NJMA NEWS

THE OFFICIAL NEWSLETTER OF THE NEW JERSEY MYCOLOGICAL ASSOCIATION

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NJMA OFFICERS

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NJMA EVENTS HOTLINE

908-227-0872 for information on NJMA events or cancellations due to bad weather. *It is NOT for general inquiries or to contact officers!*

CALENDAR OF UPCOMING EVENTS

Saturday, July 28 **10:00 am**	**FORAY:** **HOFFMAN PARK** *Leader: Igor Safonov*
August 2 - 5	**NEMF ANNUAL SAMUEL RISTICH FORAY** **East Stroudsburg, PA**
Saturday, August 11 **10:00 am**	**FORAY:** **MANASQUAN RESERVOIR ENVIRONMENTAL CENTER** *Leader: Patricia McNaught*
Saturday, August 11 **12:15 pm**	**MINI-WORKSHOP (at the Environmental Center)** **BOLETES** *Instructor: Igor Safonov* Registration required. See March-April *NJMA News* for info.
Sunday, August 19 **10:00 am**	**FORAY:** **STEPHENS STATE PARK** *Leader: Jim Richards*
Sunday, September 2 **10:00 am**	**FORAY:** **SCHIFF NATURE PRESERVE** *Leaders: Dorothy Smullen and Marc Grobman*
Sunday, September 2 **12:15 pm**	**MINI-WORKSHOP (at Schiff Nature Preserve)** **DARK-SPORED MUSHROOMS** *Instructor: Dorothy Smullen* Registration required. See March-April *NJMA News* for info.
Saturday, September 8 **10:00 am**	**FORAY:** **WAYWAYANDA STATE PARK** *Leader: A.J. Bozenmayer*
Sunday, September 16 **10:00 am**	**FORAY:** **WASHINGTON CROSSING STATE PARK** *Leader: Virginia Tomat*
Friday-Sunday, **September 21-23**	**NJMA VICTOR GAMBINO FORAY 2012** **Pocono Environmental Education Center (PEEC)** Bushkill, Pennsylvania *Coordinator: Lynn Hugerich* Registration required. See article on page 2 & 3, and registration form on page 21.
Saturday, September 22 **10:00 am**	**ANNUAL GRETE TURCHICK FORAY & PICNIC** **STOKES STATE FOREST, Kittle Field Picnic Area** *Leader: Jim Barg*
Sunday, September 30 **10:00 am - 4:00 pm**	**NJMA FUNGUS FEST 2012** **Frelinghuysen Arboretum, Morristown, NJ** *Coordinator: Terri Layton*

Directions to the Frelinghuysen Arboretum, Morristown

Traveling from the South: I-287 Northbound to Exit 36A (Morris Ave.). Proceed East approx. 1/2 mile in the center lane, past Washington Headquarters (on left). Take left fork onto Whippany Road. Turn left at 2nd traffic light onto East Hanover Avenue. Proceed for about 1/4 mile. Entrance is on left, opposite the Morris County Library.

Traveling from the North: I-287 Southbound to Exit 36, following signs for Ridgedale Avenue (bear right in exit ramp). Proceed to traffic light, then turn right onto Ridgedale Avenue. At 2nd traffic light, turn right onto East Hanover Avenue. Proceed for about 1/4 mile. The Arboretum entrance is on the right just past the traffic light at the Morris County Library.

Traveling on New Route 24: New 24 West to Exit 1A, (also labeled as Rt. 511 South, Morristown) onto Whippany Road. Stay in right lane. Turn right at 1st traffic light onto East Hanover Avenue. Proceed for about 1/4 mile. Entrance is on left, opposite the Morris County Library.

PRESIDENT'S MESSAGE

It has been sixty days since the last President's message; I can account for about a dozen of them. I have no idea what happened to the rest, just gone. There are a few things of interest that I will share with you from the twelve days that I do remember.

First, Dr. Glenn Boyd has agreed to fill the empty position on the Board of Trustees. Originally, the seat was held by Ray Fatto, who is no longer with us. The remaining members of the Board unanimously agreed that Glenn would be the first choice to fill Ray's seat. As a group, the trustees don't get involved often but when they do it's something really important and we are glad that Glenn is adding his wisdom and experience to the process. Thanks, Glenn.

Next, shortly after I became President, about mid January, I was welcomed into office by a call from the IRS. No, they were not interested in the edibility of a recently-found mushroom. They were interested in auditing us to test our eligibility to retain our tax-exempt status. Talk about a way to motivate a new officer to learn a lot about the workings of the club in a hurry! I got us off to a less-than-perfect start by sending them to the wrong address. It appears that Frelinghuysen Arboretum changed their address from 53 to 353 East Hanover Avenue eleven months ago. Luckily, the agent assigned to our case has a sense of humor and didn't hold the confusion against us.

The audit actually went very well. Thanks to our Treasurer, Bob Peabody, we could initially provide almost all of the required records. What we didn't have, we never had but could get from the bank. There were a few questions and one discrepancy which was easily resolved. What we came away with was our continued status as a tax-exempt entity and several really useful suggestions about our recordkeeping that will cause our operation to run much smoother in the future.

Next, thanks to all of the members who are on the NEMF committees. I know firsthand how hard you all are working and how much is getting done.

Finally, I attended our Wild Foods Foray in June and was pleased to see all of the new faces. At the risk of sounding like a broken record, I am still seeing the new folks standing around with a bewildered look wondering what is going on and what they should do. In less than five minutes, you, as a member of NJMA, can make a world of difference in a newcomer's first impression of our club – and usually the first impression lasts a long time. Thanks.

–Phil Layton

WELCOME TO THE ONLINE EDITION OF NJMA NEWS

For the great majority of you who are viewing the online PDF of this newsletter, please note that **most web links and email addresses are now clickable.** Clicking on a web or email address will launch your web browser and take you to the specified page or open your email software so you can send us an instant email. Just look for the "click finger" when you hover your mouse over these items.

No more clumsy "writing it down" or copying and pasting!

THEN AND NOW:
NJMA TO REVISIT PEEC ON SEPTEMBER 21-23 FOR VICTOR GAMBINO 2012 FORAY

by Lynn A. Hugerich

The cabins were dreary, shoddy to say the least, I had heard. And the food…the food was awful! Trucked in from who-knows-where. Institutional food, bland food, food that you eat only when you're desperate. That is what I had heard. I wasn't there, but those were the rumors. That was then, years ago when NJMA held forays at the Pocono Environmental Education Center.

Why, oh why did I sign on for this task?

How very pleasantly surprised I was when I visited the Pocono Environmental Education Center (PEEC) on May 29th to plan NJMA's Victor Gambino 2012 Foray which will be held on the weekend of September 21-23.

Location, location! The drive was 1½ hours from my home in Secaucus, not the 3½ hour trek to Carlisle, PA that I took last year for my first Victor Gambino foray. And it was a pleasant drive, even though I left during rush hour, since I traveled away from the rush in the hour. The Pocono Environmental Education Center is located within the 77,000 acre Delaware Water Gap National Recreation Area, along the Delaware River, just minutes from the New Jersey border and an hour twenty from Morristown.

There is a zen-like peace (as well as mushroom spores) that permeates the air throughout the grounds. PEEC offers six ecologically-diverse trails that vary in distance and difficulty. All trails are loops that begin and end on the campus (This *is* an environmental education center, and, as such, is open to school groups). I'm told there's some mighty fine mushrooming in and around the area.

The accommodations that have been set aside for us are

considered "family duplex cabins" and were built in 2007. Each cabin can (but probably won't) hold 12 people with two rooms separated by a locked (or unlocked if we choose) door. Each room holds three bunks with six to a room, ONLY IF IT IS NECESSARY. I am hoping to be able to limit us to the bottom bunks. Of course, this depends on the response that we have to the weekend, although, I know there are some adventurous and dexterous members of NJMA. Each room has its own bathroom and shower, ceiling fan, and heat if needed. There is WiFi in the main areas, which, depending on the stars, might be accessible at the cabins.

The dining has also changed from days of yore. All meals are prepared on-site by a professional food service staff and served buffet style. The 3600 sq. ft Dining Hall received a 2006 Honor Award, and in 2007 was named one of the Top Ten 'Green' Buildings from the American Institute of Architects. The "siding" is actually made of rubber tires that were pulled out of the Delaware River.

So, about the weekend. The cost for two nights, three days with meals, from dinner on Friday, September 21 through lunch on Sunday, September 23 is only $140. For day visitors, Saturday, September 22, the cost is $50.00, which includes lunch and dinner without accommodations. There will be no professional speakers; it is a no-stress weekend of foraying and socializing. The registration form can be found on page 21. The deadline is August 22, and as quickly as summer begins, it ends, so sign up soon, and I'll see you in September!

