



# NJMA NEWS

THE OFFICIAL NEWSLETTER OF THE NEW JERSEY MYCOLOGICAL ASSOCIATION  
Volume 37-4 July - August 2007



## NJMA OFFICERS

President – Jim Barg  
Vice-President – Nina Burghardt  
Secretary – Ania Boyd  
Treasurer – Bob Peabody

## DUES

Payable on calendar year  
Individual: \$15.00  
Family: \$20.00  
Mail checks (payable to NJMA) to:  
Bob Peabody  
50 Alfalfa Hill  
Milford, NJ 08848-1727

## NJMA WEBSITE

[www.njmyco.org](http://www.njmyco.org)  
Bob Hosh and Jim Barg

## NJMA NEWS

Editor: Jim Richards  
211 Washington Street  
Hackettstown, NJ 07840-2145  
email: [jimrich35@verizon.net](mailto:jimrich35@verizon.net)  
Art director: Jim Barg  
email: [jimbarg@bssmedia.com](mailto:jimbarg@bssmedia.com)  
Circulation: Susan Hopkins  
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Send ONLY newsletter submissions to the editor. All other correspondence should be sent to the secretary:  
Ania Boyd  
181 Highland Avenue  
Montclair, NJ 07042

## NJMA EVENTS HOTLINE

908-362-7109 for information on NJMA events or cancellations due to bad weather.

Volunteer for  
**FUNGUS  
FEST**

Help needed in all areas - Mark your calendar!

**It's more fun than a barrel of Porcini!**

**September 22-23**  
(setup on Saturday, show on Sunday)

Call Dorothy Smullen (908) 647-5740  
or Nina Burghardt (609) 466-4690

## CALENDAR OF UPCOMING EVENTS

- 
- \* Sunday, July 15**      **FORAY: Meadow Woods Park**  
10:00 am  
*Leader: Dorothy Smullen*  
*(Our regular ID session and a cooking mini-demo will follow after the foray for those who wish to participate.)*
- 
- \* Sunday, July 22**      **FORAY: Hoffman Park**  
10:00 am  
*Leader: Bob Hosh*
- 
- Saturday, July 28**      **NJMA EDUCATION CLASS:**  
10:00 am      **"Lichens are Fungi Also!"**  
*Dorothy Smullen, Instructor*  
*Registration is required...see registration form on page 9.*
- 
- \* Sunday, July 29**      **FORAY: Herrontown Woods**  
10:00 am  
*Leader: Nina Burghardt*
- 
- Saturday, August 4**      **NJMA EDUCATION CLASS:**  
10:00 am      **Dyeing with Mushrooms Workshop**  
*Ursula Pohl, Instructor*  
*Registration is required...see registration form on page 9.*
- 
- \* Sunday, August 5**      **FORAY: Manasquan Reservoir**  
10:00 am      **Environmental Education Center**  
*Leaders: John and Nina Burghardt*  
*Special Guest: Dr. Steve Trudell, forest ecologist from the University of Washington in Seattle*  
*(A microscope session/workshop will follow the foray.)*
- 
- August 9 - 12**      **NEMF Samuel Ristich Foray, Orono, Maine**
- 
- August 16 - 19**      **NAMA Foray, Pipestem, West Virginia**
- 
- \* Sunday, August 19**      **FORAY: Stephens State Park**  
10:00 am  
*Leader: Jim Richards*
- 
- August 23 - 26**      **COMA Clark Rogerson Foray**
- 
- \* Sunday, August 26**      **FORAY: Schiff Nature Preserve**  
10:00 am  
*Leader: Susan Hopkins*
- 
- \* Sunday, September 2**      **FORAY: Rancocas Audubon Nature Center**  
10:00 am  
*Leader: TBA*  
*(A microscope session will immediately follow this foray.)*
- 
- Sunday, September 23**      **FUNGUS FEST 2007**  
10:00 am – 4:00pm  
*Erelinghuysen Arboretum, Morristown, NJ*  
*The year's biggest event! Volunteers are needed to assist with setup on Saturday, September 22, as well as to help in all areas on the day of the show.*
- 

\* An added feature to our forays this year (if we find edible mushrooms) will be "mini cooking classes" which will run concurrently with our post-foray ID sessions, for those who are interested. (Note that this will only happen at NJMA forays, not at NEMF, NAMA, or COMA forays.)



## PRESIDENT'S MESSAGE

The issue of safety in the woods is often taken for granted and passed off to common sense, but it's a good thing for us to be reminded now and then of the perils that are out there and how to best avoid them. As mushroomers, we're concerned every day about the edibility vs. toxicity of mushrooms we collect. I thought this would be as good a time as any to point out some common-sense woods safety issues that we face beyond that. My purpose is not to scare anyone away from the woods, it's just to remind all to *be aware* and *be careful*.

I could start out by reminding everyone, first and foremost, to *watch your step!* The woods are not paved sidewalks, and the environs in which we foray are full of hidden ankle-twisting stones, crumbling rocks, rotting wood, animal burrows, and slippery mud (any of us could go on and on with these!) And we need to be aware of things coming from above, too. Dead tree branches, whole trees falling, as well as weather-related dangers (need I say "lightning?") should not be dismissed with "What's the chance of THAT happening?" As we point out in our foray guide each Spring: Nature is not your mom! By being observant and careful, we can often avoid accidents. Yes, there may be a big morel up on that hillside...but is it worth the risk of tumbling to a broken knee (or something worse) to get it?

Another issue that we need to be aware of: "Critters". Much has been made about the danger from wild animals, and while many of the stories are exaggerated and sensationalized in the press, we need to be aware that wild animals are just that – wild. It is bad to feed any wildlife while in the woods, and it's important to be aware, if you're carrying a picnic lunch with you, that there are also animals out there who can smell it and who are also hungry. Chances are that they're not after you, but they do love the smell of that honey ham in your backpack! It's probably best to leave your food in a locked car and eat it upon return from your foray. Also, be a little more "on the lookout" when you're foraging near berry patches and natural food sources. You don't need to be scared if you see a bear or other "feared" animal in the woods...if you do, be sensible: drop any food you are carrying, make lots of noise, and move away slowly. Most animals are afraid of adult humans, and some of the most "feared" ones are generally, but not always, timid. Of course, there are exceptions (in my case, my closest call with an animal in the woods was actually with someone's dog!), so it pays to be aware.

Also, snakes (some poisonous) lurk in the underbrush and in rocky areas. It's important to look around a bit before you grab that mushroom! Northwest New Jersey (and other parts of the state) is home to the Copperhead and the Timber Rattlesnake, and I have seen both during my travels in the woods. While the Copperhead tends not

(continued on page 6)

## UPDATE:

### NORTHEAST MYCOLOGICAL FEDERATION'S 13<sup>th</sup> ANNUAL SAM RISTICH FORAY AUGUST 9 - 12, 2007 • ORONO, MAINE

This year's NEMF foray will be held in Orono, Maine, at the University of Maine campus. Your host will be the Maine Mycological Association, Inc.

The spruce, pine, and deciduous forests with streams, rivers, and bogs around Orono provide diverse habitats for finding mycological treasures. The foray will also provide interesting lectures and workshops, good food, and a lobster banquet on Saturday night. There is a wide range of recreational opportunities around Orono for you and your family to enjoy. Activities you can delight in (within an hour of Orono) are golfing, fly fishing, white water rafting, canoeing, kayaking, and shopping. Some natural attractions within close driving distance include Acadia National Park, Bar Harbor, Moosehead Lake, and Baxter State Park with Mount Katahdin and the Appalachian Trail.

## MUSHROOM ART SHOW

We are planning a Mushroom Art Show! All attendees are invited to bring paintings, drawings, prints, photographs to hang. Please provide some form of hook on the back of your artwork since we will hang the pieces from a conduit pipe by wires. There is lots of space on the walls of the room where the display tables will be. We will also have some table space for displaying sculptures.

No judges, no prizes, no sales, no rules – just bring whatever you think others would like to see.

Have questions? Call Martha Gottlieb at 207-549-5198 or email her at [megom@adelphia.net](mailto:megom@adelphia.net)

## AMANITA RISTICHII TREASURE HUNT

We are also having an *Amanita ristichii* Tulloss hunt. The type locality for this elusive taxon is New England, and there have been confirmed records in Quebec. Rod Tulloss, an *Amanita* expert, will be at the foray to confirm any identifications and will post forayer's images of *A. ristichii* collections on his Web site. We will offer rewards for finding this elusive fungus, and there will be a special reward for the collection with the best field notes.

For information and registration information,  
please visit [www.nemf.org](http://www.nemf.org)

## A BEGINNER'S VIEW

by Frank Santora (part 2 of a series)

Winter gives way to spring, and Ashley and I eagerly watch the thermometer to see when conditions will be right to start looking for mushrooms. This year, our first Spring as mushroom hunters, the weather brings floods that would make Noah cringe, followed by a lack of rain and chilly weather that would make Moses glad to be in the desert.

Even though the conditions were poor, our enthusiasm got the better of us and we regularly headed to an old apple tree and a small stand of tulip poplars to look for morels.

