

Next Meeting Oct. 13th, 2003

SPORES Afield

The newsletter of the Colorado Mycological Society

October 2003

Reflection on a memorable trip to Denver

By Dr. Orson K. Miller Jr. and Hope H. Miller

Once again Hope and I had the pleasure of participating in the collecting and identification of mushrooms of various kinds for the annual Mushroom Fair at the Garden. Our first visit in 1974 at the invitation of the late Dr. Sam Mitchel revealed a growing interest in Rocky Mountain fungi and a very diverse assortment of species to display at the annual show. This year, our fourth visit, was also both exciting and diverse. The team of Hope as recorder, Curator Vera Evenson, volunteers Rosa-Lee & Bob Brace, foray leader Ellen Jacobson surrounded by a group of knowledgeable CMS members turned up over 167 species for the Mushroom Show. Each year finds many of the same species which fruit at about the same time in the fall. However, there are always some unusual species fruiting which need to have our focus. On occasion some of these are new records for Colorado and special collections, called voucher collections, are photographed described and placed in the valuable mycological herbarium at the Denver Botanical Garden. These collections (now over 21,000) are then available at any time for the required microscopic study necessary to provide a precise determination of the species. In addition, the DNA of individual collections can be extracted from herbarium collections for confirmation of the genus and species of new or unusual species.

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Speaker for the October Meeting:

Ed Lubow

"Identifying gilled mushrooms"

Lemme think... Yeah, I remember... It was waaaay back in '92. He fell off o' the back of a turnip truck. Landed right on his head, he did. Got up and started staggering around like some boxer waitin' to be knocked out. Saw a few people walking, and dazedly started followin' 'em. Next thing he knew, he was in this big room where there was a bunch o' people and mushrooms and the people was talkin' about 'em. Now, he didn't know nothin' 'bout mushrooms, but they did look a little like the tops o' turnips, which he loved. So he decided to hang around. Soon there was mention of a foe-ray? Somethin' about goin' out and findin' some of them there mushrooms. Well, by this time he'd got it fixed in his head that them mushroom things was another kind o' turnips, and, knowin' how much he like turnips, he decides he oughta go along. So he paid 'em his money, then showed up where they said. And, sure enough, they was findin' them mushroom thingies out there. So he took a couple of 'em home that was supposed to be good to eat, and he cooked 'em up and et 'em, and he done decided that they was some of the best turnips he ever had. Not as crunchy, but the taste was good. So he got himself some books and started studyin' 'em so's he could find as many kinds o' turnips as he could, and not eat one o' the bad ones. Course, he still ain't figured out that they ain't really turnips, but why ruin his fun?

Heck, if he can find 'em and tell 'em apart, who cares if he thinks they're turnips or smurf houses?

Upcoming Events

- Oct. 13th Ed Lubow
"Identifying gilled mushrooms"
- Oct. 19th End of Season Mushroom Dinner

(Dr. Miller continued from page 1)

This year CMS members turned up some very interesting species. A large tooth fungus, *Sarcodon leucopus*, was found under conifers at Guanella Pass at about 10,500 feet elevation. Club member Ed Lubow along with Vera Evenson and Hope and I found specimens. Our field identification will now be confirmed with laboratory study of what could be a new record for Colorado or perhaps the United States. The species is known in Europe where it is found associated with conifers. In addition, some very familiar edibles including *Boletus edulis*, *Coprinus comatus* (the shaggy mane), *Tricholoma magnivelare* (the American matzutake) and *Lactarius deliciosus* (the orange milk fungus) were found and displayed. Also on display were such poisonous species as *Galerina autumnalis* which is deadly poisonous, and grows in well decayed wood or in woody debris. In the lawns throughout the Denver area *Agaricus xanthrodermus* with its butter yellow context in the base of the stock and *Chlorophyllum molybdites* (the green spored lepiota) were on display. Though not deadly, mistaking these two for edible look-alikes would make a person very sick indeed! No doubt Marilyn Shaw, CMS member and consultant to the Denver Poison Center, would be called upon for her expertise in diagnosing the toxin involved. In fact Marilyn is called upon for help in diagnosing mushroom poison cases far beyond the Colorado region to advise doctors concerning mushroom toxicity.

