MushRumors

The Newsletter of the Northwest Mushroomers Association

Volume 21 Issue 3 August - September 2010

2010 Morel Madness Inspires New Members at Tall Timbers

Tall Timber Ranch Morel Madness , a mushrooming extravaganza *By Jan Porter*

The 2010 Morel Madness outing was my first time foraging for mushrooms with the Northwest Mushroomer's Club. I would like to briefly share my 3-day experience at Tall Timber Ranch. Driving over Stevens Pass was filled with breathtaking views, the coolness of the air and the brightness of the sun reflecting off the snow.

photo by Jan Porter

Mushroom highjinks in the kitchen

Arriving at Tall Timber Ranch and settling into my room at the Schultz Center was easy and Fein proved to be a wonderful room mate. The warm and welcoming hospitality shown by Margaret Dilly and others made me feel like I knew them all for many years already. We spent the evening walking around, reading mushroom books and dreaming about finding the BIG MOREL on the following day.

The morning arrived with such a chillness in the air, frost on the grass, birds singing, spectacular mountains rising up to meet the day, that it made me pause to reflect just how glorious our world is.

By 9:00 am everyone was up, checking maps, discussing "not-so-secret spots" to hunt, working out our plans for the day and finally taking off in a "car train." Arriving at our destination, we all piled out to prepare for the hunt. Some of us wore bells to alert any bears that "might" be in the area, which I thought was a great idea! Some small black morels were found, but for the most part, most of us came up empty handed. At this point Pam, Evan and I drove off to spots closer to Leavenworth where they had found a few morels the day before. Pam and Evan also showed me a rare wild flower (*Lewisia tweedii*) they had found as well.

photo by Jan Porter

Many of the usual suspects showed up

The day was like a 3-4 course meal. We had lots of sun, a down pour of rain turning into hail, sun again, rain again and then more sun. We found a few black morels, but not enough to put on our "bragging hats". During the down pours, we opted to have lunch at the Squirrel Tree Restaurant. Food was very good and we were treated as royalty. The sun came back out and we headed for Wenatchee State Park, North Entrance. We separated to cover more

ground. I stayed pretty close to the campsites. It had to have been about 45 minutes before I found my first black morel mushroom along with a few others. I was pretty excited!

We all headed back to Tall Timber to tell our TALL tales of the black morels and of course prepare for the potluck dinner. The potluck was awesome. We had lots of great food, tall "shroom'n" tales, and different mushrooms/fungi laying out for identification and discussion. I was in fungi knowledge overload. Additionally, I learned how to do a spore print. WOW! How beautiful it looked and what vital information it told. It was a relaxing evening with many walks and picture taking around the ranch. Fein and others were planning the morning mushroom omelets from the mushrooms donated by club foragers.

photo by Jan Porter

Morning was once again exhilarating sunny and brisk! Our first class breakfast consisted of individually prepared mushroom omelets garnished with a sprig of parsley or onion. It was a delicious "Kodak moment" and well worth the hunt! Everyone pitched in to clean up before setting out for home. I left Tall Timber with a wonderful fungi experience and knowledge overload. I know more about mushrooms and my fellow mushroomers, and I am looking forward to next year's Tall Timbers Morel Madness. Many thanks to the MushRumor's for a wonderful and unforgettable weekend!

photo by Jan Porter

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The Northwest Mushroomers Association meets on the second Thursday of the months April, May, and June and September, October, and November. *Meeting Location is NEW: CEAEE - Center for Expressive Arts and Experiential Education, 1317 Commercial Street, Suite 201, Bellingham, WA 98225.* 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 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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The False Truffle, *Leratiomyces erythrocephalus*

By Fred Rhoades, Sept 2010

Last month my wife Gloria and I visited our daughter in New Zealand where she is taking a semester abroad. It is of course, mid-winter there and we didn't expect to see too many fungi, but I was looking forward to seeing the unique flora and fauna of that land, including many lichens related to those I have done work with here in the Pacific Northwest. Lichens are unaffected by season and are present throughout the year.

