. Please make checks payable to NMA and forward to: Cris Colburn, Membership, at the mailing address above.

Fien is our new field trip coordinator. Field trips are scheduled for the Saturday after each meeting.

MushRumors is published every other month (roughly). Deadlines for submissions are the 15th of odd-numbered months. (Of course, exceptions will be made in the event of fungal finds of unusual import!)

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Mushroom of the Month:

Psathyrella lithocarpa (A.H. Smith) By Buck McAdoo

photo by Buck McAdoo

For at least a decade, those of us who have made a habit out of going to Morel Madness in the spring have most likely run into this innocuous brown gilled mushroom with the pale ochre tan caps. It's usually the only one on the identification table that doesn't have a name on it at the end of the weekend. And every year I tell myself I'm going to check this thing out but never do.

Well, at last it has happened. I gritted my teeth, dug into the microscopic characters, and tried herding it through A.H. Smith's *The North American Species of Psathyrella*, a 633 page monograph. You are invited to judge for yourself whether I landed on the correct species or not.

The specimens in the photo were found by myself under vine maple and Douglas fir at the Tumwater campground on May 12, 2001. Many others have found these as well. There always seem to be several on the identification table. They just curl up like old forest leaves and end up in the trash.

But when you look at them closely, they are a rather handsome *Psathyrella*. Caps usually measure 2-5 cm. wide and are broadly convex with a small, obtuse umbo. The surface is smooth and shallowly corrugate or lined. The colors are pale tan to ochre buff, usually darker at disc. The gills are adnate or adnate with a decurrent tooth. They are very thin and secede from the stem in age. At first grayish, they soon become dark brown from the spores with whitish edges. There are three tiers of lamellulae. The stems are 2-4 mm. thick and 2-10 cm. long. They are smooth with no hint of a veil. The color is buff becoming ochre in age. They are expanded at the apex, then equal before expanding again at the base. The odor and taste is mild. The spore deposit is dark brown, and the whole fruiting body is fragile like most *Psathyrellas*.

The microscopic characters are a bit more interesting. The spores were smooth, thick walled, and ellipsoid to obscurely inequilateral in profile. The apices were truncate due to broad apical pores. They were dark brown in KOH and measured 5.4-6.9 x 9.7-13 microns. The basidia were 4-spored and clavate. The pleurocystidia were utriform to subcapitate and measured 12.9-13.9 x 34.3-38.4 microns. They were not common. The cheilocystidia were saccate to fusoid ventricose with broad apices or capitate. These were plentiful. The pileipellis consisted of several layers of hyaline, vesiculose cells like oblong balloons that measured up to 20 microns thick. The subpellis had slightly inflated, parallel hyphae, ochre in KOH. There were clamps in the stipitipellis. And there were subcapitate to clavate caulocystidia in catenate (chain like) clusters near the stem apex.

The first thing we have to do is key it out to subgenus. If we follow the leads for smooth spores, pleurocystidia not in fascicles, fruiting bodies not parasitic on *Coprinus* species, caps smooth, veil not granulose, no ring on the stem, pleurocystidia present, but pleuros without crystalline incrustations at the apices, cheilocystidia not lecythiform, and veil rudimentary or absent, we arrive at Subgenus *Psathyrella*.

Next we have to follow the thread to Section. If we follow 'not growing on dung or fertilized soil', pleurocystidia present, spores 9-12.5 microns long or longer, and pleurocystidia subcapitate to utriform, we arrive at Section Umbonatae.

Once here, we follow 'spores 9-12.5 microns long', stems narrower than 6 mm. thick, spore apex truncate,



spores not distinctly inequilateral in profile, not found in burned areas, pleurocystidia shorter than 48-72 microns in length, and cuticle of cap more than one cell deep, we arrive at *Psathyrella lithocarp*. Smith found the type on decomposed oak logs at Lake Chaleuma in Santa Barbara County, California, and I can't find any reference to it since.

But there are a few differences from Smith's description. Although the cap cuticle is not a single layer, it seems more inflated than his description. Also, he didn't mention the caulocystidia. He didn't say there weren't any, so possibly it was the end of the day, and knowing they weren't diagnostic, decided to skip them. The other difference is in the cap colors. Smith described two color forms. One was buff fading hygrophanously to whitish, only slightly paler than our collections. The other was pinkish cinnamon fading to pale pinkish cinnamon, which we don't have at all.