Family duplex cabins at PEEC

EDITOR'S NOTES

I have a lot of new people and sources to thank this issue, but first, an apology: Because of personal issues, this newsletter is getting to you later than it should have. My fault! Too many personal issues had arisen that I needed to attend to! But, the good thing is that any information that you needed about upcoming events was already available in previous issues as well as on our website, ***www.njmyco.com***.

I would like to thank all of the NJMA members that have been making contributions to *NJMA News*; you are what makes our newsletter so special. I receive many newsletters from other clubs and I see a wide variety of formats. Some are nothing but a listing of upcoming events and foray finds. Others are mainly articles that have been gleaned from the internet – especially technical articles from the European press. What we have tried to do with *NJMA News* is to make it a mix of all of these and more. Our aim is to make as much use as we can of material that is generated within NJMA, and thanks to the many of you who contribute on a regular basis, we are reaching this goal. We also like to use much of the fascinating information from other newsletters (and that we do, as well) as space permits. We try for a balance of articles that will appeal to both pot-hunters and taxonomists. We think we generally offer a well-balanced mix. We try, when articles are submitted, to do as little editing as possible. We feel that it is essential for the "voice" of the author to come through, rather than to try and make everything "prim and proper". If you are not happy with our approach, so be it! Let us know; your input is extremely important to us.

NJMA News 42-4 is filled with articles from our members, including some familiar contributors (John Dawson, Terri Layton, Nina Burghardt, Steve Sterling, Paul Funk, A.J. Bozenmayer) and a lot of new ones (Lynn Hugerich, Betty Wise, Luke Smithson, Ruth Jourjine, and Judy Glattstein). We were able to get permission to reproduce a couple of articles that we saw on line: Lawrence Millman's *Polemic on Mushroom Collecting for the Table* and Christina DiMartino's article on commercial mushrooms from *The Produce News*. And, as usual, there are scans from other club newsletters as well.

Because we are beginning to get a lot of photos from you (mostly mushrooms) it is important that you provide captions and as much information as possible. We have been very lucky to have the help of a number of our better taxonomists (especially Dorothy Smullen, Gene Varney, and Igor Safonov) with putting names to some of the mysteries. Thanks for your invaluable help!

There are lots of pieces that Jim Barg and I have to put together to make one of these issues get to you. My email folder for just this issue has over 80 pieces of correspondence (some contain as many as 50 photos), and that does not count the scans, etc. that arrive by other means. As we keep repeating, *this is your newsletter*. Your contributions are essential!

Keep them coming! Oh yes, please make sure that they are sent to us at : ***njmaeditor@gmail.com***, not our personal mailboxes.

And, if I missed you when I listed contributors, it was unintentional.

– Jim Richards

NJMA'S PRINCETON FORAY FROM TWO VIEWPOINTS

FROM THE FORAY LEADER – TERRI LAYTON

This certainly was a strange spring. We had a very mild winter followed by a hot dry spring. Some members were going out of their minds as temperatures were running dangerously high with no rain in sight for weeks on end as morel season was coming to an end. Then rain finally did arrive in mid-April, but not enough, and hopes of a good harvest withered away as Mayapple blossoms began to fade.

Our first foray – many who showed up were still optimistic (despite a gloomy forecast) and were still excited about morel hunting. We call this wishful thinking.

As the foray started, we divided into smaller groups and went into the woods with some hope. One group that followed me ended up getting an earful on trees, flowers and, of course, garlic mustard (does it interrupt the mycorrhizal process?), etc. We found many interesting non-morel fungi: Luminescent *Panellus stipticus*, horse mushroom, chicken, inky caps, witch's butter, tree ears and many polypores including *Phellinus robineae* (15 feet above the ground) and Dryad's Saddle. By the end of the walk, some of us ran excitedly toward piles of rotting tree trunks looking for slime molds.

Part of the group who attended the Princeton foray

To our amazement, one group (Eric and his family with two small children) found five morels. I definitely think that members who show up with little ones (closer to the ground) get better yields. Some foragers found two or three; just enough finds to convince us that they were really out there. One lady came running out of the woods holding a huge object (about three and a half inches long and almost one inch in diameter). Upon inspection, I realized that it was a mammoth morel stem without a cap. When I asked her what happened to the cap, she said that was all she found. I had to report that something or someone had eaten/taken the cap which could have been at least three to four inches long if it was intact. She was excited that she almost found a huge one, but sad at the loss of what could have been a nice accompaniment to her dinner menu.

It always amazes me that many folks who come on forays are interested in not just fungi. Many love trees, flowers and birds – and they know so much about them. Our group got lucky and stumbled onto a Pileated Woodpecker who was not too shy (probably a juvenile) who let us gawk at him for some time before flying off. Some of us did some weeding (garlic mustard, of course!) on the way back to our cars.

I count myself fortunate that I am able to walk in the woods and to be in the midst of folks who respect and care about nature.

FROM A NEW MEMBER – LUKE SMITHSON

I joined the New Jersey Mycological Association this winter with the hopes of both expanding my mushrooming knowledge and getting to know others who are as excited and passionate about mushroom hunting as I am.

I went out with NJMA on the season's first foray at Princeton to see if I had found a group of people who shared my idea of a good time: crawling through brush and mud looking for edible treasures! But I was hoping for a bit more than just a mushroom hunt; I was hoping to really learn something new, whether it be the identification of a new mushroom, some sort of habitat tip or even just some correct Latin pronunciation.

I had never been on an organized foray, although I have been seriously hunting mushrooms for the past four years and foraging wild foods my entire life. I have read about forays and suspected that I would really enjoy them, but had never been able to make the time for them. So with a fair amount of nervous excitement, I ventured into Princeton to find a whole group of people stuffing pant legs into socks, applying sunscreen, eating trail mix and huddling around knowledgeable-appearing people checking out the spring's meager mushroom specimens. I saw a few familiar faces from the couple of NJMA gatherings I had attended over the winter, said hello, and planted myself next to the fellow who was calling out the names of various mushrooms he was being shown. This was, after all, why I came: To learn about mushrooms.

We received a few instructions from the foray leader, Terri Layton, and set off into the woods in search of our quarry: Morels! I had been having an average year finding morels, a few here and a few there, and I fantasized about the mother lode I was going to find today. A dry spring suggested the mother lode was going to be a fantasy this year, but one could always hope.

The larger group quickly splintered and fractured into smaller groups until I found myself with a friendly couple, pushing ourselves through the brush into a

clearing of Tulip poplars. The woman (name forgotten, sorry about that) quickly found several beautiful morels, which set a very positive tone for the morning. As we chatted and scoured the area, I found myself drifting away toward some other clearings. I wasn't having much luck finding any morels, but I did find a small but lovely clump of Chicken Mushrooms on a stump. I had found a nice flush of them on April 24th, about two weeks earlier, in Bucks County, PA, and was counting myself pretty lucky to have found Chickens again! I had never found Chickens in the spring, and only occasionally in the summer (they are more common in the fall), although Bill Russell refers to them as a spring mushroom in his *Field Guide to Wild Mushrooms of Pennsylvania and the Mid-Atlantic*. He also delves into the possibility that there are several species of very closely-related *Laetiporus* species that appear throughout the warm seasons, but I won't get into that.

Moving along, still glowing over the Chicken mushroom, I crossed paths with a Box Turtle. I love reptiles almost as much as I love mushrooms, and I was down on my hands and knees trying to convince the turtle to smile for my camera (he wouldn't smile) when I finally spotted my first Morel of the day – about 10 feet to my right. Now my strategy for morel picking is: When I find one, I squat at that mushroom, thank the mushroom gods, and start scouring the ground in a circular fashion around me, trying to observe and absorb every square inch of ground in an organized attempt to find the other morels that are sure to be lurking around the area. Usually I spot another and I try to resist the temptation to run right over to it (unless I'm with somebody else, then I dive for it) until I've scoured the ground around me for a full 360 degrees. I then gather the other morels that I have spotted and start moving around the area in a circular fashion until I'm convinced that I have found them all.

So, after spotting my first morel, directly under a massive poplar, I started really concentrating on the area using my method. I hadn't found the mother lode that I had fantasized about, but I was finding some pretty nice mushrooms. I was concentrating my efforts on the really big poplars, as I was having pretty good luck under them and I have really been trying to recognize some sort of pattern as to where I find morels. As soon as I located all of the mushrooms under one tree, I would scan the area looking for the next biggest poplar and move in that direction. I have often read and heard that morels associate with poplars and have occasionally found a few around poplars, but today was the first day ever that I really could see a pattern forming. The morels that I was finding were directly under the drip lines (the outer perimeter of the canopy) of only the biggest poplars in the forest.

I kept looking at my watch, remembering Terri's instruction to meet back in the parking lot at noon for lunch and an identification session with all of today's finds. This was my age-old dilemma; how long can I really push it out in the woods before I'm truly late? Finally, I had to move on, giving myself exactly two minutes to make the fifteen-minute walk back to the parking lot. Final count: ten morels, one Chicken Mushroom, one Fawn Mushroom (*Pluteus cervinus*) (on which I wanted a second opinion of my ID) and several photos of a scowling Box Turtle. Finding ten morels under three or four poplars wasn't exactly the hard evidence of a pattern that I was looking for, but I felt pretty good that I had applied some strategy to my hunt and had found some success.