Since we didn't find a single mushroom, it was with great anticipation our thoughts turned to the first NJMA foray of the season at the Princeton Water Works, and for us, the first club foray ever. Though we're both extraordinarily resistant to the idea of getting up early on the weekends, we managed to do a good job of getting out of the house with what seemed like a decent amount of time to get down to Princeton from Northern NJ. After a few U-turns in Princeton, we scrambled to find the other mushroom loonies. (If I could offer a couple pieces of advice: use the bathroom BEFORE you set off to a foray because there aren't convenient facilities, at least not at the Princeton site.) Also, make sure you have good directions and maps to the meeting places!

Although we were about a half hour late, the group hadn't gotten more than a few hundred yards ahead of us. When we caught up we were excited that Jim Barg had already found 2 morels! I couldn't have been more surprised if he pulled a pair of leprechauns out of his basket. For the first few minutes, I couldn't do much but observe. Before me lay a sea of strange, slow moving creatures in a widening line, poking the earth with sticks. Non-mushroom hunters stared strangely, and when one obvious outsider passed close by, I muttered something about being glad to finally escape from the hospital.

We were given some help by our fellow NJMA'ers about where and how to look. It went something like this: "Step 1: point head at ground with eyes open...What do you mean step 2? There is no step 2!"

And it really was that easy.

Ashley and I found a tulip tree and assumed the crippled posture of mushroom hunters, and before long my eyes focused on a speck the size of a thumb tack and the color of butter peeking out from behind a little log under some leaf litter. As I peeled away the leaves I couldn't have been happier if it were a gold nugget I found. Mind you, this little morel was about the size of a baby's thumbnail, but it proved that I was doing something right, and sometimes that's exactly what you need.

It was proof that I could find morels, even if I hadn't exactly found this spot on my own, and even if this morel could probably be swallowed whole like an aspirin. I'm exaggerating a little here – the morel, like all the others we found that day (six total), was about two inches tall.

Before I excavated my treasure from the earth, I needed some trophy photos. Our excited picture-taking drew the attention of our fellow hunters, who found a few other small morels in the same area.



PHOTO BY FRANK SANTORA

*Morchella esculenta*, under Tulip Poplar, at the Princeton foray.

We then decided we should head for some new territory. As we scanned the woods for more tulip trees, something caught my eye under the fallen bark of an old tree. I found several masses of small, dark mushrooms growing in abundance. I collected a small bag of them, and they were later identified as *Coprinellis micaceus* (formerly *Coprinus micaceus*), or Mica Caps. Because I wanted to be sure to include the entire base for identification, I made the mistake of allowing a lot of dirt in with the mushrooms. This was a big mistake because it tends to make all the mushrooms in the same bag harder to clean later.

This is an interesting little mushroom. Most field guides list it as an edible, but some say that if you have consumed any alcohol hours (or even a few days) prior, and up to five days after, it can make you very sick. (Similar species that are, or were, in the genus *Coprinus* definitely cause this reaction! A prime example is



*The mica cap, Coprinellis micaceus, showing growth habit*

*Coprinopsis atramentaria*, formerly named *Coprinus atramentarius*, the Tippler's Bane.) Some of the side effects listed were such interesting ailments as "bulging neck veins!" Did I try them? You bet! I gave two or three of them a quick fry in some butter, and they tasted very creamy and had a slightly crunchy texture. Even though we only ended up with a mouth full of edible mushrooms, it was well worth the experience of collecting wild food as table fare.

If you are reading this as a fellow beginner, no doubt you are sometimes overwhelmed with the vast array of terminology you need to use the guides, but this terminology is not only useful in actually identifying mushrooms but, in most cases, points out what to actually look for! Learning just a little of the terminology has helped me to progress beyond looking for obvious things like an annulus (ring) on the stipe (that's myco-speak for stem) or just looking at something as apparent as the size and color of the cap, to looking at things like the shape of the margin of the cap, and its texture and other surface features. These features might go unnoticed unless you knew there were special terms to describe their significance.

The workshops offered by NJMA have been extremely valuable. The beginner's workshop was taught by Dorothy Smullen and, later that afternoon, we attended Bob Peabody's "Identification of Gilled Mushrooms" workshop. As a beginner, it's really a commitment you should make. We probably doubled our knowledge by the end of the day, and I went in having read at least two or three field guides. A big THANK YOU to the instructors of all the workshops I attended!

One of the guides in particular, *Identifying Mushrooms to Genus I: Macroscopic Features*, is full of that necessary terminology. Necessary, but excruciatingly boring. This book has a few drawings here and there but no photos, and it's pretty dull stuff. I slipped into a coma twice while reading that book and I think the second

time I may have even stopped breathing for several minutes. I've found one way to counteract this loss of consciousness is to sit down next to a computer while reading it and when a species is mentioned as exemplifying a certain characteristic you can use the internet to look up that species and examine the feature mentioned. A good place to look for photos is Google.com, where you can type in the common or scientific name provided in the book and then click on the 'images' button, where it will usually find dozens if not hundreds of images for you. Reading the book this way made it much more interesting for me! Don't misunderstand me – Bob Peabody was on the money when he recommended this book. It's filled with vital information on every page.

Maybe it's a bit soon to make such claims, but I finally feel like I can say I'm no longer a complete beginner, and the last workshop I attended, "Mushrooms Magnified," is the reason why. I won't go into how much time and effort it took to either buy or borrow both a stereo (dissecting or low power) microscope and a compound microscope, but these tools allow the viewing of some very important microscopic features, and the workshop gave me insight into what I was seeing. I'm by no means an expert on the scopes themselves, but I have spent about the past six months thoroughly researching features, pricing, and availability of both new and used scopes. If anyone has questions about that aspect drop me a line and I'd be happy to share what I know. Before attending this excellent workshop, it was difficult to grasp what I was looking at under the compound microscope. Without confirmation by an expert, I had no idea if what I was seeing was a spore, an air bubble, or some other contaminant. We were taught to recognize the scale and location of some very important structures. I've already used this knowledge to ID a deer mushroom based on its unusual "antlered" cystidia.

I've learned that it takes a commitment of time (and usually weekend time) to get any serious "mushroom learning" done. I've also come to the conclusion that regardless of how many times you read something, it's not the same as being able to engage in a discussion with experts.

Finally, from my experience at the meetings, lectures, workshops, and forays, it's obvious that a great many members are interested primarily in mycophagy (eating the mushrooms). I've mentioned in my previous article that finding mushrooms to eat was one of my own primary interests. I hope, however, that others that may be considering getting involved with NJMA (or who are current members) also appreciate how rewarding it is to get out and hike, what wonderful photographic subjects mushrooms make, and the wide array of activities offered by the organization. It's nice to come home with some food from the woods, but the real reward is to come home having had some exercise, fresh air, and an appreciation for the wildness around us.



## WHO'S IN A NAME?

### *Collybia cookei*

by John Dawson (part 3 of a series)

The genus *Collybia*, formerly a large and diverse collection of species, has recently undergone a major taxonomic revision.<sup>1</sup> Consequently, only four species now remain within it, one of which, *Collybia cookei* (Bresadola) Arnold, is a small white mushroom that is parasitic on other mushrooms, especially species of *Russula*. (<http://users.skynet.be/deneyer.mycology/> has superb color photographs of it *in situ*.) Its specific epithet, *cookei*, commemorates the British naturalist Mordecai Cubitt Cooke (1825–1914), one of very few mycologists who have been the subject of a full-length biography<sup>2</sup> — and no wonder, for his life was extraordinary in several respects.

Born in the village of Horning, Norfolk, Cooke briefly attended a local school, but at age 10 was sent to live with a maternal uncle, a Baptist minister who ran a day school in his church. When he returned home three years later, young Cooke was, he later wrote, well-grounded “in the rudiments of Latin, Greek, algebra, etc.,” and had developed an interest in botany, fostered by his uncle’s habit of sending him out to collect roadside plants, which he was then tasked to identify using books in his uncle’s library.

Cooke’s formal education was completed by 18-months’ study at a commercial academy in a nearby village, where he learned the practical skills of surveying and bookkeeping. He was then apprenticed for five years to a draper in Norwich, whom he served primarily as a bookkeeper. His main interests, however, lay outside his work. Encouraged by his employer to take up bird-watching, he also was active in local choral and instrumental music groups, and sang and played the flute throughout his life.

At 20, aware of the limited economic prospects for a bookkeeper, he moved to London, where he worked as a clerk in a solicitor’s office; and the next year he

married a woman two years older than he, Sophia Elizabeth Biggs, whose two-year-old illegitimate daughter Annie came with her. The marriage endured until Sophia’s death 51 years later, but was anything but conventional. To quote from the entry on Cooke in the *Oxford Dictionary of National Biography*<sup>3</sup>:

“Cooke had no children with his wife, but from the age of seventeen Annie bore him three sons and a daughter. In 1871 [she] left Cooke to marry his step-second cousin, John Quincey Cubitt, but by 1875 had left Cubitt and returned to Cooke, bringing with her her young daughter by Cubitt. She then had two more sons and a daughter by Cooke, before finally leaving him about 1890.”



Mordecai Cubitt Cooke as a young man, with his always luxuriant beard

Cooke’s seven children were thus his wife’s *grandchildren*! It was not an incestuous relationship, but it was certainly a most unusual *ménage à trois*.