I also thought we might see another kind of fungi that "show" themselves during the winter months here, truffles and false truffles. These fungi are, respectively, *Ascomycota* (relatives of morels and cup fungi) and *Basidimycota* (relatives of mushrooms, puffballs and boletes among others). These two groups of fungi share many characteristics. For one, they are secotioid, that is they do not open and shed their spores into the wind, but remain closed and depend on animals to find them, consume them and later deposit the spores elsewhere. Also, many of these fungi are hypogeous (they fruit underground). Here in the northwestern US, most remain buried and entice their animal vectors with odors that emanate up through the soil, complex odors that sometimes confuse the wildlife into looking for food, or even mates. Common vectors in the Northwest include voles, mice and squirrels. When I was a graduate student, the truffles and false truffles were classified in separate, single groups in the *Ascomycota* and *Basidiomycota*. Over the intervening years, mycologists have come to realize that different truffle and false truffle genera are actually more directly related to individual genera of non-secotioid fungi (*Ascomycota:* morel and cup fungal genera and *Basidiomycota:* puffball, bolete and agaric genera).

Back to New Zealand. New Zealand is a strange and wonderful country biologically. It became separated from the southern supercontinent, Gondwana, between 80 and 60 million years ago and since then has gone on its own evolutionary route. Originally Gondwana was composed of Antarctica (centrally placed), South America, Africa, India, Madagascar, Australia and New Zealand. Some 100 million years earlier, Gondwana had separated from its northern counterpart, the supercontinent Laurasia, and one by one Gondwana's components left to become separate land masses. On Gondwana, many of the early mammals that diversified were marsupials. Also evolving on Gondwana were the flightless birds, including the distant relatives of the ostrich (on present day Africa), the emu and cassowary (on Australia), the rhea (on South America) and the moas and kiwis (on New Zealand). When New Zealand finally split off from Gondwana, for some reason no mammals remained but only birds (and some other interesting non-mammalian vertebrates, but that is another story), including the ancestors of the flightless moas and kiwis. So the New Zealand ecological communities evolved in the absence of mammals and that has made quite a difference.

Only recently, with the discovery of New Zealand by the Maori (in about 1200 AD) did the natural balance of things become disrupted. The Maori hunted the giant moas to extinction and they, and later, European colonists introduced many mammalian predators that the native flora and fauna now have to contend with. But back to the original New Zealand ecology. New Zealand's flora includes herbs, shrubs and smaller trees in a variety of families, some common in the northern hemisphere and others endemic to the southern hemisphere. However the flora is dominated by trees from three plant groups that are only found in the southern hemisphere: the Podocarpaceae and the Auracariaceae, gymnosperm families related to our conifers but quite different, and species of the southern beech, Nothofagus, in the Fagaceae (oak & beech family). Each of these trees has fungal associates in both secotioid and non-secoidiod genera that are similar to those in our forests.

While in New Zealand, I kept my eyes glued to the ground. Eventually I was lucky enough to stumble across a false truffle on a walk on Stewart Island, off the south coast of the south island (the Maori regard Stewart Island as the anchor to the south island canoe). This is the false truffle, *Leratiomyces erythrocephalus* (see Figure 1), formerly known as *Weraroa erythrocephala*. *Leratiomyces* is a genus related to the agarics, *Hypholoma*, *Stropharia* and *Pholiota*. Like its relatives, this fungus is a decomposer (unlike most truffles and false truffles in the US) and it is found on rotting wood or other vegetation. It is not hypogeous, but it is secotioid and depends on animals to spread its spores. Instead of attracting by odor (the fungus has little odor), it is a color mimic of the "fruits" of the Rimu tree (*Dacrydium cupressinum*) and the Miro (Podocarpus ferrugineus), both dominant podocarps. "Fruits" is in quotes because these berry-like structures are not true fruits, but ap-

pend ages to these gymnosperm seeds, much like yew "berries" here. In any case, the false truffle has evolved a dependency on the one group of animals evolved to be the vector for these seeds: birds, including the kiwi. Kiwis are known to find these fungi by sight and to consume them, and, in their turn, to pass the spores on in another place where they can form new individuals. Whether the extinct moa also was a vector is unknown. And as some New Zealand biologists have questioned, will introduced mammals be tempted enough to continue to propagate this interesting fungal species?