As I made my way back to the parking lot, I was thankful to notice that I wasn't the only person who was running a bit late. I slowed down and started conversing with some other late-returning members, comparing our finds, exchanging tidbits of information and generally enjoying the fine weather we were having that day. Most people were already gathered in the parking lot when we arrived, eating their lunches and standing around a pile of various fungal specimens and a few items from other kingdoms such as Wolf's Milk and

All things considered, not a bad find!

some lichens. Not too many morels were on display, but there were plenty of other mushrooms out, such as Fawn Mushrooms (*P. cervinus*), an old beat-up Birch Polypore (*Piptoporus betulinus*), some *Coprinus* species, Witch's Butter (*Tremella mesenterica*) and a handful of LBM's (little brown mushrooms). This is, by no means, a comprehensive list, just a few of the mushrooms I remember off of the top of my head. I put out my Chicken Mushroom, which received a lot of attention and the largest of my morels before really looking through the other specimens and striking up some conversation with other observers. I noticed that not too many people were showing off morels, although most people stated that they "found a few" when I asked. I really have no idea how many morels were found that day, just that "a few" were found and most people would rather keep their finds quiet.

I ended the day with a really enjoyable conversation with our foray leader, Terri, who proved herself most welcoming and friendly to one of NJMA's newest members, myself. I had come to my first foray looking for knowledge and this is what I learned:

- *Morels really do (sometimes) grow under Tulip Poplars.*
- *I need to learn to identify White Ash, as morels are said to associate with this tree as well.*
- *I am very confused about the specific species of morels.*
- *Witch's Butter is edible.*
- *Wolf's Milk is not a fungus, it is a slime mold.*
- *Turtles do not smile.*
- *Forays are a lot of fun and a great place to learn!*

FAIRVIEW FARM BIO-BLITZ

by Paul Funk

On May 19, I volunteered for the 6:00 AM shift at the 2nd annual Fairview Farm Bioblitz 2012, hosted by Raritan Headwaters Association (RHA). When I arrived at 7:30 AM, I apologized to the site's naturalist Lauren Theis for being one and one half hours late. She was very gracious and said that she had actually been busy with the birders.

After making sure I had breakfast and a Bioblitz 2012 tee shirt, she pointed me toward the woods, where I began collecting mushrooms. Unfortunately, I was the only one who signed up for the fungi team and was not able to identify many of the fifteen or so species of slime molds and mushrooms that I brought back. I made a list that only described the genus or characteristics of the different specimens. I am still trying to decipher identifications from the photographs I made while collecting. Lauren was intrigued to learn that there are so many different fungi fruiting at this time of year. She said that she remembered NJMA's Dorothy Smullen from a Lichen workshop.

PUBLIC OUTREACH IN 2012

by Terri Layton

Our busiest time for public outreach is in the spring. Many conservation organizations celebrate Earth Day (April) and NJMA is becoming one hot commodity as more organizations learn what fungi are all about. We attended the Monmouth County Earth Day Event at Manasquan Reservoir Environmental Center, Lewis Morris County Earth Day (one of the biggest events), and the grand opening at Duke Farms. Most recently, NJMA had a display at the Hackettstown Fish Hatchery Centennial Celebration with Patricia McNaught and Todd Van Gordon. Patricia reported, "The turnout at Hackettstown was unbelievable. Many more than Lewis Morris, it was a good crowd for my mushroom talk. The crowd thinned a bit at 3:30, but we were never more than a minute or two without someone coming by until we left at 5:00 pm."

This year, we had new members Lynne and Paul Hugerich making their debut at the public outreach. They took to it like ducks to water needing little encouragement. My experience tells me that you don't have be a good taxonomist to be able to talk about mushrooms (me being the prime example).

Patricia gets them early

The goal of public outreach is all about educating the public as to what fungi do and their important role in our ecosystem; it's not even about recruiting new members for our club. We already have plenty of talented great members who love the club. You can start to get involved by attending (if you haven't yet) the introductory and intermediate fungi classes (offered in spring and fall), and having a little patience, a smile on your face (a MUST) and some passion. That is the key ingredient in successful public outreach. Unlike some other professions, we don't have to sell, convince, cheat, lie or inflate truth. Just simple plain truth will do.

If this article got you all excited and you want to try your hand at reaching out to the public, call me and I will set you up. It can be a lot of fun just hanging around with other excited NJMA members and, most importantly, you will be doing something worthwhile, that is, educating people so they can appreciate nature.

WHO'S IN A NAME?
Tilletia tritici

by John Dawson (thirty-second of a series)

Tilletia tritici (Bjerk.) G. Winter is a smut fungus that causes the disease known as the bunt of wheat, once a scourge for wheat farmers everywhere. The genus *Tilletsia* is one of seven genera in the family *Tilletiaceae*, which in turn is the only family in the order *Tilletiales*. All three are named for the Frenchman Matthieu Tillet, who was born in Bordeaux on 10 November 1714.

As noted in the entry on Tillet in the *Dictionary of Scientific Biography*, little information is available about his early life. His father, Gabriel, was a goldsmith, from whom young Tillet learned the principles of metallurgy. His skill at that trade led to his appointment in 1740 as director of coinage for the mint in the city of Troyes, and later to the post of King's Commissioner for Refining and Assaying throughout the kingdom.

In 1750, Tillet published a book on metallurgy entitled *Dissertation sur la ductibilité des metaux, et les moyens de l'augmenter* (Treatise on the ductility of metals and the means of increasing it). That same year the Academy of Arts and Sciences of Bordeaux, to which Tillet belonged, offered a prize "for the best dissertation on the cause and cure of the blackening of the wheat", which stimulated Tillet, a small-time farmer, to undertake field experiments on that subject (a radical idea at the time, when reasoning from "philosophical tenets" was the preferred means of extending knowledge).[1]

Among the many proposed causes for the bunt of wheat was sunstroke on sodden ears, 'pestilential mists', poor soil drainage, insect attacks, effects of the moon or the weather, the use of sheep manure as fertilizer, and decay of the seed in wet ground. Tillet had the idea of testing those ideas through comparative plantings. He first disposed of the sunstroke and wet ground theories by planting seeds in flower pots, one of which was "kept normally watered and well-drained" and the other of which was kept water-logged and exposed to bright sun throughout the growing season; he observed no appreciable difference in the extent of bunting. He then went on to divide a field measuring 540 by 25 feet into five parallel strips, four of which were manured with various different types of manure, while the last was left unmanured — an early instance of what would now be called a 'control' plot. Perpendicular to those strips he then divided the land into four further strips, in which he planted wheat seed treated in one of four different ways, including one in which the seed had been blackened with the dust from bunted heads. Finally, each of the twenty rectangular plots thus created was subdivided into six strips, planted on different days in different weather conditions.

Tillet carried out his experiments throughout the growing seasons of 1752 and 1753, and then submitted a report on his observations to the Academy, which awarded him the prize he had sought. His observations were published in 1755 under the title *Dissertation sur la cause qui corrompt et noircit les grains de bled dans les épis; et sur les moyens de prévenir ces accidents*, translated into English, nearly two centuries later as *Dissertation on the Cause of the Corruption and Smutting of the Wheat in the Head, and on the Means of Preventing These Untoward Circumstances*. The results were unequivocal: All plots sown with seed contaminated by bunt dust were heavily bunted; those sown with untreated seed showed some bunting; and those sown with seed treated with lime, lime and salt, or lime and nitre showed virtually no bunting.

The following year, Tillet resigned his post at the mint and moved to Paris, where in 1758 he was elected to the Academy of Sciences as a botanist. He continued to study causes of crop failures, and in 1762, in collaboration with Henri-Louis Duhamel du Monceau, published a book on an insect that was devouring grain in the region of Angoumois.

Subsequently, Tillet held various prestigious posts, both within and outside the Academy.[2] In 1766, on the basis of his metallurgical expertise, he was given the task of fabricating copies of the official standard of length, the *Toise de l'Academie*, and distributing them to the principal French cities. The next year, he was appointed Inspector-General of the Mint, and served in that capacity until 1774. He was knighted in 1773, and in 1784 was placed in charge of the *Saltpetiere* prison. He became Treasurer of the Academy of Sciences in 1788, and not long afterward was appointed to the Academy's Metric Commission, whose other illustrious members included the mathematicians Joseph Louis Lagrange, Gaspard Monge, and Pierre-Simon Laplace, the chemist Antoine Lavoisier, and the philosopher Nicolas de Condorcet.

In 1791, that commission issued a report recommending that the meter be defined as one ten-millionth of the length from the pole to the equator along the meridian through Paris; and on 20 December of that year, shortly before the beginning of the French Revolution, Tillet died in Paris. He thus escaped becoming a victim of the *Terror*, which, given his posts under the monarchy, would otherwise likely have been his fate, as it was for Lavoisier and Condorcet.