Then there is the issue of distribution. Why would a species known only from the shores of Lake Chaleuma become plentiful in the eastern Cascades? '*Lithocarp*' is Latin for tanoak. Oaks do extend northward into southern Washington, but stop short of where we find this species. And there are precedents in other genera. *Lepiota sequoiarum* was once thought to be found only with sequoia. Now it can be found up into British Columbia under other conifers. *Agaricus hondensis* was once thought to occur only in La Honda, California. Now it stretches along the Pacific Coast into British Columbia also. All we know is that *Psathyrella* is a vast genus with plenty of forms, varieties, and other innuendos. To help sort out these vagaries, the word is out that the great searchlight of DNA sequencing is about to focus on *Psathyrella*. Only then will we know for sure whether our Tumwater Campground version is the same as the southern California version.

- Buck McAdoo

Bibliography

A.H. Smith, *The North American species of Psathyrella in Memoirs of the New York Botanical Garden* 24, (305), 1972.

Acclaimed Mycologist David Arora Is Coming to Bellingham on October 22nd!



David Arora with morel mushrooms, circa 2000.

I am extremely proud to formally announce that David Arora, author of the book *All That the Rain Promises, and More* and *Mushrooms Demystified*, the bible of the Northwest Mushroomers Association (and many other such groups, I might add), is going to be speaking to our humble group of avid mycophiles and the community of Bellingham, Washington, at large. The presentation will be cosponsored by the Northwest Mushroomers Association and the Biology Department of Western Washington University, and will be held at Arntzen 100 lecture hall at the south end of campus. The talk will commence at 7:00 pm. on Thursday, October 22nd 2009, and is called "Grace of the Flood: Mushroom Hunting in the 21st Century".

Parking will be available for free for the event in the C parking lot, not too far a walk from Arntzen lecture hall. There is also some paid parking available just behind the lecture hall for those not able or willing to make the walk.

The lecture hall has a capacity of 400, and there will be a great deal of interest from various parts of the community in hearing David's talk, so make certain that you, as members of the NMA, arrive early to assure that you can attend.

A very special thanks to Fred Rhoades, our own science advisor, for coordinating with the Biology Department at Western Washington University to procure us this fine facility for this historic presentation,

and thanks to David Arora for taking the time to come to Bellingham and share with us his vast knowledge and experience in the field so near and dear to our hearts. *Thanks to Jack for convincing David to come to Bellingham! EM*

Rockport State Park Foray, June 27th 2009, Northwest Mushroomers.

Species List Provided by Dick Morrison

Tarzetta cupularis (L. ex Fr.) Lambotte - the small tan cup fungus with a short stipe. *Pluteus cervinus* (Fr.) P. Kumm.- young specimens, thought to be *Pluteus* or *Melanoleuca*. Spore print turned out to be pink, plus horned cystidia abundant on gills.

photo by Vince Biciunas



Happy forayers surveying their haul

Fomitopsis pinicola (Sw.: Fr.) P. Karst. Red belted conk.

Coltricia cinnamomea (Pers.) Murrill -little cinnamon coloured velvety polypore on the ground.

Inocybe rimosa (Bull.: Fr.) P. Kumm. -smooth spores, thin-walled cheilocystidia and no bulb.

Inocybe praetervisa Quel. -with a bulb, very nodulose spores and thick-walled cystidia with crystalline tips (metuloids).

Nolanea holoconiota Largent & Thiers

Nolanea sp. -smaller, dark brown

Psathyrella sp. (2)

Helvella chinensis (Velen.) Nannf. & L. Holm

(= *H. villosa*). -the little dark grey cup on a stalk

Lopharia cinerascens (Schwein.) G. Cunn. -like a dingy

photo by Vince Biciunas



Foray organizer and hostess extraordinaire, Fien

Gymnopus dryophilus (Bull.: Fr.) Murrill - tan-brown cartilaginous mushroom clustered on humus

Russula densifolia (Secr.) Gillet -the big brown Russulas that turn red then soon grey and eventually black.

Russula chamaeleontina Fr. - the small orangey pink mild-tasting Russulas.

Gymnopus peronatus (Bolton: Fr.) Antonin, Halling, & Noordel. -very common, "Wood woolly foot"

Ganoderma applanatum (Pers.) Pat. -The big shelf mushroom that you can draw on underneath.

Phaeolus schweinitzii (Fr.) Pat. -I saw an old manky one from last year but did not collect it.

Cryptoporus volvatus (Peck) Shear - One on the ground, rather old and fallen to bits, not collected.

photo by Vince Biciunas



Rockport's friendly forest rangers

brown turkey-tail with a smooth grey underneath but some pretty cool cystidia under the microscope.