During the course of our stay in Denver we studied an interesting puffball discovered by Rosa-Lee and Bob Brace, a number of collections of earth stars, collections of *Catathelasma*, *Battarrea*, *Battarreoides* (both desert inhabitants from the Western United States), and other herbarium collections from Colorado.

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2004 CMS Board Nominations

Election of New Officers for 2004 will take place at the October meeting. The following individuals have agreed to run for office. Other nominations will be accepted from the floor at the meeting. Its not to late to offer your talents to CMS.

President - Chris Hardwick

Vice President - Tom Ruzicka

Pres-Elect - William Windsor

Secretary - Joanna Seward

Treasurer - Harry Obermeier

Editor - Norm Birchler

Members attending the meeting will vote at that time.

Tom Ruzicka and Marilyn Shaw will continue in their roles as liaison with Denver Botanic Gardens and be responsible for CMS publicity in DBG's publications. There are a couple of important chair positions that we still need to fill. Please help CMS by volunteering just a small amount of your time. Please call or e-mail William Windsor at 303-544-6069 (wnwindsor@comcast.net) to volunteer for a chair position.

Spores Afield

Spores Afield is published from March through October by the Colorado Mycological Society. CMS dues are \$23 for the first year and \$20 thereafter. Send membership dues to CMS Membership Chair, Box 9621, Denver, CO 80209. All CMS members receive *Spores Afield* as part of their membership.

CMS is an affiliated member of the North American Mycological Association.

CMS website: <http://www.cmsweb.org>

How to Find Chanterelles

By Ellen Jacobson

On September, 5, I officially hung up my mushroom basket and decided that even though I had not found any chanterelles, for me, the season was officially over. I had made numerous trips to "my secret place", as Tom Ruzicka calls it, and had hauled home and processed many pounds of *Bolletus*. My car was tired and I was tired. I was tired of mushrooms and driving and having to lean on my freezer to get the door closed. And then I went to the September Meeting and that optimistic Bird of Hope fluttered by. Maybe there was a chance for me after all. Ed Lubow and Norm Birchler both reported finding nice ones in Fraser and west of Boulder, and Adele Mikelivicious had picked a bunch on Rabbit Ears Pass. Surely, my old faithful secret spot would have many. So off I went with the Bird singing happily on my shoulder. At the very first stop, there they were---large, fresh, and glorious, but only a dozen. Surely, the Bird said, there will be many more, but several foot miles later, I still had my original twelve and the car and I agreed that we really didn't want to drive to Fraser on ~~Rabbit~~ Ears. The Bird was very quiet.

Toward the end of this lovely, but disappointing day when my tired legs had only one more hill left in them, I put that stupid Bird in the car and crossed the road. And there they were not 10 feet from the path. Not my elusive chanterelles, but the telltale pine needle lids that hide the dark and dirty homes of the world's most beautiful mushroom, the matsutake. I filled a large bag and I was happy.

On the long drive home I mused about the many times that I had found chanterelles and realized that never once had I found them when I was actually looking for them. There was Lizard Head Pass in 1987 when we got lost and found 5 shopping bags full. There was Fraser when the car broke down and I walked toward the rodeo grounds and found way too many to carry. There was even the time when I had a flat on Squaw Pass, pulled over, and found a ditch full on the side of the highway.

There was the hillside in Italy, the Rampart Range Road, and behind my tent in William's Fork, for heaven's sake. And, at not one of these places, had I actually been looking for the rings of golden yellow.

So, the moral of this tale is:

If you want to find chanterelles, go look for something else. Next year, I plan to go birding and I'll bet I find chanterelles.

(Dr Miller continued from page 2)

Field work at Loveland Pass in alpine tundra also provided mycorrhizal species associated with dwarf and low bush willows in the mushroom genera *Russula*, *Hebeloma*, *Laccaria*, *Cortinarius* and two species of *Amanita* of special interest. It was a pleasure to be at Denver Botanical Gardens and to work with the collections in the Herbarium of Fungi. It is an outstanding regional collection of higher fungi directed by Curator Vera Evenson and an important resource for the serious student of mycology.

Mycology on the Internet

http://www.pfc.forestry.ca/biodiversity/matchmaker/index_e.html

By Ed Lubow

Since this month's speaker's topic is identification of gilled mushrooms, it seems appropriate that this month's featured topic for this column is a web site that runs a computer program to do exactly that.