[1] The account of Tillet's experimental work given here is based on that in E.C. Large's classic work on the history of plant pathology, *The Advance of the Fungi*.

[2] Information on Tillet's later life was extracted from the article on him in *Wikipedia*.

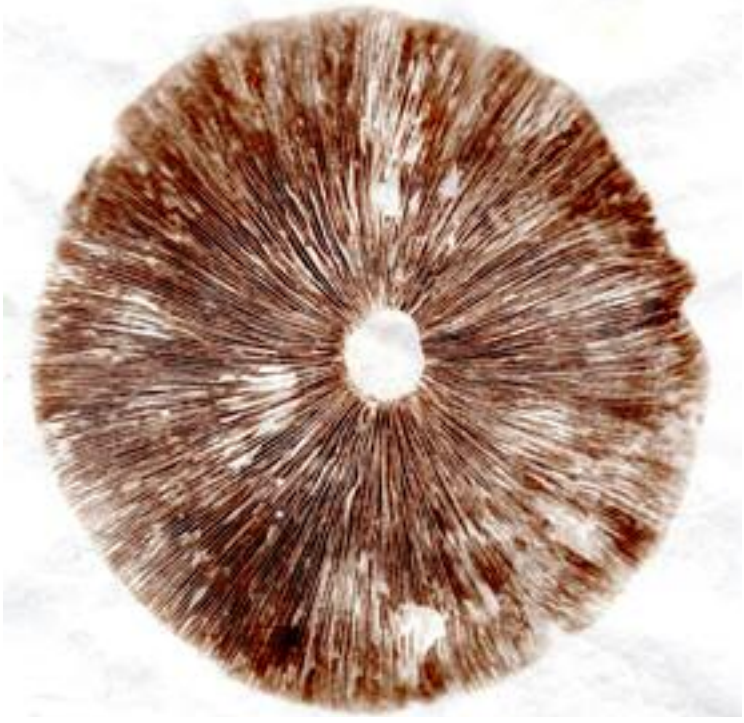
MEMBER FINDS

Photos on this page are random submissions from our members, and represent unusual, out-of-season, and/or especially attractive fungi which they've captured as photos. Enjoy the views!

Below are a couple of photos of members of the genus *Hygrophorus* taken by NJMA member Paul Funk in May in Gloucester County.

Paul also sent us the following photo of two *Suillus* which he found on May 16, 2012 in a well-established, (probably 40 year old) pine border in Cherry Hill, NJ. There were five or six specimens fruiting at this site. This was possibly quite early for these because Alan Bessette describes them as fruiting mid-summer. Paul also noticed that there was an even earlier fruiting that had wilted into a blackened mess. The dimensions of the mushroom with the droopy pileus are: Stipe, ¼" diameter; and cap, 6". The flesh was white and became pale yellow after a few minutes. The spore print appeared to be olive green. Paul stated that he can't be sure which species this is without chemical verification; but physical characteristics, especially the ratio of stipe to cap diameter, to him, seem to indicate *Suillus pseudobrevipes* as the species.

Member Ruth Jourine sent in this spore print which she made from a Spring Agrocybe *(Agrocybe praecox)* which she found in her back yard in Hopewell Valley back during the dry period in April. It measured 4.5 inches across. Ruth was fascinated by the detail which was produced in the spore print. Might you agree?



Jim Richards, our editor, adds that if you decide to save and frame any of your spore print creations, you might consider using a pastel/charcoal fixative to anchor the spores. Use a very, very light spray to avoid clumping and color change. And if you frame your prints, make sure that you use a spacer so that the spore print does not touch the glass. Most of all, have fun with all your finds!

A FRESH PERSPECTIVE ON THE WILD FOODS FORAY

by Terri Layton

Weather was great! Nathaniel Whitmore, our guest lecturer was great! Food was fabulous! Company was superb!

Many new or relatively new members showed up eager to learn about foraging. And, of course, our spread was one of the best I've seen and tasted. Just when I think that things can't get any better…

Most interestingly, Nathaniel took us down a different path, one definitely less traveled by NJMAers in the past. Digressing a bit to past Wild Foods forays – our usual path is up the hill through the "very hot sunny wildflower field" where we slowly cook our brains out and walk back about a mile (crossing a dangerous road). By the time we got back, our bodies were dangerously overheated and resulted in crankiness rearing its ugly heads in some of us (you know who you are). Now back to this year – As many times as I have been to a Wild Foods foray, I don't ever remember going down toward the pond/swamp. It was refreshing for three reasons – first, lots of shade, and second, a shorter walk. Lastly, watching a bunch of young members following Nathaniel down the hill and mucking through the swamp/pond looked refreshing (actually it reminded me of Jesus and his disciples).

Nathaniel leads a group through the area adjacent to the pond

Getting one's feet wet is something that we mature members (unless we have galoshes on) stay away from, but that didn't seem to be an obstacle for some of our young-at-heart-and-body members.

We watched as Nathaniel harvested cattails and stripped away the outer layers of the long grassy blades to reveal white edible flesh. Some of us munched on what tasted like hearts of palm (to me anyway). Apparently, you can also eat the hot-dog like part which contains pollen: Sprinkle it on salads, etc.

We also nibbled on bull thistles, which tasted a bit like celery, but it was more of a thirst quencher for me.

Some of us got good botany lessons too…opposite vs. alternate leaves, and why some compound leaves that look opposite are not opposite. Did you get that?

I've heard of many ways to cook milkweed (especially the leaves and flowers), but it was interesting to hear about being able to eat the seed pods during a very short window of opportunity. Nathaniel's knowledge was exceptional and he said that same old rule applies to wild mushrooms as it does to wild plants: Don't rely on the way it looks to determine its edibility, since plants, like mushrooms, can be variable from region to region.

Nathaniel Whitmore is the current President of the Delaware Highlands Mushroom Society. He is a naturalist and herbalist who artfully integrates his training in internal martial arts to treat his patients at Horndale Wellness Center. His knowledge of plants as both medicine and food is impressive.

After the walk, we sat down to a feast of dandelion pizza (Lynn Hugerich), Squirrel Balls (Patricia McNaught apparently spent hours deboning squirrels), delicious mushroom soup (Pete Bohan), quiche, potato salad with maitake, fresh pineapples, watermelons, and unbelievable amounts of desserts all lovingly prepared by our members that made my tummy sing with joy.

Many members shared my sentiment that this was one of the best – as well as one of the most heavily attended – Wild Foods Forays in recent years. You may need bring a chair if this popularity continues. It was standing-room-only at the pavillion!

Patricia McNaught preparing the squirrel balls

COLLECTING FOR THE TABLE: A POLEMIC

by Lawrence Millman (Used by permission of the author. This article first appeared on his website, lawrencemillman.com/fungi)

Increasingly, I object to collecting mushrooms for the table. I'm not referring to one's own dinner table. Nor am I referring to commercial pickers, who are collecting for financial purposes rather than the table. Rather, I'm referring to the collection tables that occupy pride of place at local and regional mushroom forays.

Here's the scenario: a brigade of mycophiles lights out for the woods, armed with capacious baskets. Into those baskets, they'll toss any specimen they find, then bring back those specimens for the foray's experts (so-called?) to sort and identify. Often the specimens will be accompanied by a dearth of data. What was the substrate? Under a tree. That sort of thing. Then the experts will place names on them with such alacrity that they could be tossing confetti. Never mind that many of the specimens can be identified only microscopically.

But there's worse to come. All during the foray, the specimens remain on the collection tables, "dehydrated, shriveled, and stanched from releasing spores," in the words of mycologist Nicholas Money. In the end, virtually all of them will end up being dumped into a garbage bag. Not set aside for an herbarium. Not spreading a single viable spore. Not oven-dried for future study. Simply turned into trash. Hardly a fate any self-respecting mycelium would wish on its fruiting body.

Well, at least that mycelium itself is not disturbed, you might say. But the mycological jury has not yet come up with a palpable verdict on this subject. After all, much of a mycelium's mass and an undetermined portion of its energy is transferred to its fruiting bodies. To me, this does not call up an image of a happy mycelium…

To collect or not to collect, that is the question. Personally, I think it's nobler to study specimens in the field than to watch them dessicate on a table. And if they're studied in the field, mycophiles might learn a bit about how different species relate to their environment. They might also ask themselves some questions: Why are insects congregating on a certain mushroom? What's the smell of a particular mushroom (dehydrated specimens usually don't have a smell)? And what the blazes is that tree under which the aforementioned species was growing?

So let's try to collect less promiscuously. For fruiting bodies mean spores, which mean a potential mycelium, which means more fruiting bodies. Fewer fruiting bodies mean less genetic diversity, which might result in, well, even fewer fruiting bodies. With too few fruiting bodies, there's always the possibility of a species going extinct.