A bout of illness caused Cooke to lose his clerkship, after which he moved briefly to Birmingham before taking up a position as junior master in a private, church-run school for poor children in the Lambeth district of London. He remained there from 1851–60, teaching the boys while his wife taught the girls, and it was during that period that his interest in mycology began. In 1859, he obtained a First Class pass in a governmental botany examination — his only formal academic credential in the sciences — and shortly thereafter began publishing prolifically on a wide variety of topics in natural history, including (besides fungi) algae, ferns, reptiles,

pond life, spiders, and mites. Cooke was a very successful popularizer, whose twentieth-century counterpart might be Herbert S. Zim.

Relieved in 1860 of his teaching position, Cooke helped to catalog exhibits from New Zealand and India for the Great International Exhibition of 1862 and then worked for 18 years for the India Museum. In 1862 he also began a 27-year correspondence with M.J. Berkeley, founded the Society of Amateur Botanists, and published

<sup>1</sup>For further details see Tom Volk’s Fungus of the Month for June 2004 at [http://botit.botany.wisc.edu/toms\\_fungi/jun2004.html](http://botit.botany.wisc.edu/toms_fungi/jun2004.html)

<sup>2</sup>Mary P. English, *Mordecai Cubitt Cooke, Victorian Naturalist, Mycologist, Teacher and Eccentric* (Bristol, UK: Biopress Ltd., 1987). English, a distant relative of Cooke’s, is herself a mycologist.

<sup>3</sup>Also by Mary English.

*Manual of Structural Botany*, followed the next year by *Index Fungorum Britannicum*. Three years after that he published *Rust, Smut, Mildew and Mould*, founded the Quekett Microscopical Club (the second oldest microscopical society in Britain, still very active today), co-founded a popular science magazine, *Science Gossip*, and began publishing a series of *Exsiccati* (collections of dried fungi, mounted on loose pages that were gathered into sets, bound, and sold as books).

Cooke's two-volume *Handbook of British Fungi* appeared in 1871, and the following year he founded the technical mycological journal *Grevillea*, to which he contributed many important taxonomic articles. He became a corresponding member of several American natural history societies, was awarded an honorary M.A. by Yale University in 1873, and in 1880 "was seconded to the Royal Botanic Gardens, Kew, as its first cryptogamic botanist." There he "redoubled his mycological studies," one result of which was the publication, during the decade 1881-91, of the "monumental eight-volume *Illustrations of British Fungi*."<sup>4</sup> His total published output comprised nearly 350 books and papers.

Throughout his life, Cooke was acutely aware of his lower-class origins. Never financially well off, "he was ill at ease", despite his international reputation, "with the gentlemen scientists of his day", many of whom snobbishly regarded him "as a mere technician". In fact, Cooke was a dashing presence: an excellent speaker, writer, and artist, he conducted an extensive correspondence with mycologists around the world, and was responsible for arranging the specimens in the mycological herbaria of both the Edinburgh Botanical Garden and the British Museum. His own herbarium and collection of fungal drawings were eventually sold to Kew, and his microscope to the Royal Horticultural Society.

In a few respects, Cooke was a reactionary: In the face of mounting evidence to the contrary, he never accepted that lichens were dual organisms, and he remained largely ignorant of fungal culture techniques. Nevertheless his impact on mycology was great, and toward the end of his life his contributions were recognized by the award to him of the Victoria Medal of Honor and the Linnean Society Gold Medal.

Besides *Collybia cookei*, Cooke's name was memorialized by the Italian mycologist Saccardo, one of Cooke's major correspondants, in the genus *Cookella*. Its type species, *Cookella microscopica*, grows on the underside of oak leaves — a habitat typical of those that Cooke investigated.



<sup>4</sup>All quotations in this and the next paragraph are taken from the entry on Cooke in the *Oxford Dictionary of National Biography*.

## MORRIS COUNTY BIOBLITZ RESULTS

submitted by Dorothy Smullen

Several members of the NJMA searched for fungi as part of the May 19 bioblitz at Loantaka Brook Reservation in Morris Township. There were 32 fungi and ten lichenized fungi species recorded for the bioblitz. Surprisingly, there were even two morels brought in.

Thanks to Michael Rubin, Melanie Spock, Bill and Diane Smullen for volunteering their time.



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### PRESIDENT'S MESSAGE *(continued from page 2)*

to be aggressive and its bite is rarely fatal, it's a poisonous snake nonetheless, and placing your hand or body too close could result in some *very* unpleasant consequences. Rattlesnakes do tend to be more aggressive, and while many think they'll rattle to warn intruders, this is not always the case. Remember, too, that younger children and the elderly are likely to be the most sensitive to venom. Most importantly, stay aware that we share the woods with *all* nature, and we're in *their* home.

I don't need to remind you of the annoyances of gnats and mosquitoes. And unless you've had your head buried in the sand, I don't need to tell you that mosquitoes can be vectors (carriers) of certain diseases, West Nile Virus being one of them. Ticks are a big problem here in New Jersey as well. Think of every tick as being a disease carrier and don't subscribe to the "big one/little one" tale. Lyme Disease is just one disease that's spread by ticks. When on forays, be sure to wear long pants and tuck your pants into your socks, and apply insect repellent to clothing and skin. Even with repellent and precautions, ticks will still find their ways into the smallest and least-expected places on your body, so after the foray, as soon as possible, check yourself thoroughly for ticks! Go through your hair, behind your ears, into your shoes, and even into "places where the sun don't shine!" And while we aren't crawling with lots of poisonous spiders in NJ, it's still a good idea to look before reaching for 'shrooms near spider webs and crevices.

And, lastly, for this issue (but certainly not the least), a reminder to parents: Watch and stay with your children! There are any number of reasons for this, but I shouldn't have to remind you that injuries and other problems can and do arise when children are allowed to roam free in the woods without parental supervision. And check them for ticks, too! It's great to bring the kids along (NJMA is great for the whole family!), but don't let them stray beyond your sphere of influence.

So, come to our forays, enjoy the woods...Get out there, find a lot of mushrooms, and enjoy identifying your finds. Just *be aware* and *be careful!*

– Jim Barg

## **CATCHING UP WITH PROFESSIONAL MYCOLOGY:**

# **WHERE HAVE ALL THE COPRINUS GONE?**

by Gene Yetter

21<sup>st</sup> century bioscience techniques – DNA sequencing, cladistics, systematics, etc. – are taking their toll on popular mushroom books, outdating them in forcing nomenclatural changes as a result of discoveries about old, assumed taxonomic relationships. One recent name in the fungal lexicon to be torpedoed involves the famous “inky caps,” the group beloved (or abhorred!) by mycophiles for the bizarre habit of several of its members of turning to a messy black liquid as they mature.

The “inkies,” agaric genus *Coprinus* and its type species, *Coprinus comatus* (O. F. Müll.) Pers., appear throughout the mycological literature. The basionym of *C. comatus* is *Agaricus comatus*, named by Otto Friedrich Müller in 1767. Historically, the genus has been positioned in the taxonomic family, Coprinaceae, which also included *Lacrymaria* and *Psathyrella*. *Coprinus* was first described as a genus by Christiaan Hendrik Persoon in 1797. The Coprinaceae was erected as a family by French mycologist Ernest Roze in 1876; it was re-interpreted by Casper Van Overeem and Josef Karl Weese in 1924. Thus “Coprinus” and “Coprinaceae” have been common labels applied to many mushrooms and mushroom groups by authors going back to Persoon.

But, as of a relatively recent article, “*Coprinus* Persoon and the disposition of *Coprinus* species *sensu lato*,” co-authored by several scholars, DNA study has confirmed that the familiar taxonomy of the Coprinaceae no longer applies. The article was published in the journal, *Taxon* 50(1) in 2001. Authors include Scott A. Redhead, Rytas Vigelis, Jean-Marc Moncalvo, Jacqui Johnson and John S. Hoppie, Jr.

Only *Coprinus comatus* and two similar species remain in genus *Coprinus*, which has been repositioned to the family Agaricaceae. In studies cited in the article by Redhead et al., *Coprinus comatus* turned out to be more closely related to *Agaricus* species than to its former siblings in the Coprinaceae. Technically that renders the family name Coprinaceae a synonym of Agaricaceae.

Other former *Coprinus* species have become “*Coprinopsis*,” “*Coprinellus*,” or “*Parasola*.” “*Coprinellus*” and “*Coprinopsis*” are names published originally by Karsten in 1879 and 1881, respectively. As previously published names, they come to the fore once the decision was made that the name *Coprinus* does not apply to most species that the genus was previously thought to contain. Tom Volk’s Web site presents a summary of the basic morphological distinctions between the newly resurrected genera. The URL is: [http://botit.botany.wisc.edu/toms\\_fungi/may2004.html](http://botit.botany.wisc.edu/toms_fungi/may2004.html)



PHOTO BY JIM BARG

*Coprinellis micaceus*, formerly known as *Coprinus micaceus*

These changes did not happen without controversy. In fact, it had been suggested that changes could have been avoided by just changing the type species of *Coprinus* to *C. atramentarius*, while also changing the name of *Coprinus comatus* to another genus in the Agaricaceae, the genus *Annularius*, named by François Anne de Rousell in 1806. Then the Coprinaceae species now displaced to other genera could have remained in *Coprinus*.