Figure 1. This is a stereo pair. Let your eyes relax, (go wide-eyed) and form three images and the center image will be in 3D

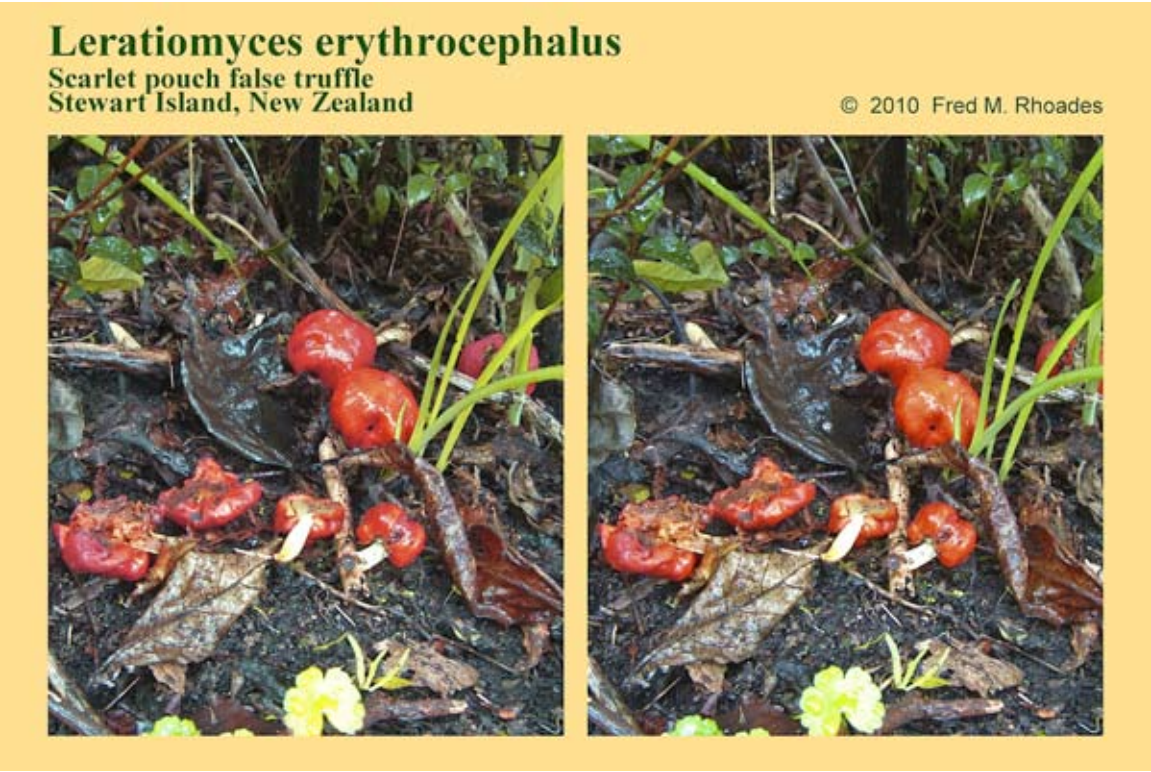


Figure 2. Living Rimu branch upper left, dead litter below, Rimu or Miro "fruit", lichen *Sticta filix* to the upper right, and an unknown mushroom (the only mushroom I saw in New Zealand in August).

It's Showtime! 2010 Northwest Mushroomers Association Fall Show Is Upon Us

The rains have thankfully begun to fall and the fungi that we have wistfully dreamed of through the long dry days of summer (all right, not so long) are waking up. Grab your wet weather gear, baskets, or buckets if you expect the monster bolete haul, and head out to the forests and highlands of western Washington to capture the new crop of mushrooms that is sure to be rising forth from the perfectly heated soil in the coming days.

I implore everyone to bring a good collection for the show this year, which will be on Sunday, October 17th, 2010 from 12:00 noon until 5:00 p.m. at Bloedel Donovan Park. We will gather at the community building at 5:00 p.m. on Saturday, the 16th with our copious collections to begin the intense but fun sorting process. The more people who bring in collections, the more variety of species we are likely to have, which makes the show very much more interesting for all. In order to leave adequate time for collecting, I would recommend taking a day off from work (if that's at all possible)

Some important tips for collecting for the show: 1. Keep each specific species in a separate container (2 or 3 samples of the same species, if possible). 2. Harvest only those mushrooms which are in good condition. Please leave the half-rotten, wormy, or less than prime specimens there in the woods to spread their spores. Looks do count for the show. 3. When collecting, make every attempt to include the entire mushroom, and a bit of the substrate from which it grows. For example, if the mushroom is growing on wood, try to pry up some of the wood to bring in with the mushroom. 4. Never assume that if you are running across many of one type of mushroom, that someone else will bring it in. Collect all that you find, we will sort them out later.

Volunteers are welcome, and very much needed, to help set up and run the various functions at the show. We depend on the membership of the club to donate their time and effort in order to make this the great and popular event that it has always been in the past.