Calocybe carnea (Bull.:Fr.) Kuehner apud Donk -ours was more orangey than pink, but other characters keyed out.

Hymenochaetea sp. This was the bumpy beige crust with white margins growing on the root mass and soil of an upturned tree, unfortunately I don't recall the type of tree. This is going to take a bit more work.

Princely Recipes For the Discriminating Mushroom Connoisseur

photo by Jack Waytz

The Prince with Chive Bisque:

- 1 1/2 lbs. of Prince chopped
- 1/2 cup butter
- 1/4 cup flour
- 1/4 tsp. dry mustard
- 2 cups chicken broth
- 2 cups light cream
- 1/3 cup minced chives
- 1/4 cup sherry
- Salt to taste
- 1/4 cup heavy cream whipped



Agaricus augustus: common summer feature, if you know where to look!

Finely chop mushrooms, stems and all.
Melt butter and sautee mushrooms until soft.
Add flour and mustard and keep stirring for a full minute.
Add chicken broth and keep whisking until thickened.
Add light cream and chives, reserving some chives for garnish.
Flavor with salt.
Can be served hot or cold. Can put whipping cream on top. Tastes even better the next day.

The Prince Florentine:

- 12 medium caps about 3" in diameter.
- 2 lbs. fresh spinach
- 1/4 cup butter
- 1 medium onion, minced
- 1 egg yolk
- 1/2 tsp. salt
- 1/8 tsp. pepper
- 1/8 tsp. freshly ground nutmeg
- 1/4 cup grated parmesan cheese

photo by Jack Waytz



Finely chop the stems and set aside.
Preheat oven to 325 degrees.
Wash and drain spinach, then cook in only the moisture that clings to the leaves for 4-5 minutes.
Squeeze all water from spinach and chop finely.
Melt butter in medium heat, then coat the caps in the melted butter. Transfer caps to an 8x12 inch baking pan.
Add onion and chopped stems to the frying pan and cook until onions are limp.
Stir in the spinach and remove pan from heat.
In separate bowl, combine egg yolk, salt, pepper, nutmeg, and 2 1/2 tbsps. of the parmesan, then add to spinach mixture.
Mound the mixture in the mushroom caps, sprinkle with rest of the parmesan, and bake uncovered for 20 minutes.

Both recipes come from *Private Collections 1 and 2* by the Junior League of Palo Alto in Northern California. They are for *Agaricus*, not specifically the Prince.

photo by Jack Waytz



This behemoth weighed 3.6 pounds!

photo by Jack Waytz



Not a worm to be found!

The Editors's Annual Expedition to the Eastern Cascade Slopes

As has been my custom since 2005, after a long winter's wait and a verification that the first reports that *Boletus rex-veris* has been sighted in the Lake Wenatchee area were indeed true, I ventured forth from the presently mushroom-barren Whatcom County and struck out in search of the elusive (some years not so much..) Spring King. On Thursday, June 12th this year, it was quite warm here, and once I crossed over the pass and found myself on the eastern slopes, it was actually cooler than in the west, and there was a bit of rain in the air.

My spirits were instantly buoyed by the lush green of the vine maples, suggesting that there had been ample moisture in the preceding weeks, always a good sign for the bolete crop. The mosquitoes were plentiful and ferocious, another great omen, in my experience. Almost at once I was both pleased and disappointed. I immediately found a few plump Spring Kings, however, it was also apparent through my formidable tracking skills, (as well as the presence of some big holes in the earth that mushrooms had previously occupied) that in the days directly before my own venture into the eastern alpine, someone had beaten me to the punch. This was no casual mushroomer, either. I reasoned that I would simply beat the bush up the slope and get above where they had foraged, but much to my chagrin, after traversing the slope for about 1500 feet upward, I never did discover anywhere that had not been covered.

It was therefore, that I ended up pushing myself over snags and through the thickets of the great eastern wilderness for what ended up being about 15 miles. The good news is that I did rend from the earth 20 pounds of delectable Spring Kings, and there was one very pleasant surprise in addition to this great gathering. After cresting one small ridge I found myself in a small clearing matted with last year's fall of vine maple leaves and there before my feet were 25 - 30 beautiful *Morchella esculenta*, the blonde morel. I have never before run across these delectable creatures in this area, that really softened the blow of being a few days late to collect a much larger number of boletes. So ended another successful, and surprising, foray to the east.