At least for the time being, it was agreed among concerned mycologists that to change the name of such a well-known mushroom as *C. comatus*, the venerable “shaggy mane,” – the “lawyer’s wig!” – would have been more destabilizing than changing the name of a few hundred less well known coprinoid species. It may be that the issue comes up again in the year 2011, when the next International Botanical Congress convenes. That’s where such issues are discussed and possibly settled.

For now, most of the members of the former Coprinaceae (*Coprinellis*, *Coprinopsis*, *Parasola*) and including *Psathyrella* and *Lacrymaria lacrymabunda*, are now assigned to a new family, “Psathyrellaceae.” Pardon me for injecting my personal slant into this report, but isn’t that great? *Psathyrella* is one of my favorite genera because its limits are famously unclear. Now it gets its own family moniker. I wonder if Alexander Smith (1904-1986), author of the only monograph on North American *Psathyrellas* to date, would be proud.

*Panaeolina foenicicii* (*Psathyrella foenicicii* in Smith’s monograph) has been moved to the Bolbitiaceae, the family including *Bolbitius*, *Agrocybe*, *Conocybe*, and *Hebeloma*.

Many folks, including some authors of field guides, may ignore the new names for a time but transition is inevitable.

The 30-year record of the Northeast Foray includes 10 former *Coprinus* species, 13 *Psathyrella*, *Lacrymaria lacrymabunda*, and *Panaeolina foenicicii*. The list on the next page shows new Psathyrellaceae nomenclature

to be applied to NEMF records when the database is next updated. (In other words, when it is re-released as a 31-year record after the 2007 foray in Maine in August) Some additional names from the NJMA database follow the NEMF list names. *Coprinus comatus* will be moved to the Agaricaceae.

## DEAD MAN'S FOOT

by Else Vellinga

(reprinted without photos from Mycena News, The Mycological Society of San Francisco, May, 2006, vol. 57:05)

When in August crumbly dog turds appear along the side walk, I know that autumn is coming, and my heart leaps up! These turds are MUSHROOMS. In a time of year when there is not much moisture around, in the midst of our rainless California summer, these mushrooms are able to grow and form these firm juicy fruit bodies. They are so firm, and are so turgid, that they can even push up the pavement and pop up in other unexpected places to shed their spores (fig. 1). I remember a foray in Denmark into a dry sandy pine plantation where these weird fungi were sticking their heads up. Their ugliness was admired by all of us, but nobody wanted to be photographed with them...In New Zealand I have seen a related species just outside the fence that kept me from the dangers of a thermal vent. Officially, the dog turd fungus is called *Pisolithus arrhizus*, one of many names for it. The name is derived from the Greek and means the "rootless pea-stone". Dead man's foot and Dye ball are two common names for it. You'll also find '*tinctorius*' as its species name, referring to its qualities as a dye for wool - this has been known for a long time; Micheli mentioned it already in his book from 1729. Can we assume that even in antiquity it was used as such? Older names for the genus include *Polysaccum* - the mushroom with the many bags. We can compliment all those mycologists in finding very suitable names for this species. *Pisolithus* starts out as a club-shaped dark brown object, that when cut open shows those 'peas' - little compartments in which the spores are formed. Arora described them as "Rice Krispies in tar" - a beautiful comparison. In this stage, the mushroom is firm, and wet, and stains your hands. In the next phase the top matures, the outer wall disintegrates and a dark chocolate brown dry spore mass is visible. Those spores are well suited for air transport - they have pigmented hydrophobic walls, and are spiny, real long-distance dispersers. The fruit-bodies wither slowly and can, when not kicked, remain in place for months, until only a small depression in the ground might show their former place.

There is wide variation in the shape and size of the species - from round and small ones to humongous amorphous lumps. Do these forms represent different stages of one species or many species with each their own host? Only one species is commonly recognized here in the U.S.A. Until very recently all the *Pisolithuses* found all over the world were thought to be just one species, but molecular research has shown that there are at least eleven different types, and several species beside those eleven have been described. More work is needed to show whether these are all good species.

### COPRINACEAE REVISIONS

(names now grouped in Psathyrellaceae)

#### NEMF Nomenclature

<i>Coprinellis:</i>	<i>micaceus</i>
<i>Coprinopsis:</i>	<i>acuminata</i>
	<i>atramentaria</i>
	<i>cinerea</i>
	<i>lagopides</i>
	<i>lagopus</i>
	<i>narcotica</i>
	<i>variegata</i> (= <i>Coprinus quadrifidus</i> )
<i>Lacrymaria:</i>	<i>lacrymabunda</i>
<i>Parasola:</i>	<i>plicatilis</i>
<i>Psathyrella:</i>	<i>atomata</i>
	<i>camptopoda</i>
	<i>candolleana</i>
	<i>conissans</i>
	<i>cotonea</i>
	<i>deliniata</i>
	<i>gracilis</i>
	<i>piluliformis</i> (= <i>Psathyrella hydrophila</i> )
	<i>rugocephala</i>
	<i>septentrionalis</i>
	<i>spadicea</i>
	<i>subamara</i>

#### NJMA Additions

<i>Coprinellis:</i>	<i>disseminatus</i>
<i>Psathyrella:</i>	<i>annulata</i>
	<i>conopilea</i>
	<i>deceptiva</i>
	<i>hymenocephala</i>
	<i>kauffmanii</i>
	<i>multipedata</i>
	<i>solheimii</i>
	<i>sublateritia</i>
	<i>subterrestris</i>
	<i>velutina</i>

(Special thanks to Rod Tulloss for reviewing this article before publication.)



(continued on page 15)



## CORRECTION

The large color photo of *Bondarzewia berkleyi* published in the last issue of *NJMA News* (#37-3) was mistakenly attributed to John Dawson. The caption/photo credit should have read:

*Bondarzewia berkleyi* (photo by Gary Emberger, from the 2005 NEMF foray)

The newsletter staff extends its apologies to both John and Gary for the error.

ANNOUNCING THE FORMATION OF THE  
**NJMA YAHOO GROUP**  
[tech.groups.yahoo.com/group/NJMYCO](http://tech.groups.yahoo.com/group/NJMYCO)

A free forum on the Internet for NJMA members to share mushrooming experiences and to freely exchange any kind of mycological information.

For full details on joining this group, go to page 19 of this newsletter.

**Join now, and start communicating!**

## NJMA EDUCATION CLASSES: Two left this season!

NJMA is offering classes in mushroom identification and other topics in 2007. The classes will be offered on weekends at various times and places – see list below. For all-day sessions, please plan to bring your own lunch. Coffee and tea will be provided. **Pre-registration is required.** Fees are listed with the courses. **All classes are limited to 25 people unless otherwise noted.**

Directions to the Great Swamp NWR Friends Bookstore and Rutgers University are at <http://www.njmyco.org/directions>.

You'll find a registration form on page 12 of this newsletter, or at [www.njmyco.org](http://www.njmyco.org).

### Saturday, July 28

#### 10:00 am to 2:00 pm – LICHENS ARE FUNGI ALSO!

##### Great Swamp Bookstore /Gift Shop

Presented by Dorothy Smullen, club member. Learn about Lichen biology, classification and uses.

Lichens are present to discover and appreciate in all seasons. Bring a hand lens and lunch. \$10.00 fee.

### Saturday, August 4

#### 10:00 am to 3:00 pm – DYEING WORKSHOP

at the Pohl residence, Flemington, NJ (Directions will be emailed after registration)

Gather at the home of Ursula Pohl to take part in dyeing wool with mushrooms. Bring lunch.

Limited to 12 participants. \$10.00 fee.

## REGISTRATION FORM for NJMA EDUCATION CLASSES 2007

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

TOWN/ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

EMAIL \_\_\_\_\_

Please mail your check, along with this completed form, at least 7 days before the **first** class for which you're registering. Remember, classes are limited in size. Send your check, made payable to "NJMA", to: **Jim Barg, 220 Millbrook Road, Hardwick, NJ 07825-9658**

**JULY 28 LICHENS ARE FUNGI ALSO!**                      \$10.00 x \_\_\_\_\_ persons = total \_\_\_\_\_

**AUGUST 4 DYEING WORKSHOP**                      \$10.00 x \_\_\_\_\_ persons = total \_\_\_\_\_

Questions? Call Jim Barg at 908-362-7101

TOTAL AMOUNT ENCLOSED \$ \_\_\_\_\_

NOTE: You may wish to copy the other side of this page before clipping

# SPECIES CONFUSA

by Dick Grimm (reprinted from *MushRumors*, the newsletter of the Oregon Mycological Society, issue #34-6)

How many mushrooms should have the species title of *confusa*? The answer is ... lots of them!

We often encounter mushrooms in the same genus whose differences are as hard to discern as those of identical twins. Most of the time we ignore the fact that they are actually different species. A case in point is a group of boletes, specifically the *Tylopilus* genus. I like to refer to them as the “Felleus clan”.

The leader of the band is that bitter character, *Tylopilus felleus*. Just tasting it will pucker one up like green apples. Its cap color is variable, but typically from luggage- to chocolate-brown. Its pore surface is white at first, then changing to a rather fleshy color and finally a deeper brown. This pore color sequence is typical of the group as a whole and is caused by the ripening of spores. The stem on the bitter bolete is highly reticulated (netted) all over and is the only one of the group with this trait. The others are only vaguely reticulated at the top quarter of the stem, the rest downwards is only obscurely lined.