Amanita phalloides Discovered on Campus at Western Washington University

Sighting of deadly poisonous mushroom thought to be first in Bellingham

photo by Fred Rhoades

Deadliest of them all!

The mushroom was growing deeply from soil under lawn moss outside the student union building at WWU. The two trees in the vicinity that it may be associated mycorrhizally with are an oak (likely a pin oak) and some younger street trees that may be chestnuts or buckeyes. The cap with the color is the one that he brought to the meeting. The other one is lighter but shows the typical, deeply rimmed volva. There is a ring that can just be seen a bit on the colored individual and like all Amanitas this species has free gills and white spores. I checked the spores microscopically and they are correct in every way - size, staining and shape - so I am pretty confident that this it is indeed *A. phalloides*, despite the fact it is not as robust as they often get. This species is a well known exotic found in several other urban areas in the Northwest however. Its toxins destroy liver and kidney function; not to be triffled with!

-Fred Rhoades

Part II of Buck's Left Over From 2009 Myco-oddities *By Buck McAdoo*

Flammulaster granulosus – (pg. 410#13)
Caps – 7-17 mm. wide, broadly conical to convex, ochre to ochre-cinnamon, minutely scurfy with tightly packed granular spines with blunt apices at disc becoming sparser at margins. Margins lacerate in age, and accord- to Dick Morrison, appendiculate when young. Context buff.
Gills – Adnate, seceding, subdistant. Color of cardboard. Edges entire. Two tiers of lamellullae.
Stipe – 1-2 mm. thick and 2-3 cm. long. Equal, hollow, tending to split from apex. Ochre-cream at apex becoming ochre-brown below. Scurfy with tiny, isolated brown squamules. Base ex- panded with white tomentum.
Odor – Peculiar, like stagnant water.
Taste – Mild.
Spores – Pale ochre-cinnamon.
Habitat – Gregarious in rich humous under alder and broad-leaf maple at Sudden Valley on March 30, 2010. Found by Dick Morrison.