And (to misquote Oscar Wilde) you don't want to kill off the thing you love, do you?

CULTIVATION WORKSHOP REPORT

by A.J. Bozenmayer

On Saturday, June 2nd, we held our annual Cultivation Workshop. This was my second year running the workshop, and the first year I had the pleasure of Dr. Varney hosting and assisting. Gene was very accommodating, providing not only advice but also coffee and bagels. Having Gene there was great, because he was able to offer knowledge and tips I was not already familiar with, and the participants could hear that there can be many differences in how cultivators do things and still have excellent results.

I'm not someone who likes rigid school-style structure, so I tried to keep it as informal as possible. I described the general process of going from a wild mushroom to growing more of the same mushroom species, or even a clone of that same mushroom. Everybody seemed to understand the process (I hope), and asked very good questions. Some people even brought up concepts I had never heard of before, such as fermenting Lion's Mane in a liquid broth for consumption.

Each participant made their own bag of oyster mushroom substrate and spawn, which will produce oyster mushrooms if kept within the right conditions. The strain of oyster mushrooms used for this class was actually a clone of a wild NJ specimen given to me by a club member.

PHOTO BY STEVE STERLING

I loved the enthusiasm I saw at this workshop, and I hope there is enough interest among club members to hold other cultivation related workshops, such as focusing on other species or more advanced techniques.

PHOTO BY STEVE STERLING

PRACTICING CULTIVATION

by Stephen Sterling

Last weekend I had the privilege of snooping around in Gene Varney's house.

It only cost $15. Just seeing his backyard was worth the price of admission to the NJMA Cultivation Workshop)…This guy has it figured out.

I was impressed. I wanted to be him.

Well, not right away…but when I get to be his age.

If I get to be his age.

But I quickly understood that trying to be more like him now…would probably help me get to be his age.

This guy has already forgotten more things he learned about nature than I'll ever know in the first place.

What a role model…my new hero.

The Mushroom Cultivation Workshop was conducted by Albert Bozenmayer. He goes by A.J. You can understand why.

He was making a very 60's fashion statement complete with pony tail, ratty looking goatee, and tie-died T-shirt. His shirt had a picture of a tank with the caption: "This won't solve anything"

I instantly liked him too.

Gene's wife Ruth had put out a spread of coffee, tea, and bagels with home-made Strawberry-Rhubarb jam. She knows how to make my wife Sharon happy. Sharon was still talking about that jam a week later.

So…technically, A.J. was teaching the class, but it was more like one big Q&A. With Gene interjecting some ancient wisdom that none of the participants had ever heard before.

I learned a lot from everyone.

I learned that growing your own mushrooms is a fairly labor intensive, scientific effort.

That requires very precise laboratory conditions.

That there are lots of things that can go wrong…and often do…

Which just made me admire A.J. all the more for trying to start a one-man business doing so: South Jersey Mycological Supply, ***http://sjmyco.com.***

PHOTO BY STEVE STERLING

I think he must have masochistic tendencies.

I'm sure that he has an F.B.I file.

Which makes me a little jealous… but I'm working on that.

So now I have a bag of straw in my basement with A.J.'s fingerprints all over it. Theoretically, oyster mushrooms are going to start emerging from it in a week or two. But I'm skeptical.

For the past few nights I've been lying awake in bed fearing that I've been scammed by some very cunning con men…Sold some magic beans as it were.

It seemed wrong to leave without complimenting Gene on his beautiful garden.

So I offered to buy his home from him. I told him he wouldn't have to move anything…he could just leave it all exactly as it was now.

I thought I was being generous. But he told me he had no plans of moving any time soon. And why would he?

He has cultivated quite a life for himself on little more than an acre.

Good food…good friends…and an insatiable desire to learn and teach…What more do you need?

REPORT FROM FRANKLIN PARKER PRESERVE, JUNE 28th

by Nina Burghardt

Hello, Everyone!

This late June, there were very few mushrooms at the Franklin Parker Preserve. Even though it rained four inches the end of last week, it had all sunk in and even the moss was going brown. Since it was hot and dry, we spent most of our time in the RRE White Cedar and Prince White Cedar Areas. Terri took home a *Rhizopogon* and a couple of slime molds.

This is what we found: *Amanita brunnescens, Chantherellus cinnabarinus, Cortinarius sanguineus, Galerina tibiicystis, Ganoderma lucidum, Hygrocybe cantharellus, Hygrocybe laeta (*a very slimy variable mushroom*), Hygrocybe marginata concolor, Hygrocybe marginata marginata, Laccaria longipes, Nolanea (Entoloma salmoneum) quadrata, Russula brevipes, Russula pantoleuca, Russula vesicatoria, Tephrocybe palustris, Thelephora terrestis, Trichaptum biforme,* and *Trichoglossum hirsutum.*

I often send out a list of what we have found to the people who showed up, but this time I figured that I would send it to everyone though the newsletter. We will assemble a comprehensive list at the end of the year and will make it available to those who are interested.

REVIEW OF TWO INTRODUCTORY MYCOLOGY CLASSES

by Betty M. Wise

As a novice who has been on several forays over the years, both before and after becoming a member of NJMA, I figured it was time to increase my knowledge of mycology, and mushroom identification in general. I decided to sign up for two of NJMA's education classes: *Introduction to Mycology*, and *Collection and Field Identification of Mushrooms*.

Introduction to Mycology was led by Terri Layton, with additional technical expertise provided by Patricia McNaught and Igor Safonov. The class began with an ice-breaker, where we learned a little something about our fellow classmates and their interest in mushrooms. Our being with other like-minded individuals helped to make the class more interesting and fun.

Terri explained that the primary aim of NJMA is education, and the sharing of ideas and information regarding fungi. We learned that fungi are essential for the environment. Among other positives, they are symbiotic with plants and trees and are decomposers. They recycle nutrients and return billions of tons of carbon back into the ecosystem. We also learned they are called heterotrophs, as they do not make their own food. Mushrooms (macrofungi) are composed of mycelium of which 90% is underground. They are also composed of bundles of mycelial threads called rhizomorphs, and consist of a fruiting body (the stem), a cap, and spore-producing gills or tubes.

We were shown samples of real mushrooms, as well as clay models of other specimens. One was of *Amanita virosa*, or "Destroying Angel" that showed the veil on the stem, as well as the "egg sac" or universal veil that is underground. When on a foray, it is important to look for the possibility of a sac below ground to be able to make a positive identification. Since this is one of the most poisonous mushrooms we will encounter, it is one to learn to distinguish very well!

We were given an overview of methods used to classify and identify mushrooms. Mushrooms are referred to by their scientific names (i.e. genus and species) or by a common name. As Patricia explained, common names can refer to different species of fungi, and a fungus may have more than one common name. In addition, a fungus can even have more than one scientific name before a consensus is reached on an accepted name. Sorting out all this confusion is a tall order.

Terri emphasized that it is helpful to know your trees when foraging, as specific mushrooms are symbiotic with certain trees. She said to look for woodpecker holes, which may indicate fungal activity, then look at the base of the tree for the mushrooms. For example, morels are usually found by ash, tulip, or apple trees, or near dying elms. She also suggested foraying with experts to learn more.

Igor gave an overview of mushroom toxicity. Mushroom poisoning can be mild to hallucinogenic to deadly. One item of note was that drinking alcohol with certain species can produce an Antabuse-like reaction that only occurs with the alcohol consumption.

Patricia gave a short quiz which reinforced the learning of the topics discussed. For example, mushroom poisoning is more likely to be life-threatening if initial symptoms occur after six hours. This seems counter-intuitive; at least it did for me.

In *Collection and Field Identification of Mushrooms*, Jim Barg began by showing us what to include in a foray basket. He stressed the importance of protecting ourselves from tick bites and Lyme disease, as both are prevalent in our state. He strongly suggested wearing light clothing and tucking your pant legs into your socks, as well as using a potent anti-tick/anti-mosquito spray. He brought several products of varying degrees of strength and effectiveness to show us.

The foray basket should be big enough to hold our finds without cramping or smashing them. It should include a knife, preferably with a small brush for removing dirt, wax paper or brown paper bags to hold the specimens, a whistle for emergency use, a small 8X loop to aid in identification, as well as a field guide such as George Barron's *Mushrooms of Northeast North America*, or Roger Phillips' *Mushrooms of North America*. The reason for the whistle is to signal for help if you have gotten separated from the group. Since there is little to no cell reception at some of our foray sites, it is extremely important to have one.

Jim had us attempt to describe some common everyday fruits and vegetables. To begin, he had us try to describe a zucchini. A seemingly easy task, it was harder than it sounds. There is much detail that gets overlooked, as you feel you already "know" a zucchini. Then we had to compare and contrast it with a cucumber. He had other examples as well, like a lime with a small guava. They looked almost identical! You really needed to "scratch and sniff" and cut open each one to really see and smell the difference.