*Tylopilus ferrugineus* is much the same in stature. The cap is sort of an iron (rust) color thus the name *ferru* (iron). It is more of a reddish brown than the bitter bolete. The cap margin is smooth and even.

By comparison, *Tylopilus badiceps* has a beveled margin, that is, it doesn't end in a right angle into the pore layer but has about a 40-degree beveled edge.

*Tylopilus indecisus* has more of a greenish-brown, or olive-brown cap and usually a more robust stem. *T. indecisus* resembles *Boletus edulis* in stature but, although not at all bitter, does not have the excellent, nutty flavor of the “Cep”. I find, too, that *T. indecisus* frequently grows in tight groups of 2-4 fruitings, but this is not etched in stone, single fruitings being not uncommon.

There are other names that have appeared in this clan over the years, but most of them are synonyms for one or the other of the species mentioned here. All in this section are probably edible, but I would hasten to place a disclaimer on any one of them and also the many, many species outside the “Felleus clan” that also appear much the same in one aspect or another. If you intend to eat boletes, use the tried and (mostly) true rule: Do not eat boletes with red tube mouths or boletes that change color when injured or when their flesh is exposed to air (broken open). This color change is typically greenish-blue or bluish-black. I do not eat any bolete that has a red coloration, anywhere! I may be missing some decent edibles, but, other than an elite few, I haven't found that many boletes that are worth carrying home. Perhaps, I'm too fussy, but there are just

too many *Boletus confusa*'s out there.

Most of the better edibles among the boletes are in the *Boletus edulis* group.

This group is characterized by having a pure white pore surface in the young fruitings which changes to yellow and finally greenish olive. The flesh is white and does not bruise. The stem is typically reticulate but mostly near the top. The reticulation is white. (*Tylopilus felleus*' reticulations are usually brown) In your field guides look up *B. edulis*, *B. gertrudae*, *B. nobilis*, *B. separans*, and *B. variipes*. These are all in the “Edulis clan” with the king (*B. edulis*) an undisputed favorite. Most in this group are summer boletes and one must rush to beat the varmints and the vermin to the table. I have never found a *Boletus variipes* that wasn't riddled with worms; this is unfortunate since it is not an uncommon bolete in the Ohio woodlands.

So I am not an authority on the boletes, but a few pointers for the confuse over the “confuse” species of the group may be well taken. It is a pretty good genus to experiment with, but remember the rule and stick by it!



## “Not to be missed!”

Go to [www.youtube.com](http://www.youtube.com) and search for “*Cordyceps*”. You can watch the most incredible video shot by the BBC for its Discovery Channel series, *Planet Earth*. It shows *Cordyceps* species parasitizing ants and various other insects. (This brief was submitted by Marilyn Shaw.)

Editor's note: The whole eleven part series was amazing, and is rerun occasionally on the Discovery Channel. It also has time-lapse footage of mushrooms growing, and one with a net-like partial veil that flows out and touches the ground in slow motion. I believe you can purchase the whole series on the Discovery Channel website.

– reprinted from *Spores Afield*, the newsletter of the Colorado Mycological Society, June 2007 issue.

“Nature alone is antique and the oldest art a mushroom.”

– Thomas Carlyle (1795-1881), Scottish satirist and historian

# Eastern Penn Mushroomers

## 2007 Helen Miknis Memorial Foray Kings Gap Environmental Center

### September 28, 29, 30<sup>th</sup> - near beautiful Michaux State Forest and Colonel Denning State Park

Arrangements have been made for your enjoyment and comfort at the Kings Gap Environmental Center. Dorothy Smullen will be our mycologist. She will also present a program on lichens. Rooms in the mansion, meals, and mycophagy will be provided. All we need now is your interest and early registration to make this fungal weekend a success! You will receive the final schedule and directions with your confirmation of registration. There are two handicap accessible rooms if needed.

**Foray September 28, 29, 30th** ++++++ **\$150.00**

Price includes accommodations for two (2) nights and Fri dinner and snacks; Sat breakfast, and dinner; and Sunday breakfast.

**Saturday only:** No accommodations, Dinner with group ++++++ **\$40.00**

**Meals only:** ++++++ **\$95.00**

Camping is available at Colonel Denning State Park and there is a hostel at Pine Grove Furnace State Park. There are several inexpensive hotels near Carlisle, off I-81.

**Make check payable to:**

**Eastern Penn Mushroomers  
Bill Miknis  
3119 Parker Dr.  
Lancaster, PA 17601  
717-898-8897**

Deadline for registration is **August 30<sup>th</sup>**

Cut-off

Return to Bill Miknis

### Conference Registration Form

Name 1:	Address:
Name 2:	City/State/Zip:
Phone:	e-mail:
Couple:          Female:          Male:	Please find me a roommate:

Liability waiver: By signing below I release Eastern Penn Mushroomers and King's Gap Environmental Center, and their officers and members from any and all liability and loss arising from any accident, injury, or illness which may result from activities of the September 28, 29, & 30th weekend foray.

Signature #1: \_\_\_\_\_

Signature #2: \_\_\_\_\_

**Register early, overnight accommodations limited to 30 people.  
Send \$40/person deposit to reserve a spot, balance due before August 30<sup>th</sup>.**

# AN ALMOST DEADLY MISTAKE

by Kathy Richmond

(Reprinted with permission from the author. Originally published in Mushroom the Journal, Summer 2006 edition.)

Generally, I consider myself cautious and usually fairly accurate when I identify new mushrooms. My husband Dave is pretty good at identification also. I love to spend hours and hours on end poring over my mushroom books and playing with the spores and cuticle with my microscope to get an accurate identification when I want to ID a new find. Dave does not consider such activity much fun. Consequently, he usually defers to my identification. However, when we find a potentially new edible species we have a “mushroom agreement.” This agreement consists of both of us identifying the species separately, then IF we agree on what it is and IF it is considered to be edible, only ONE of us will eat it. Dave is a physician and I am a nurse. Our theory is that if one of us becomes ill the other one will administer the needed assistance. This is a particularly good agreement since we live in the wilds of Idaho and the nearest hospital is 90 miles away.

My favorite edible mushroom is *Armillaria* (now *Floccularia*) *straminea*. It has a wonderfully mild, nutty flavor. It has a cousin named *Armillaria albolanaripes* that I have been dying (no pun intended) to taste, but have not found it in a long time. Last September, when backpacking out of the local mountains in a snowstorm, and feverishly trying to finish the 20 mile backpack to our car before dark fell, I spied what I thought was *A. albolanaripes*. I picked three specimens and was looking forward to devouring them the next morning. We finally arrived at our vehicle just before dark and celebrated that we weren't caught again on a 10,000 foot pass in a blinding snowstorm, as we had the previous year.

The next morning, I sautéed the mushrooms and served them along with eggs for breakfast. Dave urged me to keep our “mushroom agreement” and be certain of the identify before we consumed them. I refused, but he tried to identify it and came to the conclusion that it was not what I thought it was so he didn't want either of us to eat it. I looked at a picture and description in one of my many mushroom books and agreed that the specimen didn't have a ring like it should, but reasoned that the snow had destroyed the ring. Regardless, I went about to devour my mycophagic delight.

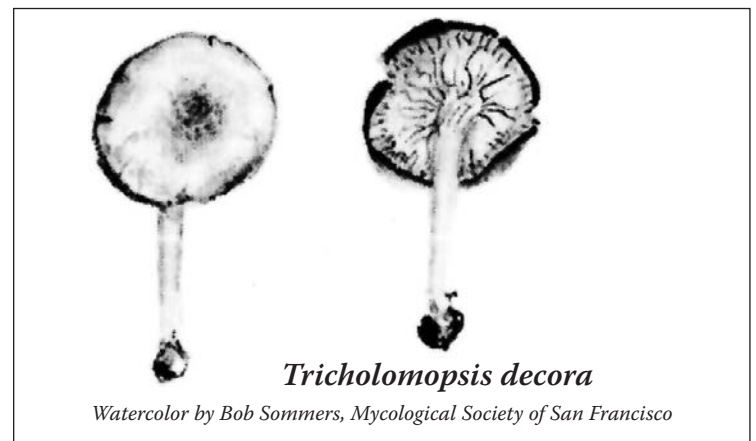
About 30 minutes later, I noticed a ‘hot flash’ coming on. Hot flashes are a regular occurrence for me at this stage in life, so I didn't think much about it at first. However, this was no ordinary hot flash. At first, I became flushed and my skin became beet red. Then I started salivating excessively. In fact, I couldn't swallow my saliva fast enough before it accumulated again. Then I got severe sweats like I've never had before. I was so wet that I had to entirely change my clothes every five

minutes, three different times. When I started to see double I knew that something was definitely wrong. I told Dave that I thought I might be having a reaction to the mushroom. We immediately started poring over the mushroom books again, and realized I was experiencing parasympathetic nervous system toxicity, as described in Gary Lincoff's Audubon mushroom identification book. The antidote was intravenous atropine. I induced vomiting (*yuk*) to get any remaining mushroom fragments out of my system, but it was apparently too late. By this time, my blood pressure had dropped to 60/40 (should be 120/80) and my pulse was only 50 (should be 80). I was going into shock and about to die. Dave, of course, failed to tell me at that time that my blood pressure was dropping out. He laid me down on our kitchen table, started in IV, and administered the atropine to me intravenously, while monitoring my vital signs. Soon, my blood pressure and pulse normalized and the hot flashes stopped, but were replaced by an hour of shaking chills so bad that I couldn't get warm in spite of the four wool blankets covering me in bed. After an hour, I returned to normal.