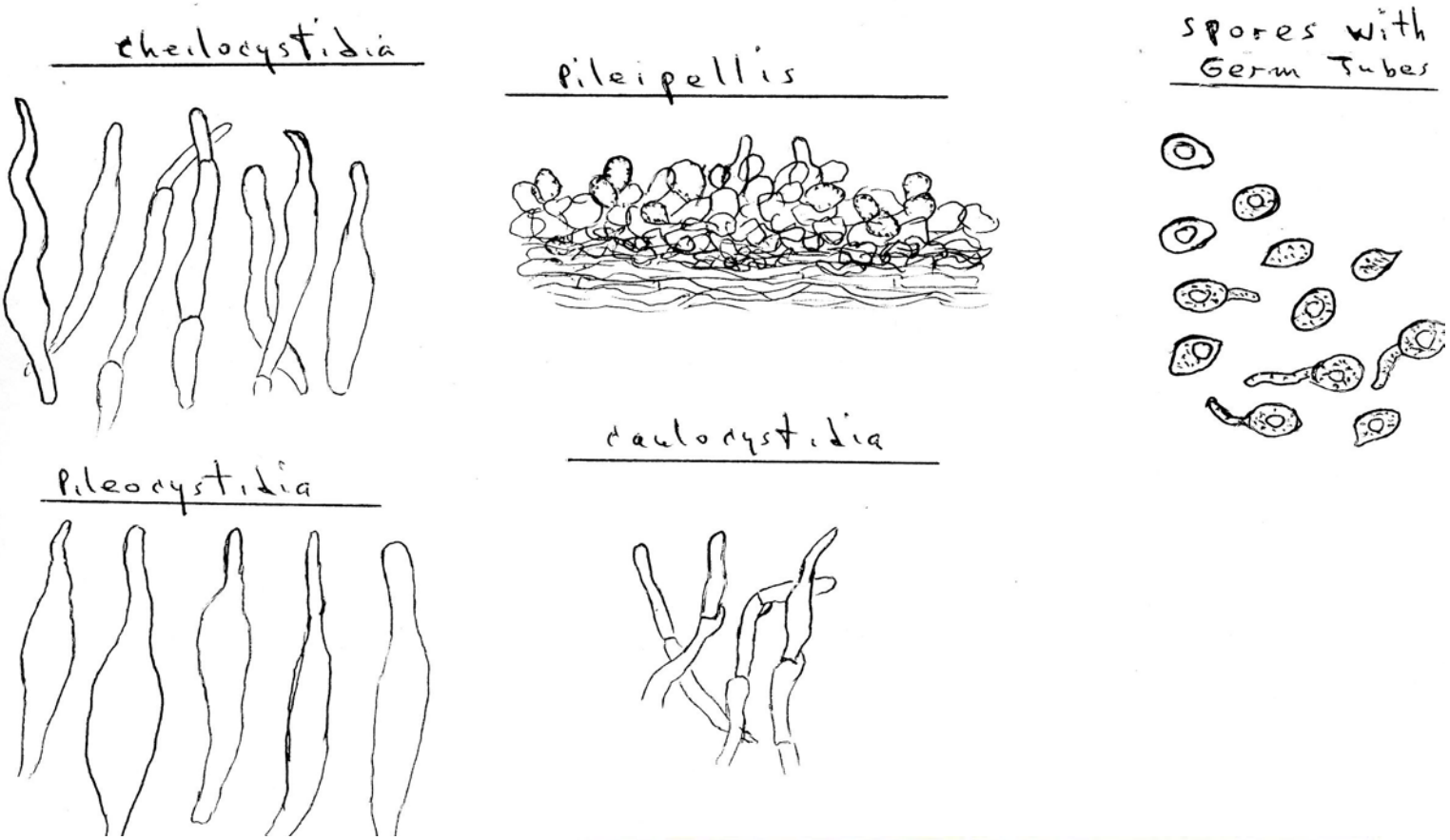
Microscopic Features
Spores – Ellipsoid to limoniform or amygdaliform, thick-walled with granular contents and often with a single oil drop. A few germinating with tubular projection from the germ pore area. However, no germ pore observed. 4.3-5.7 x 5.7-8.6 microns.
Pileipellis – Of rounded to ovate sphaerocysts often in chains. Usually with strongly encrusted walls. Cells measure 11.6-20.7 x 15.7-41.5 microns.
Subpellis – Of slightly more angular, intertwined hyphae.
Pileal Context – Of sinuous, subparallel hyphae without clamps.
Cheilocystidia – Cylindrical to subulate, more rarely clavate. Often in clusters. 6.1-7.9 x 54.3-64.4 microns. Many with septa.
Caulocystidia – Smooth-walled, cylindrical. Similar to cheilocystidia, but septa with clamps.
Pileocystidia – Subulate, lageniform or fusoid, a bit smaller than the cheilocystidia.

Commentary – This unusual species was collected and keyed out by Dr.Dick Morrison. It was moved from Naucoria to Flammulaster by Roy Watling in 1967. It is not the same as *Pholiota granulosa,* which has a cutis for a pileipellis. In fact, it might be the first record of it for North America. We don't know, but we can't find it anywhere in the North American literature. The only possible differences from European material that I could find were slightly longer cheilocystidia and shorter spores. The spores recorded by Breitenbach & Kranzlin measured 3.8-4.7 x 7.4-9.9 microns and seemed more elliptical than ours, which were more limoniform in shape. Another odd thing is no one records pileocystidia, but Dick and I both saw them in one mount. They were tawny in KOH and possibly lageniform. In subsequent sections, I couldn't

find them again. On the plus side, I clearly found clamps on the caulocystidia, an important character for *Flammulaster granulosus*.

Flammulaster granulosus – (pg.410#13)

This is normally a north European species, recorded from Scotland and Scandinavia. How it showed up in Sudden Valley in late March is a bit of a mystery.



Rhodocollybia badiialba (group)

Caps – 3-3 ¼ cm. wide, plane to shallowly depressed and barely umbonate at discs. Margins uplifted and lacerated in age. Surface glabrous and lubricous, tawny chestnut color becoming paler at margin.

Gills – Adnexed, very crowded, white. Edges entire, 4 tiers of lamellullae. No rusty stains.

Stipe – 4-4 ½ cm. long and 5-6 mm. thick. Smooth, hollow, equal. Very fragile, splitting longitudinally. White at apex becoming gasoline color below. Base strongly adheres to duff.

Odor – Mild.