It is easy to understand how the difficulty is heightened with an unfamiliar mushroom or other fungi we encounter on forays. We learned that sometimes even the experts do not agree on distinguishing characteristics that assist in identifications. You cannot be too careful as a novice! Jim stressed the importance of using all your senses, and to let nothing go unnoticed: look, touch/feel, and smell. Observe any and all distinguishing characteristics. What may seem trivial at first may be of utmost importance. For example, what is the

gill type? Attached or not? Where was it growing? What types of trees are nearby? Was it growing singly, or in groups? It is an involved process. He also told us to read descriptions in field guides and to match the traits exactly. Take a spore print for further analysis. If you are reasonably sure it is edible, you may take a taste, but spit it out afterwards. Jim explained that it is a good goal for beginners to identify to at least the genus level.

We also learned there is no single test to determine edibility. Be 100% sure before eating anything. The old adage still holds: "When it doubt, throw it out!" Sound advice for any mushroomer, novice or experienced! He also said we should cook everything before eating, even store-bought mushrooms.

Next, we each got a Portobello mushroom to describe. This was also more difficult than you would think, even for those of us who thought we knew this mushroom well! To assist us with possible identifying characteristics to look for, we were given a handout that Jim suggested we laminate and use it as a placemat! We used another handout "Macroscopic Notes on Fungi" to record our observations.

Jim gave us additional handouts to further our education These will help in learning the nuances of identification, and assist us in learning more.

Both classes were interesting and enlightening. They provided basic background information to help us to know what to look for to help identify a specimen.

I would recommend these courses to others, especially newcomers and newbies who wish to increase their knowledge of mycology.

*(**Editor's note:** Both classes will be repeated on October 6th. The registration form is in **NJMA News** Volume 42-2, March-April 2012, or you can register online.)*

OTHER MUSHROOM EVENTS OF INTEREST

August 16 - 19, 2012

SHROOMFEST 2012

The 32nd Telluride Mushroom Festival

Telluride, CO

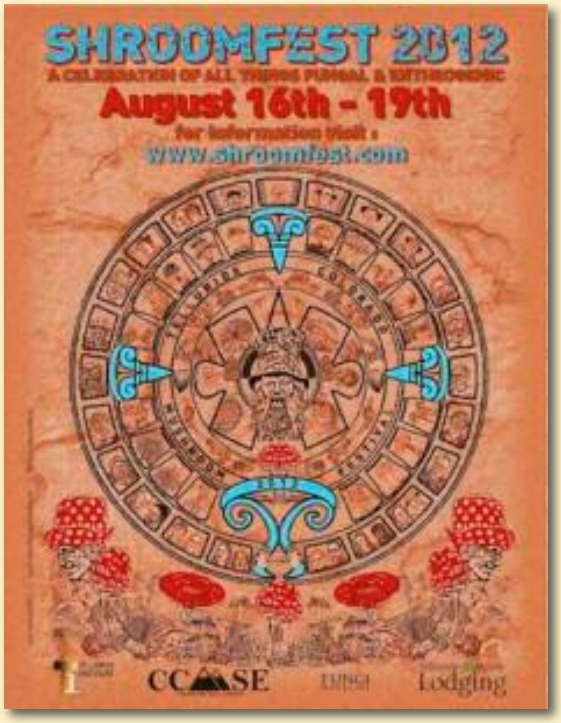
Tickets at www.shroomfest.com

For over 30 years, the Telluride Mushroom Festival has been educating citizens, both visitor and local alike, about the many incredible aspects of the amazing world of mycology.

Forays into the surrounding mountains, identification tables in Elks Park, talks at various local theaters, and the legendary Saturday parade have all been staple features.

The four-day event consists of slide presentations, lectures, forays, performances (dance, poetry, music), discussion groups, panels, a hands-on growing workshop, parade, movies, free identification fair, cook & taste, and numerous local restaurants offering gourmet wild mushroom specials. There are three tracks for those interested in particular areas of the fungal world more than others: Identification & Culinary, Cultivation and Remediation, Entheogens and Medicinal.

The San Juan Mountains surrounding Telluride are famous for their bounty of fungal species, with edible chanterelles and boletes often fruiting in profusion during the good years, thanks to summer monsoon rains.



September 8 - 9

27TH ANNUAL MUSHROOM FESTIVAL

Kennett Square, PA

www.mushroomfestival.org/the-festival

MAN FINDS CHICKEN IN THE WOODS!

by Steve Sterling

I'm feeling pretty good about myself in this picture. Holding my first major edible find. Well, my wife actually found it. But only because I was looking the other way… and I had to harvest it….so I think it's fair that I get my picture in the paper.

It was taken in Caledonia State Park in Pennsylvania. We were out there to attend a meeting about a Bolivian Orphans mission trip. I took pictures of that, too.

We were hiking along the Charcoal Hearth Trail not far from the monument parking lot. (I hope to visit that spot again next year.) Would you drive three hours each way for a mushroom?

It was pretty dry in the forest. The leaves crackled under our feet. I didn't have much hope that mushrooms were in season today. We had walked ⅞ of the trail without seeing anything very interesting.

Then suddenly a beam of golden sunlight illuminated the exact spot where the Holy Grail lay. For a moment I thought I heard angels singing…but decided I must have imagined that.

What really happened was I stopped taking pictures and saw my wife stopped on the trail pointing at the Chicken Mushroom.

I got all excited and took lots of pictures and wondered how much of this treasure I should take. There were three large growths along this fallen trunk, but I decided it would probably just go bad if I took it all. And maybe some other wannabe mycologist would stumble on them tomorrow.

But later I learned that you can freeze it…had I known that, I might have been greedier.

I emailed pictures from my iPhone to get confirmation that this was indeed an edible. I've only been learning about this stuff for the last two years and I really never gave any thought to mushrooms before that. The fascination came quite suddenly and unexpectedly while in the Adirondacks. We were staying at the Cabins at Chimney Rock in Indian Lake, NY. Our plan was to be hiking and fishing. God's plan was that we sit in the cabin and watch the rain.

And it rained…and rained.

After a few days, a small window of sunlight coaxed us out of the cabin and we began walking around in the woods. In three hours, and within a half mile from the cabin, we collected about 40 different kinds of mushrooms. I had a bit of a revelation about fungi. They're pretty cool. I had been blind, but now I could see. It was suddenly all very simple.

We joined NJMA and starting going to forays and lectures. Taking books out of the library. Buying some of our own. Buying more exotic/expensive mushrooms at the market when we can get them. Eating a lot more mushrooms in general.

I am realizing that I must be getting old. I'm sitting home at night reading books about mushrooms. What happened to me?

Maybe all mushrooms are magic. Maybe they cast some biochemical spell over people who get too close to them. That must be it! Anybody so interested in mushrooms must be under some kind of magic mushroom spell.

But I digress.

I took my prize home and prepared it with butter and olive oil. We tasted it like that first. Then I decided to get creative and started throwing in various spices. I think I made some chicken broth with "Better Than Bouillon".

And then I did something I'll never understand. I took leftover rice noodles and threw them in. I added leftovers to my first wild mushroom meal. But it was all good. It tasted fine.

I encourage you to try it. It was fun!

Steve's Chicken Mushroom creation

MUSHROOMS AT THE *FLORIADE*

article and photos by Judy Glattstein

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Holland in Tulip Time. That was the justification I used for a trip to the Netherlands in the latter part of April 2012. This year was especially suitable as it ends in a "2." What does that have to do with anything? Every ten years, on the year that ends with a "2", the Dutch put on a world-class horticultural extravaganza known as the *Floriade*. So, in addition to the events near Amsterdam that focused on bulbs (Keukenhof, the Bloemencorso, Hortus Bulborum, and so forth), the ICanGarden tour that I joined traveled to Venlo, near the German border for the *Floriade*. Ours were just three of the multiple buses pulling up to the parking lot. We scattered out and about, with the option of a 3:00 / 5:00 / 7:00 pm return. My roommate and I agreed that the middle bus was the one we'd aim for. In my seven hours of wandering among the exhibitions, I anticipated the numerous displays of bulbs. But the Netherlands is an agriculturally productive country for more than flower bulbs and in Huis van de Smaak (House of Taste) they were promoting vegetables and fruit. And not just produce. I was pleasantly surprised and delighted to find out that mushrooms were given equal billing.

Just inside the spacious building were mushrooms on display: the typical *Agaricus*, baby bella, shiitake, and oyster mushrooms, *Pleurotus*. At a good size booth, two men were busily preparing tasting samples for the numerous visitors. And these were not simple little sauteed tidbits. Gourmet treats, indeed. Might this be one of the preliminary rounds for the Silver Mushroom competition? A gourmet cooking competition open only to professional chefs with the goal of developing new recipes and methods of using mushrooms to increase their use. In 2012, the 28th year of the competition, it has a new concept with fifteen, once a week, pre-rounds beginning in early April. The chefs are given a "black box" with such standard mushrooms as shitake, oyster, chestnut, and white mushrooms and must make an appetizer, a small plate, main course, and dessert, one of which is a vegetarian dish. Well no, it turns out that this is not the Silver Mushroom competition.