After I recovered, I realized that I had just eaten a potentially deadly mushroom and I had no idea what it was. Luckily, I had kept part of the mushroom just in case something like this were to happen. I immediately pored over my books and microscope, and after hours of research I still had no idea what I had eaten. Fortunately, Dr. Orson Miller chose to retire in Idaho and we were having our annual fall foray in two days, so I took the specimen to him and he identified it as *Tricholomopsis decora*. The only lame excuse I have for this gross misidentification and error is that after the 20 mile hike out of the mountains the day before, I must have been brain dead. Rest assured that I will always keep our “mushroom agreement” in the future.

So, please make a note in your favorite mushroom identification book that *Tricholomopsis decora* is poisonous!! Most of the books listed the edibility as ‘unknown.’

This experience has taught me a very valuable lesson. I will NEVER, NEVER again eat a mushroom that I am not 100% sure of the identification.



## DEAD MAN'S FOOT *(continued from page 8)*

Some of these molecular types are only found with one host plant species, e.g. *Cistus*, a shrub in the Mediterranean basin or with *Azelia* in Africa. One part of the genus is exclusively Australian, growing with *Eucalyptus* and *Acacia*, but now these species can be found far away from the place of origin, wherever *Eucalyptus* has been planted.

British authors speculated that their local *Pisolithus* had been introduced with the planted *Eucalyptus*, but the Northern Hemisphere species *P. arrhizus*, (the species found in the Bay Area), does not associate with *Eucalyptus*. Most fungi mycorrhizal with *Eucalyptus* do not grow with other tree species at all. On the other hand, *P. arrhizus* can be found in the southern hemisphere, growing with introduced pine species. To the surprise of Australian researchers, *Eucalyptus* planted in China picked up a local species which formed partial ectomycorrhizae with the tree roots, but was detrimental to the growth of the trees. The whole point of planting the *Eucalyptus* there was to get a good crop of wood fast, so the newly planted trees would in future be inoculated with a different *Pisolithus* species to accomplish that. Earthstars and puffballs in the genera *Geastrum*, *Lycoperdon* and *Bovista* are saprotrophs, decomposing dead plant material, but *Pisolithus* is an ectomycorrhizal associate. Here in central coastal California, it grows with coastal live oak, planted birch, cedars, Monterey pine and other pine species. Just last autumn it popped up beside the European beech in our neighbor's yard, a truly surprising host (fig. 2). As already hinted at above, *Pisolithus* is widely used in initial inoculation of tree seedlings especially for forestry purposes. Here also different species are probably used, but the name given to the fungus is in most cases *P. tinctorius*. Paul Stamets' Fungi Perfecti sells a mycorrhizal mix containing *Pisolithus tinctorius* (with four species of *Rhizopogon*). *Pisolithus* is ideal as it is so well adapted to drought. Mine tailings, dry sandy areas, restoration projects – *Pisolithus* will grow and help establish the young tree seedlings. Judging from the abundance of the species with full-grown trees here in California, it is also a good competitor that is not rapidly displaced by other fungal mutualists when the tree grows up.

*Pisolithus arrhizus* is a very common sight here, both in the city, and in more natural habitats under oak. Many people who come to the fungus fair comment that it grows in their yard. It was the first species we saw when we stopped at a campground in the Yuba River area in the Sierra Nevada foothills last fall. In the northern Sierras and Lassen area it is common, especially in disturbed areas (like that campground), in foothill woodland and open oak woods. But it is not easy to get a good picture of its occurrence in the rest of North America. As the species fruits in those times of year

that are too dry for others, they can easily be missed by 'normal' mushroom forays. So there is only one record in the NAMA voucher data base, from the 2000 foray in Newton, Texas. The species is common in the northeast of the U.S.A., especially in the dry sandy and pine-forested areas along the coast, such as the New Jersey Pine Barrens and Cape Cod (Gene Yetter, personal communication). It is also found in Florida (again Gene Yetter), and Alabama and South Carolina. It is said to be common in the Pacific Northwest, but for the rest ??? This species (group/complex) would be a great candidate for a national recording project! We should also look under *Eucalypts* for other species than *P. arrhizus*. *Pisolithus albus*, for instance, has been found in Spain and Morocco, and *P. microcarpus* in Portugal. From its appearance, it is not easy to guess the closest relative of our dog turd fungus, but the presence of pulvinic acids and their derivatives point in the direction of the boletes. These are the pigments that stain the wool. Molecular comparisons have confirmed that bolete connection (Binder & Bresinsky 2002). In their study *Astraeus hygrometricus*, another drought adapted 'bolete', is a sister group to *Pisolithus*. A bit further removed in the family tree are *Scleroderma* and real boletes like *Gyroporus* and *Boletinus merulioides*. Enjoy the presence of this species – autumn is on its way, and your tree has a useful partner on its roots!



### Further reading:

Binder, M. & A. Bresinsky, 2002. Derivation of a polymorphic lineage of Gasteromycetes from boletoid ancestors. *Mycologia* 94: 85-96.

Martin, F., J. D'ez, B. Dell & C. Delaruelle, 2002. Phylogeography of the ectomycorrhizal *Pisolithus* species as inferred from nuclear ribosomal DNA ITS sequences. *New Phytologist* 153: 345-357.

### PRELIMINARY ANNOUNCEMENT

NJMA and Eastern Penn Mushroomers  
will host a special meeting with  
noted mushroom photographer

**TAYLOR  
LOCKWOOD**  
www.taylorlockwood.com

presenting a narrated digital slide show on his new book  
"CHASING THE RAIN:  
My Treasure Hunt for the World's Most Beautiful Mushrooms"

The meeting will be held in early to mid September.  
Exact date, location, and time to be announced.

Watch [www.njmyco.org](http://www.njmyco.org) for full announcement.

# THE PRODUCTION OF INK FROM THE SPORES OF FUNGI

by Rolf Singer

(from *Priroda* [Nature], No. 1, January 1938, pp. 121-123, translated from Russian by Elena Sivan-Loukianova, transcribed by Dean Abel, via *Symbiosis*, the newsletter of the Prairie State Mushroom Club)

Many mushrooms produce spores with dark pigments that may be used for producing ink for calligraphy and printing. Species so employed are found in the genera *Lycoperdon*, *Bovista*, *Pisolithus*, *Polysaccum*, and *Scleroderma* among the Gasteromycetes and also species of the *Ustilaginea* [rusts], *Elaphomycetales* [truffles], and even *Myxomycetes* [slime molds]. But until now, no experiments have been carried out to study the serviceability and usefulness of such inks.

More than 100 years ago, the French mycologist Bulliard (Jean Baptiste Francois Bulliard, 1752-1793) recommended the dung-loving species of *Coprinus* [Inky Caps] for producing ink. Herein is reported the satisfactory results obtained using inks prepared from *Coprinus atramentarius* [the Alcohol Inky Cap] and *Coprinus comatus* [the Shaggy Mane or Lawyer's Wig] which are common fungi found in gardens and other rich places.

In the Soviet Union, many mushrooms with a cap possess interesting possibilities. *Coprinus* species have gills which are very close together and the edges of which are not perpendicular to the stem even upon maturity, and because of that the spores do not fall downward to be spread by the wind. Instead the gills deliquesce or dissolve and become smeared upon passing animals which spread the spores.

*C. atramentarius* and *C. comatus* are the largest inky cap species common in Europe and Asia. As an edible mushroom, *C. comatus* is good. but it does not make as black an ink as *C. atramentarius*. Thus this report will limit discussion to the latter.

*C. atramentarius* has a cap that is gray brown. furry. and with central flakes or scales upon the surface. The cap is striate and shaped like an egg or a bell 5-10 cm in diameter. The gills are at first white, then brown, and finally black and melted together. The entire cap becomes an inky liquid. The spores are ellipsoid 7.5-11 x 4.5-6.5 microns; the stem is white and hollow; the inferior ring or annulus about the stem soon disappears. The trama or flesh of the mushroom is white to gray brown and without odor. It fruits in dense clusters from May to November. [This description is an abridgement of the technical diagnosis in the original].

With regard to making ink, it is important to collect the mushroom before it is fully deliquescent and thus too old. On the other hand, if the harvested material is not developed enough, then the quality of the ink will be bad. One must filter the fungal liquid through thick mesh

cheesecloth and then decant and discard the top clear layer of liquid above the dark residue of the spores. This separates the unpigmented material from the spores.

The inky deposit is quite gritty and therefore one should add gum arabic to promote adhesion. [Historically, gum arabic, a water-soluble gum obtained from several species of the acacia tree, was used to increase the viscosity of ink, or to make it flow well, to prevent it from feathering, and to suspend the coloring matter]. The native ink has two features: (1) it has an unpleasant smell, and (2) it tends to separate and form a hard precipitate. Therefore, in addition to gum arabic, a perfume such as clove oil is incorporated, which also helps preserve the ink. Before using a pen with a nib, shake the ink in the bottle.