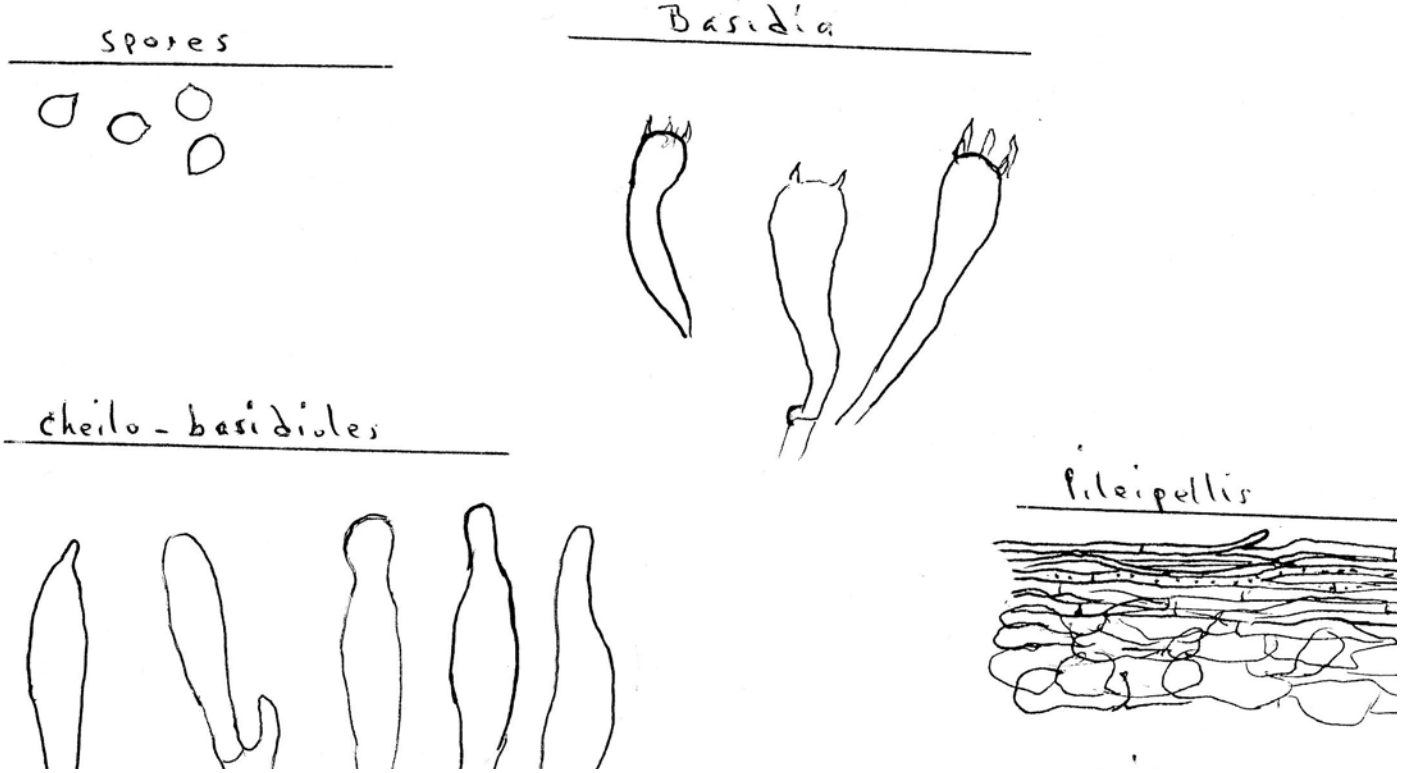
Taste – Sweetish, nice.
Spores – White, inamyloid.
Habitat – A pair in deep moss, adhering to conifer duff below. At Fall Show, October 18, 2009.