Matchmaker asks for a list of features of the mushroom you want to identify, and it produces a list of mushrooms from a database that most closely match those features. You choose what features you want to provide. If the only things you want to tell it are that your mushroom has rust brown colored spores and grows on some unspecified sort of wood, you can do that. If you do, you'll get a list of 60 species of mushrooms that match all your features 100%.

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Probably the easiest way to use it is to provide a couple easy features like that, then add features until the list gets short enough that you feel like you can read the descriptions for all the matches to figure out the best one. Continuing with the previous example, let's try adding that there is a ring on the stem. OK, that's a little better - we're down to 20 species. How about that the cap is sticky (viscid)? Even better - we're down to 10 species.

Hopefully, at this point you would know (for example, from the next meeting speaker's topic) that the mushroom is probably in the genus *Galerina* and not *Pholiota*, which are the only two genera left on the list. At this point the list includes only one species you need be concerned with - *Galeina autumnalis*, the deadly *Galerina*. You can call up a full, detailed, technical description and excellent photographs (many from the find MykoWeb site).

On the negative side, I've found that colors are often some of the worst features to input. Above, I said that we had rust brown colored spores. How different is that from cinnamon brown, dark brown, dull brown, or chocolate brown, all of which are alternative choices? Looking at the color swatches provided is a bit bewildering - all of those colors look pretty similar. I suppose we could go with the "any brown color" or "any dark color" choices available, but the lists produced will be much longer and more difficult to work through.

It's also not obvious to a casual user how you can prioritize your features. How do you tell it that the spore print color is white, and that anything that doesn't have that exact thing should be ignored?

It does have a feature where you can tell it to only consider mushrooms from a specific family or genus of mushrooms. This is a very useful feature once you can identify your mushrooms to those levels reasonably well.

Overall, Matchmaker provides a useful way to identify mushrooms that's not the usual reading

through keys. It has references to 2087 species of mushroom, which makes it better than most books. The descriptions are excellent, and reference many sources.

So, next time you're trying to figure out what that obscure mushroom you found is, and the keys are baffling you a bit, see if Matchmaker makes it a bit easier.

The White-Water Chilled to the Bone Mushroom Foray

By William Windsor

As an former Boy Scout and Scout Leader, I really should know better. Unfortunately, I am most definitely not a morning person, and since most ambitious adventures begin in the wee hours of the day (sometime before noon), I often find myself not prepared.

On this occasion, I had committed myself to spending Saturday morning at white-water kayaking and the afternoon in a mushroom hunt for chanterelles. I had planned to prepare for this on Friday after work, however, on my way home I received a phone call from a friend who invited me to share a glass of wine with her. This was an offer I had no intention to turn down. One glass led to another and oh, how time flies when engaged in conversation with someone you find attractive. I returned to my apartment just in time to see the clock turn its hands to 3:30 am.

At this point I pondered if I will be better off just staying up, but instead I decide to get in a good night's sleep. Three hours later the alarm is ringing and now I wake in a morning fog produced by lack of sleep combined with the lingering affect of alcohol. I do attempt to gather gear for the day, but only manage to get myself dressed and grab my wallet, rain parka and radio before Norm Birchler and his spouse Karen Schuster arrive to pick me up.

On the drive to the Blue River (our kayaking destination) Norm asks me if I have had breakfast. "Uuuuhhhh no" I respond and Norm gives me an extra breakfast sandwich they had purchased earlier.

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"I hope you brought your cold water gear" Karen says, "it looks like the dam is spilling bottom water". This means that the river water temperature is going to be about 38 degrees. "Ummm, no" I respond, "but I did bring a towel!" Norm and Karen offer to let me use some of their cold water gear, and I make the brilliant decision to decline this generous offer. "Do you have water for the day?" Karen asks. "Ummmm, no" I respond, and they give me a water bottle to use.