## RECIPE FILE

### *Mexican Sweet Roasted Garlic, Mushroom, and Tortilla Soup*

by Laurence M. Stickney, from *Mycena News*, newsletter of the Mycological Society of San Francisco, December 2006

- 1/2 cup olive oil**
- 1 head garlic, chopped**
- 1/4 lb. mushrooms, any kind, chopped**
- 5 cups stock, vegetable or chicken**
- 2 tortillas, cut in 1/8" strips**
- 1 tomato, cored, seeded, and diced small**
- 2 eggs, lightly beaten**
- 4 canned chipotles, thinly sliced**

1. Heat the oil in a heavy pan over medium low. Add the garlic and cook until very soft – 15 minutes. Add the mushrooms and cook for 5 minutes. Strain off the oil and set aside.
2. Transfer the garlic and mushrooms to a medium sauce pan, add the stock, partially cover and simmer for about 30 minutes.
3. Meanwhile, fry the tortilla strips in the same oil and set on paper towels to dry. Set aside.
4. And more meanwhile – brush the scallions with some of the oil and pan grill until lightly browned. Chop and set aside.
5. When the soup is ready, taste and season with salt and pepper. Remove from the heat for about 30 seconds and then drizzle in the eggs and stir for a second.
6. Ladle into bowls, add the tortilla strips, scallions, tomato dice, chipotles, chopped cilantro, and *queso fresco* (if desired).



# THE SIXTH ANNUAL GARY LINCOFF

MID-ATLANTIC MUSHROOM FORAY  
SATURDAY, SEPT. 15, 2007

7:30-8:15 Registration, 8:30-7:30 Program



Let the Hunt  
begin!

## SPECIAL EARLY REGISTRATION FORM FOR CLUB MEMBERS ONLY

**Featured speaker will be Gary Lincoff**, author of the *Audubon Society Field Guide to North American Mushrooms*. Gary is the nation's best know mushroom expert. He is past president of the North American Mycological Association (NAMA).



Join us for an exciting day of fungi, fun, and friends and mushroom exploration. We will hunt and field-identify mushrooms. Gary Lincoff will give a slide show, talk and autograph his book. We will taste mushroom cooking.



**Special guest mycologist, Renee Lebeuf**, is one of Canada's premier mycologists and a mushroom photographer. She identifies and does one day forays for the Cercle des mycologues de Montréal (CMM), the largest mushroom club in the Americas.

**Special guest mycologist, Bill Russell**, recently published, "Mushrooms of Pennsylvania and the Mid Atlantic." Bill has been studying and teaching about mushrooms for over fifty years. Get him to autograph your book.



**Special guest mycologist, Dave Miller**, just retired from teaching biology and mycology at Oberlin College in Ohio. He will be giving a program geared to the beginning mushroomer.

**A host of other mycologists** will be on hand to help you learn mushrooms, including: Fred Schrock, John Plischke III, Robert Boice, Kim Plischke, and La Monte Yarroll.

## FUNGI FUN FRIENDS

Cost is only \$50 at the door or only **\$23\* each pre-registered and paid by July 15**, (\*does not include club membership). Children 11 & under free. Registration is limited. Send your registration in today!

Contact **Glenn Carr** 412-369-0495 [gbrown2carrs@cs.com](mailto:gbrown2carrs@cs.com)

**Signing and dating the release is an absolute requirement for attendance. No refunds**  
**Make check payable to: Western PA Mushroom Club**, 1848 Fairhill Road, Allison Park, PA 15101

Name 1 \_\_\_\_\_

Name 2 \_\_\_\_\_

Name 3 \_\_\_\_\_

Address \_\_\_\_\_ City/State/Zip \_\_\_\_\_

Phone \_\_\_\_\_ E-mail \_\_\_\_\_

### RELEASE

Knowing the risks, I (we) agree to assume the risks, and agree to release, hold harmless, and to indemnify the Western Pennsylvania Mushroom Club, and any officer or member thereof, from any and all legal responsibility for injuries or accidents incurred by myself or my family during or as a result of any mushroom identification, field trip, excursion, meeting or dining, sponsored by the club.

Signature \_\_\_\_\_ Date \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

# AMANITA STUDIES WEBSITE NEWS

by Rod Tulloss

(The following is a combination of two emails which were sent by Rod Tulloss to various people in the field of mycology, including the editor of NJMA News. Being that the information is pertinent to anyone concerned with the genus *Amanita*, and that Rod is always asking for comments on how to make his website better and more useful, we are sharing these emails in the form of an article.)

I am very pleased to announce that some new areas are being added to the Amanita Studies website, <http://eticomm.net/~ret/amanita/mainaman.html>

Motivated by recent questions from Ron Pastorino, a checklist/picturebook for amanitas of eastern Texas and the Gulf Coast regions of Louisiana and Mississippi is being prepared for the site. A first draft should be on-line in a few days. David Lewis (Texas) has agreed to co-author the new checklist/picturebook page with me.

Because the site receives hits from emergency rooms and others involved in poison control, a new section on toxins, toxin research, and poisoning information (starting with the US common phone number for poison control) is being established under the editorship of Dr. Heather E. Hallen, Michigan State University. A rough first draft is accessible now.

Because the site should be as connected to related biology on the web as much as mycorrhizal fungi are to the network of life in a forest, the site is in the process of initiating a new section that will address mycorrhizae, mycorrhizal research, and related topics such as reforestation and afforestation. Dr. Anne Pringle, Harvard University, has agreed to be the editor of this new section.


I am very happy that the above-named colleagues have agreed to take on their respective tasks. Their efforts will strengthen and expand the site in its efforts to reach students, mycophiles, mycological hobbyists, parataxonomists, and a wide range of professional researchers.

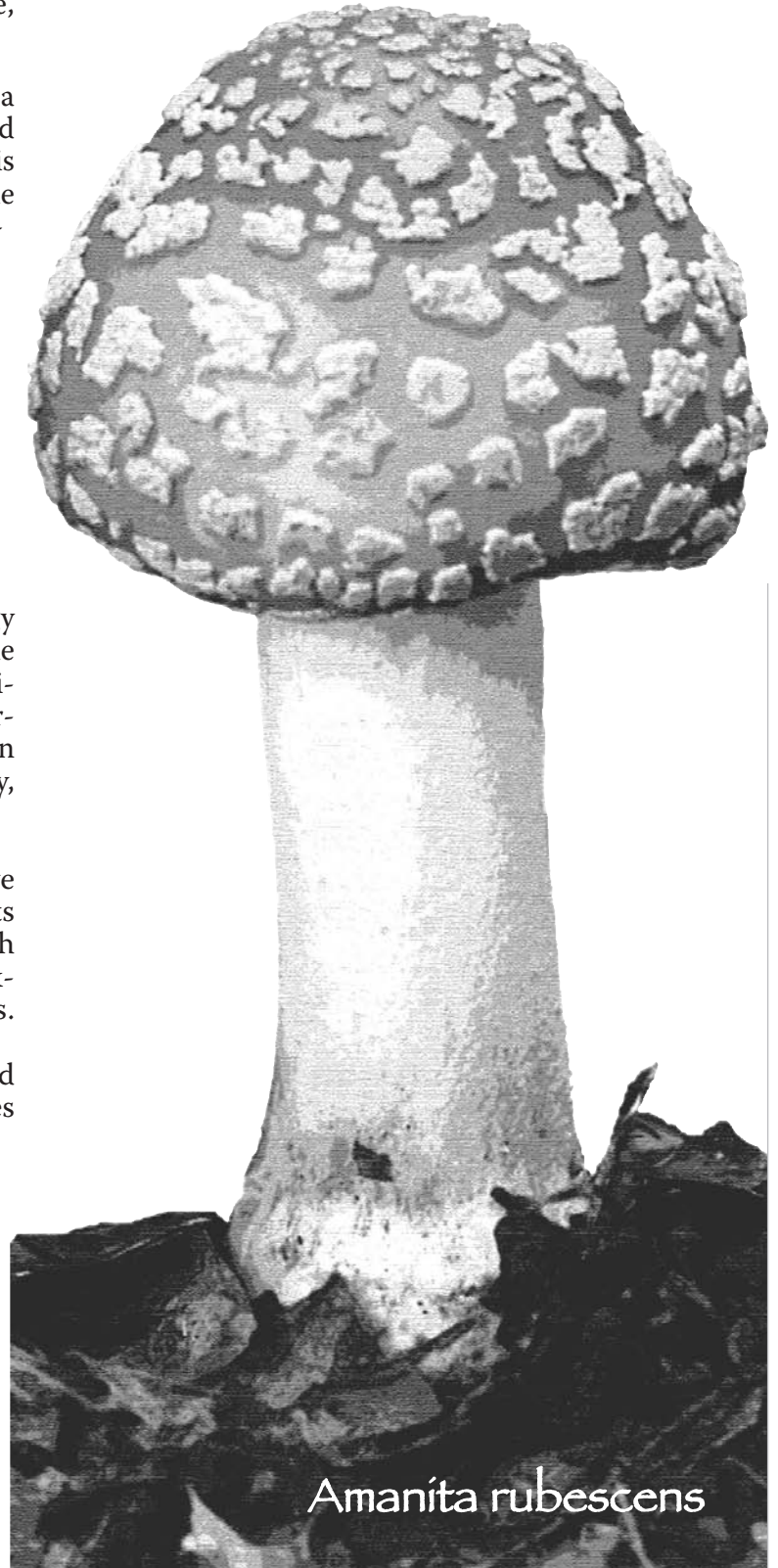
On behalf of the newly expanded set of editors and authors, I thank everyone who asks questions, makes suggestions, points out needed improvements, etc.