Preparing mushroom tasting samples

That happens on Tuesdays, and I'm at the *Floriade* on a Wednesday. If this is just an average day's mushroom sampling, what must the competition dishes be like! One man was making an intense, rich mushroom stock. That was ladled into an interesting device like a large funnel with a thumb control that allowed precise opening/closing of the spigot at the bottom. Glass wine glasses had been prepped with raw mushrooms diced small, and even-more-finely diced bits of red and green pepper. The hot broth was added, then the glasses were passed out to the eagerly reaching hands. Delicious!

Glasses with mushroom stock and diced mushrooms and peppers

The other sample was more complicated. Finely chopped sautéed mushrooms, coarser than *duxelles*, topped with a mushroom foam and finished with a sprinkle of green herbs. Mushrooms I can mince and sauté, herbs I can chop. Mushroom foam? That's new to me. Apparently one sautés mushrooms with butter, olive oil, and garlic over medium heat until the mushrooms are beginning to soften and any liquid is gone. Add some cream and simmer until rather tender. Let cool until tepid, then puree in a blender. Place the puree in one of those CO_2 cartridge powered canisters, press the trigger, and *voila* – out comes mushroom foam. What I sampled had a great taste. However, I think the foam would be insipid

(continued on following page)

Handing out the mushroom-foam-topped duxelles samples

unless the mushroom cream has a very intense flavor, almost unpleasantly so.

When there was a lull in the people crowded about the booth, I introduced myself. Of course I mentioned the New Jersey Mycological Association and our passion for fungi. As we were chatting, I also mentioned in passing that I am especially fond of foraging for edible mushrooms. "Aha!" I was told, "Then you must meet Thijs Houben," and I was escorted over to his nearby booth.

We were able to talk only briefly before the throngs of enthusiastic *Floriade*-goers began crowding around his booth, which featured tantalizing displays of inoculated logs sprouting oyster mushrooms. Apparently, in the Netherlands, they also sell little plastic boxes with substrate and inoculum for apartment dwellers, the size box I'd expect to see when buying baby salad greens. There was reference to ***www.champignonidee.nl***, which is a very nice site if I could only read it, but the information, including recipes for *kastanjechampignon*, chestnut mushrooms, is all in Dutch. There was also an address for "De Paddestoelerij," a restaurant serving a variety of special mushroom dishes that is a subsidiary of Prime Champ, a fully integrated grower and supply chain company producing fresh, special exotic, and convenience mushroom products. If only I didn't have to return to Amsterdam tomorrow, and home the day after that. Apparently Northern Limburg is an area not only renown for its production of white asparagus, but also as a center for mushroom cultivation.

Mushrooms continued to appear before me. When it was time for lunch, my roommate and I found ourselves at the Restaurant Villa Flora. This was a casual food restaurant, and of the two soups of the day one was a thick creamy mushroom soup. Of course you know what I chose. It was very good on this rather cool, drizzly day. That evening we had dinner at our hotel, the Van der Valk Venlo. For an entree, I chose cannelloni stuffed with chestnut mushrooms *duxelles*, served in a cream sauce. I had never heard of "chestnut mushrooms" before my mushroom adventures at the *Floriade* earlier today, and was delighted to have the opportunity to try them in a prepared dish. Some research after I returned home let me know that these are also known as black poplar or velvet pioppini here in the United States. Chestnut mushroom is *Agrocybe aegerita*, also known as *A. cylindrica* or *Pholiota aegerita*. A medium-size agaric, apparently toxic forms are not normally found in Europe. Very intense mushroom flavor and I enjoyed every bite. I would have garnished the plate with some sliced sautéed mushrooms and some herbs, just for color, as it was all very pastel/beige.

Thijs Houben in his edible mushrooms booth

My time in the Netherlands was a delight. I saw millions of bulbs in bloom and enjoyed the gustatory pleasures of mushrooms. At home, I may have only thousands of bulbs, but the pleasure of mushrooms shared with my friends in the New Jersey Mycological Association is even more special.

Judy Glattstein *has taught at New York Botanic Garden, as well as being a photographer and writer. She is a fairly new member of the New Jersey Mycological Association, having joined just last year at Fungus Fest. Her adventures in the Netherlands may be found in more detail on her website* ***http://www.bellewood-gardens.com*** *at "Holland in Tulip Time" in the Garden Diary.*

MUSHROOM DEMAND SHOWING CONSISTENT GROWTH

*by Christina DiMartino / **The Produce News**, May 30, 2012*

Sales of mushrooms have continued to grow over the past decade, according to Bart Minor, president of the Mushroom Council headquartered in San Jose, CA.

"In 2011, supermarket sales in pounds were over 204 million as reported by Symphony/IRI Group," he said. "Mushrooms continue to outperform total produce dollars and volume."

He added that in the past, white button mushrooms were always the standard, and while still immensely popular, other varieties are finding favor with consumers such as the increased usage in brown mushrooms indicates.

PHOTO COURTESY OF THE MUSHROOM COUNCIL/SHUTTERSTOCK IMAGES

"Brown trends are driven by Criminis, also called browns or Baby Bellas, and Portabella mushrooms," he said. "Recent data show an overall mushroom category sales growth of 3 percent on a year-to-year basis, and Crimini sales showed an 8 percent increase."

Joe Caldwell, vice president of Monterey Mushrooms Inc., headquartered in Watsonville, CA, concurred, adding, "The overall increase in mushrooms over the past decade is only about 1 percent per year, or 13 percent in total over 10 years. However, the past three years we've seen a marked increase averaging 3 percent annually, and many varieties [have climbed] much higher than that. Throughout the economic downturn, consumers looked even more to add value to their meals at a reasonable cost. As more publicity around vitamin D, antioxidants and other nutrients in mushrooms has picked up, consumers have responded with their purchases. They continue to find mushrooms much more versatile and flavorful than they had previously thought."

Mr. Caldwell also agreed that while most specialty mushrooms and organics have seen increases from 5 percent to 15 percent, the big mover in the mushroom category is the browns, specifically Baby Bellas, or Criminis.

"Portabellas have become well known for their meaty flavor and texture, but consumers have discovered their smaller version is just as versatile as the white button," he said. "The percentage of brown mushrooms sold in the U.S. has grown from single digits to now over 25 percent of the total category."

Quoting from the Mushroom Council's statistics, Paul Frederic, senior vice president of sales and marketing for To-Jo Mushrooms Inc. in Avondale, PA, said that the 2010-11 crop year for pounds and value in dollars, compared to the 1994-1995 crop year, shows a remarkable increase.

"During that period, mushroom sales saw a 34 percent increase in value of sales," said Mr. Frederic. "The 1994-1995 crop in value of sales was $759 million, compared to $1.02 billion in 2010-2011. During that same period of time, the industry has seen a 9 percent increase in pounds, from 789 million in 1994-1995 to 862 million pounds in 2010-2011. That's substantial and consistent growth for any produce item."

Mr. Frederic added that like all in the agriculture community, there have certainly been hits and misses during the years, and in some years the industry has over produced.

"But today we're in pretty good balance," he noted. "In the current crop year of production, browns were at 137 million pounds, up 14 percent from the year before. Browns still represent a small part of the total mushroom production, but the category is growing faster than the white side."

Foodservice, he added, is using the browns heavily to perk up menus, but retail sales are also up on Criminis and Portabellas.

Mr. Caldwell said the health story surrounding mushrooms is certainly compelling and is in part attributed to the increase in demand. Mushrooms are high in antioxidants, B vitamins and are the only produce item with natural vitamin D. They are fat-free and low in sodium and calories.

"However, we believe consumers spend their dollars more for flavor and the versatility that mushrooms have in fitting into any meal, any cuisine and any diet," Mr. Caldwell said. "Monterey Mushrooms have specifically targeted getting that message out through our new sustainable package changes, along with social media efforts."

(continued on the following page)

To-Jo Mushrooms, Mr. Frederic said, has more than doubled its production and sales over the past decade.

"It's a truly significant increase, and we believe it will continue to grow," he said. "When you look at the per-capita consumption of mushrooms around the world, it's dramatically higher in Canada and Europe, so we have a long way to go in production and demand increases in the U.S."

Mr. Frederic agreed that the nutritional and medicinal value of mushrooms is helping to spur the demand, but they also offer great flavor and texture, and they fit perfectly into any meal.

"We see only positive things about mushrooms on television food shows, on the Internet and in magazines and newspapers," he said. "And with proteins in meats and fishes becoming very expensive, people are grabbing the 80-20 idea: substitute 20 percent of your daily protein with mushrooms. That not only saves the cost of a meal, but it improves the flavor of the foods people prepare."

He also noted how fast-food, quick-serve and medium range restaurant chains are increasingly adding mushrooms to their menus.