Soon we mount our boats and head into the river. Ohmygod that water is cold! I am a beginner kayaker and in the very first set of rapids I flip my boat and take a swim. OHMYGOD that water is COLD!!! So cold I cannot breathe and I scramble onto the first rock that I can catch hold of. Norm and Karen confirm that I am safe and out of the water and then paddle downstream to fetch my boat and paddle. I try to find a path on top of rocks to get to my boat, but I only succeed in getting stranded in the middle of the rapids. Norm paddles over to me and instructs me to get into the water and he will guide me through the rapids to the shore. "I don't want to get back into the water" I meekly protest, but I know that there is no other way for me to get off that rock. I slip back into the water and take hold of the back of Norm's kayak. OHMYGOD, OHMYGOD, the water is still cold, and I can only take short breaths of air. I sound like a bird chirping as I attempt to breathe. "Your not having a heart attack, are you?" asks Norm as he guides me between rocks and rushing water. "Nope, I'm okay", I respond. "Just can't breathe, that's all", I chirp.

So here it is, about 10:30 am and I have been in freezing cold water twice, and I still have several miles of river and even bigger rapids to pass through before reaching the pick-up point. I had rented a 'sit-on-top' kayak which means that the freezing cold river water will be washing over my body at every white-water section. At the mid-way point we stop to take a break, and of course I had failed to bring along a snack. I think my skin color was beginning to resemble a smurf (blue) because Norm and Karen peel off some of their

clothing and give it to me to wear. Although I am cold, I do not feel 'in danger' cold, and perhaps this is a trap of hypo-thermia. You don't feel like you are in danger until its too late. About a mile from the take-out point it starts to rain. I notice that the rain feels warmer than the river water washing over me. We finish the river run, load the boats on Norm's truck and it feels great to put on my dry cloths. But even then, I still feel cold.

We stop and eat a warm meal and I start to feel a little better. After a short drive we arrive at Winter Park and start to Foray for 'schrooms. It is still raining and the temperature is about 48 degrees. Although I did bring a waterproof shell, I failed to bring any warm layer clothing. "Did you bring a coat or sweater?" asks Norm. "No, no", I respond, "I'm fine, but I did bring my radio!" I add in a vain attempt to not appear completely lame. This small indicator of outdoor competence is immediately lost when I have to confess that I also forgot to bring my mushroom basket.

Normally, the cold does not bother me and I usually do not need much in the way of thermal layering. However, just minutes into the foray my body starts to shake uncontrollably. Karen notices my shaking and she offers to go back to the truck with me to lend me a warm layer. With the additional layer, I now feel comfortable enough to continue the foray, however I notice that my stomach still feels cold.

There is a special beauty to foray or hike in the mountains during a rain. The background noise of rain is pleasing to me and the visual impact of soft indirect light combined with hard wet glossy surface appearances is stunning. On this foray, I scan the forest and mountains as much as the forest floor. In the distance white ground-fog lifts in the valleys to join the grey clouds above. I stop along side a creek to take in the visual and audible concert of running water being fed by rivulets of rain run-off.

Although the fruiting this year is moderate and the 'schrooms are small, it is easy to spot the bright yellow-orange caps of chanterelles against the dark wet forest floor. I collect several clusters, *(continued on page 6)*

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leaving behind a few caps to spore and maintain their reproductive life cycle. Boletes are out as well, and we collect a number of mid-sized caps which are firm and completely free of insect tenants. It is a good foray.

When I return home, I immediately head into the shower. I run the hot water on full and remain in the shower for about 30 minutes. Apartment life does not have many benefits, but one thing it does provide is an endless supply of hot water if you shower at a non-peak-use time. Following the hot shower, I place my mushrooms into the fridge, grab an extra blanket from my closet and then crawl into bed and sleep.

We live in a place of incredible beauty and outdoor activity opportunity. But the very variety of environment and climate demands that a person be prepared to encounter changing temperatures and conditions. The line between an enjoyable outdoor adventure and a life threatening situation

can be sharp and sudden. In my years of friendship and shared outdoor adventures with Norm and Karen I have noticed that they are always well prepared for any venture. I would advise my fellow mycophiles to emulate their consistent level of preparedness. In this case I call upon a well worn parental prerogative and admonish the reader to do as I say, and not as I do.

Address Correction:

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French Truffles

I saw a short article in the Wall Street Journal that said due to the heat and drought this summer the Truffle harvest in France could be off as much as 70% and may take a couple years to recover.
The Editor