-----  
Last year, when Dorothy, Glenn, and I put on the toxicology seminar, we used a summary of Dr. Denis Benjamin's book *Mushrooms. Poisons and Panaceas*. With Dr. Benjamin's permission, this summary is now online on a new subunit of the Amanita Studies website. This unit will be edited by Dr. Heather Hallen (Michigan State University). The target is to cover all the *Amanita* toxins in particular, the current research into these toxins, and the labs doing that research. Because it is a poisoning nexus for the Amanita Study site, it will

also serve as a quick delivery service for poisoning control contact and back-up information. You can view the lame start-up (not the responsibility of Heather, but mine alone) at:

<http://eticomm.net/~ret/amanita/toxins/toxinsam.html>

I will be glad to pass suggestions on to Heather (who is a member...soon to be more active...of the NAMA toxicology group). Her postal address is on the web page. 



*Amanita rubescens*



# JOIN THE NJMA YAHOO! GROUP

**OUR "LITTLE FORUM ON THE INTERNET"  
WHERE MEMBERS CAN SHARE EXPERIENCES,  
THOUGHTS, IDEAS, AND PHOTOS**

*by Frank Santora (with contributions by Jim Barg)*

The newly-formed NJMA Yahoo! Group is a great way to exchange any kind of mycological information and photos with other members of NJMA. Yahoo! Groups are basically Internet forums where members with a shared interest (in this case, mushrooms!) can ask questions, post information, photos, and Internet links, and access messages which have been posted to the group. One of the fun features of Yahoo Groups is the "polling" feature, where we'll occasionally ask the opinions of our members on club and mycological topics. We eventually will post our club calendar to the group as well. We welcome all members to join and start sharing whatever you want to share with the rest of the club.

To join this group, it takes about five to ten minutes to sign up. There is very little to worry about – you won't be receiving any unwanted emails or junk mail. The group itself is limited to just NJMA members, and no personal information is available unless you wish to make it so. Although the instructions below are rather detailed, the entire process is very self-explanatory and intuitive, so if you've got some "Internet savvy," you might wish to just go to the Yahoo Groups website shown in Step 1 and sign up on your own, then proceed straight to Step 2.

## STEP 1

To begin with, you will need to go to:

<http://groups.yahoo.com>

At the top left of the screen, you will see the red Yahoo! logo. To the right of the logo you will see a line that reads "New User? Sign Up". Click on the words "Sign Up". This will take you to a new page that asks some very brief questions about you and asks you to create a Yahoo! ID name for yourself. You may have to be creative with the name you choose because Yahoo! is a very popular service and has millions of users, and each user must have a unique name! (I suggest that you choose a name followed by .NJMA, for example: "frank.NJMA". You will probably find you can choose any name you wish if you do this.) You will also need to make up a password that's easy to remember. Finally, at the bottom of the page you will see an image of four letters and numbers that you need to retype as shown. You'll notice that the letters and numbers aren't perfectly clear – they are purposely stretched out, skewed, and have extra lines in some cases. The purpose of this is to ensure that you're actually a human signing up rather than another computer attempting to access the page. If you have trouble reading this image you can click on "Try a different image". Finally, imme-

diately underneath this, you will need to click on the box that reads "Do you agree?" to put a check mark in the box, then click on "Create My Account" to complete registration. If there is any information missing or incorrect from the form above, it won't let you proceed until you fix it.

If all of this sounds confusing, try just going to <http://groups.yahoo.com> and try it on your own. It's all very easy and intuitive.

That's just about it! You've joined the Yahoo! Groups community, now you'll need to find our group and join it, which is what Step 2 is about. That's easy. Go back to <http://groups.yahoo.com> and you will see a search box at the top and about in the middle. Type NJMA in that box. Click on the group named NJMYCO. This will take you to our group! In your web browser, you can bookmark the site once you're on it, and when you return, you'll be asked for your user name and password to gain access to the group.

## STEP 2

Once you're on our group's page, you will need to join it, so click on "Join This Group!". When you join, you'll be receiving notifications in your email that there has been activity in the group. After clicking "Join This Group", you'll be asked how you want to monitor activity in the group. If you check "Individual Email" you will get a message each and every time someone posts a message or a response to a message. You should check either "Daily Digest" if you want to see all the activity every day or check "Special Notices" (which is in smaller print to the right) which means you will get email ONLY when there is a critical piece of information sent out. You will have to check for new activity on your own. I prefer either "Daily Digest" or "Special Notices" depending on how active the group is. At the bottom is another one of those crazy letter boxes where you need to copy the letters and numbers you see, then click JOIN near the bottom right of the page. For group security reasons, you'll have to wait a day or two for your membership to be approved by the group moderator. You'll receive an email from the group once your membership is approved.

Like I said, the process of joining looks more complicated in writing than it really is. Once you see this all presented to you on your computer screen, much of it becomes self-explanatory.

Welcome to the NJMYCO Yahoo! Group. Take advantage of it...you'll find it's fun, informative, and is a habit worth acquiring! (*And thank you, Frank, for making this happen! – JB*)

*PLEASE NOTE: This is what is known as a "moderated" group. Posts which are inappropriate to the group theme, are of questionable taste, or are deemed to be inaccurate or inflammatory will be deleted. Offenders may be suspended at the discretion of the moderator.*



## **NJMA NEWS**

c/o Susan Hopkins

P.O. Box 291

Oldwick, New Jersey 08858

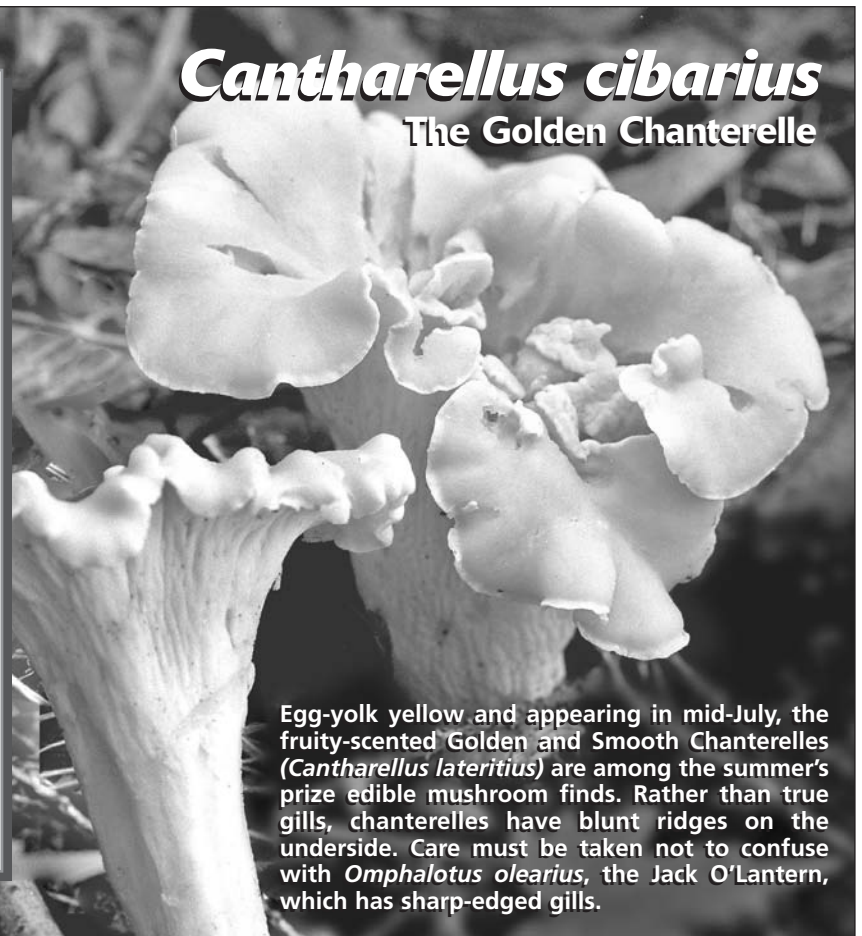
### **FIRST CLASS MAIL**

#### *In this issue:*

- **COPRINUS CHANGES**
- **NEMF FORAY UPDATE**
- **EPM HELEN MIKNIS FORAY**
- **WHO'S IN A NAME, PART 3**
- **A BEGINNER'S VIEW, PART 2**
- **SPECIES CONFUSA**
- **DEAD MAN'S FOOT**
- **AMANITA STUDIES WEBSITE**
- **ALMOST DEADLY MISTAKE**
- **NEW NJMA YAHOO! GROUP**

*...plus much more!*

## ***Cantharellus cibarius*** **The Golden Chanterelle**



Egg-yolk yellow and appearing in mid-July, the fruity-scented Golden and Smooth Chanterelles (*Cantharellus lateritius*) are among the summer's prize edible mushroom finds. Rather than true gills, chanterelles have blunt ridges on the underside. Care must be taken not to confuse with *Omphalotus olearius*, the Jack O'Lantern, which has sharp-edged gills.

PHOTO BY JIM BARG