Microscopic Characters
Spores – Globose to subglobose, 2.9-4.6 x 3.6-5.9 microns.
Basidia – clavate and relatively short, 4.6-6.4 x 17.6-22.9 microns. 2-spored and 4-spored. Clamped.
Cheilocystidia – Not differentiated from the basidioles. Of various shapes from clavate to capitulate, fusoid-ventricose to mucronate, one even branched near base. 4.3-5.9 x 19.3-27.2 microns.
Gill trama – Of parallel hyphae 3.1-8.6 microns wide. Subhymenium miniscule. Clamps present.
Pileipellis – A cutis of agglutinated, compacted, radially parallel hyphae slightly intertwined, a few with intracellular pigmentation. These hyphae measured 2.5-6.4 microns thick. The subpellis consisted of similar hyphae 4.3-8.6 microns thick. Contextual hyphae were intertwined.
Caulocystidia – Of flexuous, septate, gnarly hyphae, filamentous to clavate and sometimes branched. Also clamped.
Commentary – This is essentially Rhodocollybia badiialba because of the subglobose spores alone. I have not seen this species before. At the show, we labeled it as Rhodocollybia butyracea in the rush of the moment, but there was something about it that seemed off. One look at the spores would tell you it is not R. butyracea. However it differs slightly from the two descriptions of Rhodocollybia badiialba in the following ways: 1.) Young gill edges are supposed to be serrate, and these had smooth edged gills. 2.) The spore print is supposed to vary from cream to pale orange, and these were white. 3.) the taste is supposed to become bitterish and this was mild. 4.) Stems are supposed to be striate-grooved, not smooth and splitting longitudinally. 5.) Stems are flesh colored to pinkish-gray, not white at apex. 6.) Caps are supposed to be hygrophanous to warm buff, and these remained a dark chestnut color when dried. 7.) This collection also had caulocystidia which were not mentioned for R. badiialba.

Dr. Fred Rhoades assisted with the microscope. We both observed that no cystidia protruded beyond the wall of basidioles. This is a collection in sore need of DNA sequencing to determine whether it is Rhodocollybia badiialba or not.

Gymnopus badiialbus was introduced by Murrill in 1916. Melanoleuca collybiiformis, quite possibly the same species, was introduced by Murrill in 1913.

Rhodocollybia badiialba (group)



Mushroom Events Still to Come in the 2010 Fall Season

Taylor Lockwood - Mushrooms of America October 14th, 2010
Don't miss this wonderful presentation by world-renowned author and mushroom photographer. See more about him at www.kingdomoffungi.com

Mushrooms Cookery - Jack Waytz November 11th, 2010

Northwest Mushroomers Association Wild Mushroom Show October 17th, 2010

Snohomish County Mycological Society Fall Exhibit October 10th, 2010

Puget Sound Mycological Society Fall Exhibit October 16th - 17th, 2010

Vancouver Mycological Society Fall Exhibit Ocotober 24th, 2010

In Fond Memory of Linda Haynes

It is with great sadness that we report that Linda Haynes, member of the Northwest Mushroomers Association since 2006 and former Vice President of our club, has passed away after a lengthy and courageous battle with illness.

Linda was responsible for the wonderful official website of the Northwest Mushroomers, and played an integral role in the organization of our club. She also played a key part in the presentation of our fall show and will be sorely missed by all those who knew and worked with her.

I was fortunate to have had the opportunity to work closely with her as a board member throughout the course of her tenure as an officer of our club, and can say that during the treatments that she received for her illness, she never lost her drive or sense of humor, and was a true inspiration to us all. She conducted herself with a degree of dignity despite her deteriorating condition that I would hope to aspire to, and stood always, as an example for all to follow. Her attitude and approach to life, even in the face of such daunting circumstance, were a credit to the best parts of what it is to be a human being, and we all will deeply miss her. Farewell, Linda. -Jack

Tempting Mushroom Cookery

Persian Chicken With Chanterelles and Dried Fruit*

1 cup dried apricots, cut into strips
1 cup pitted dried cherries or cranberries
1 1/2 cups warm water
3 tablespoons olive oil
2 pounds boneless, skinless chicken breast, cut into 1 - 1 1/2 inch chunks
1 pound chanterelles, shredded or cut into chunks
2 cups chopped onion
1/2 teaspoon tumeric
1 cup chopped chives
1/2 cup chopped mint leaves
2 cups chopped parsley
2 cups chicken stock

Place dried fruit in a medium bowl and cover with warm water. Let soak for one hour

In a large pan, cook chanterelles until they release their moisture. Seet aside. Heat the oil and brown the chicken. Set aside.Add onion to the oil remaining in the pan and cook until soft, about 5 minutes. Stir in tumeric, chives, mint, and parsley. Cook over medium-high heat about 2 minutes, or until fragrant. Add the chicken stock, bring to a boil, cover and cook for about 15 minutes. Add the fruit and soaking water and cook for another 5 minutes. Ad the chicken and chanterelles and simmer for 12 - 15 minutes. Salt and pepper to taste.

*Recipe taken from the “Forest to Fork” segment of the MushRumors newsletter of the Oregon Mycological Society Vol. 48, No. 5

photo by Fred Rhoades

Beautiful white chanterelles, even tastier than the yellow...