The Mushroom Council is promoting a Swapability campaign to promote the health and nutritional benefits of mushrooms by substituting a portion of meat with mushrooms. Mr. Minor said it's an easy, three-step process.

"Step one is to chop a favorite mushroom variety to match the consistency of ground beef or turkey," he said. "Step two is to cook and season the mushrooms in the same way as the meat, and step three is to combine the cooked meat and mushrooms and use the mix to complete the recipe."

The council is reaching consumers with its Swapability campaign in one-on-one conversations through its numerous social media efforts.

"The campaign also has positive implications for Meatless Mondays and now consumers are gravitating towards the concept of Mushroom Mondays," Mr. Minor added. "Mushroom Mondays get consumers thinking about adding mushrooms to their dishes on Mondays as an additional opportunity to get another serving of vegetables on the plate."

Exotic mushrooms are also gaining ground. Mr. Frederic said that To-Jo Mushrooms' gourmet exotic blend for foodservice and retail includes whites, Shitake and Oyster mushrooms.

"These mushrooms have very distinct flavors and textures," he said. "They are a popular way to perk up menus, and are perfect for sauces and soups."

Mr. Caldwell said that he also believes that consumers are more open to specialty foods and specialty mushrooms than in the past.

"The popularity of cooking shows and celebrity chefs has really opened up the culinary experience to people who never thought about it before," he said. "As more consumers try these other varieties, they find that they enjoy them a lot, and they come back for more. On a percentage basis, the specialty growth will lead the category, but is still a relatively small part of the whole, around 5 percent, of total mushroom sales."

Mr. Frederic added, "There are a lot of people eating and enjoying these little fungi today."

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The original article can be found at:
http://producenews.com/index.php/component/content/article/9-news-section/story-cat/7923-mushroom-demand-showing-consistent-growth

STUDY SUGGESTS DEATH CAP MUSHROOM POISON ARRESTS PANCREATIC CANCER IN MICE

*reprinted from **Spore Prints**, newsletter of the Puget Sound Mycological Society, May-June 2012. Article originally appeared on ScienceDaily.com, April 2, 2012*

The mere thought of an identification error sends a chill down the spine of any mushroom lover. The death cap mushroom *(Amanita phalloides)*, which resembles the common white button mushroom, contains one of the most deadly poisons found in nature, *a-amanitin*. This substance kills any cell without exception, whether it be healthy or cancerous. At the German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) and the National Center for Tumor Diseases Heidelberg, immunologist Dr. Gerhard Mold-enhauer, jointly with biochemist Professor Dr. Heinz Faulstich, Max Planck Institute for Medical Research, has now developed a method for destroying cancer cells using the dreaded fungal toxin without harming the body.

The trick to accomplish this is to deliver the poison directly to the right address in the body using something that virtually serves as a cab. In this case, the cab is an antibody whose highly specific arms attach to a cancer-typical cellular surface protein called EpCAM. The fungal toxin is linked to the antibody in a stable chemical conjugation.

In the culture dish, the poison-loaded antibody arrested the growth of pancreatic, colorectal, breast, and bile duct cancer cell lines. In mice bearing transplanted human pancreatic cancer, a single antibody injection was sufficient to inhibit tumor growth. Two injections of higher doses of the antibody even caused complete tumor regression in 90 percent of the animals. Even the higher doses did not cause any poison-related damage

(continued on next page)

MUSHROOM POISON ARRESTS CANCER...

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to the liver or other organs of the animals.

EpCAM, the protein chosen by the Heidelberg immunologists as the tumor cell recognition structure, is a characteristic membrane protein of epithelial cells. This type of cells lines all inner and outer surfaces of the body. Most malignant tumors originate from such epithelial tissues. Many of these, such as pancreatic cancer, breast and ovarian cancers, bile duct carcinomas, and tumors of the head and neck, produce too much EpCAM—and this is frequently associated with an extremely poor prognosis of the disease. EpCAM is therefore considered a suitable target structure for attacking tumor cells.

"Treatments with unconjugated antibodies against EpCAM have already been tested in clinical trials such as for breast cancer. They were intended to attack the cancer solely with the weapons of the immune system, but they turned out to be clinically ineffective," said Gerhard Moldenhauer. "However, our amanitin-conjugated antibody has a much greater potential for killing cancer cells."

Each antibody is linked to between four and eight toxin molecules. Amanitin is regarded as very suitable for this purpose. It is small enough not to be recognized as foreign by immune cells, while it is also robust enough to lend itself to chemical conjugation. "When developing toxin-conjugated antibodies you have to take an awful lot of things into account," Moldenhauer explains. "The cancer cell has to regularly take the target molecule including the attached antibody into its interior, for this is the only place where the poison can act. In the cell's interior, the poison needs to detach from the antibody or else it will not be effective. At the same time it is absolutely vital that it does not get lost while it is being carried through the body, because this could cause severe adverse side effects."

The dosage of the amanitin antibody needs to be determined with the utmost care. One problem is that liver cells are extremely sensitive to the fungal toxin; another is that other healthy cells carry the EpCAM molecule as well and are therefore endangered. However, the results obtained in mice give reason to be optimistic, according to Gerhard Moldenhauer: "Even at high doses we have not detected any organ damage in the animals. We therefore expect that there is a sufficient therapeutic window for a dosage that kills cancer cells while leaving healthy tissue unaffected."

Moldenhauer, who has many years of experience in developing therapeutic antibodies, already has plans for amanitin-conjugated guided missiles against other cancers. In particular, certain types of leukemia and lymphoma cells also carry highly specific surface molecules which lend themselves as target structures for poison-loaded antibodies.

"All mushrooms are edible; but some only once."
- Croatian proverb

HOFFMAN PARK FORAY PREVIEW

by Paul Funk

Last year, 2011, I arrived a day or two late for the the Hoffman Park foray; however, I still managed to obtain some nice photos during my self-guided visit.

I would like to share these photos as previews, if you will, for this year's upcoming foray to this location.

I chose to give you a catchy caption or two over identification. After all, captions have decided photo contests, haven't they?

Hey you! Get off my stump! (Hoffman Park 2011 foray)

Smorgasbord – Hoffman Park 2011

BOWMAN'S HILL MUSHROOMS

Dr. Eugene Varney answers Steve Sterling's emailed ID-from-photos question – see photos on right

I have been going over e-mails that have accumulated and I believe I never answered this one. The big *Peziza* is what we used to list as *Peziza badio-confusa* (the hyphen is often omitted), a spring mushroom that may be confused with *P. badia*, usually a summer mushroom in NJ. Pfister claims it is the same as *Peziza phyllogena* which was described earlier. Bessette uses *phyllogena.* NJMA's older reports will list *P. badio-confusa*. I like to check the spores before giving it its final name because of similar-appearing species.

The photo of a fungus on scat is of *Phycomyces blakesleeanus*, a much-studied member of the Mucorales, an order of the Zygomycota or Zygomycetes. There is no other dung fungus with such long sporangiophores. You can check the internet and find lots of pictures and information.

Peziza phyllogena (badio-confusa?) *at Bowman's Hill*

Phycomyces blakesleeanus *on scat (Bowman's Hill)*

Foray Newfoundland and Labrador
Annual Foray 2012

Foray Newfoundland and Labrador's annual foray will be held at **Terra Nova National Park** this year from **September 28 to 30**. Mark these dates on your calendar and pay a visit to their website **www.nlmushrooms.ca** for more information and a registration form.

This year, Mexican Mushroom Tours has organized a following week of forays through Newfoundland's Bonavista and Avalon peninsulas as well.

WELCOME TO ALL OF OUR NEW NJMA MEMBERS!

We'd like to extend a warm welcome to the following members who joined us between April 27th and June 30th. We look forward to seeing you at lectures, forays, and other NJMA events. Happy 'shrooming!

Judy Dinnerman	Washington Crossing, PA	Jennifer A. Pax	Middlesex, NJ
Jacqueline Eastwick	Merchantville, NJ	Richard D. Reilly	Frenchtown, NJ
Kelly Ellis	Hillsborough, NJ	Brian I. Szabo	Piscataway, NJ
Lydia R. Francis	Bordentown, NJ	Bryan Konoski & Kira Treyvus	Staten Island, NY
Timothy W. Glaesman	Medford Lakes, NJ	Frank J. Tropea	Pocono Pines, PA
Adam Hearlson	Princeton, NJ	Suzanne Venezia	North Wales, PA
Darion L. Jackman	Hamilton, NJ	Carla Visser	Franklin Park, NJ
Christina Z. Jawidzik	Monroe Township, NJ	Donghul Wang	Basking Ridge, NJ
Walter Mattingly	Somerset, NJ	Brett B. Williams	Egg Harbor Twp, NJ
John J. Mizin	Frenchtown, NJ	Wendy Yugorsky	Stewartsville, NJ
Clement Ockay	Lawrenceville, NJ		

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NJMA's

Victor Gambino Foray 2012

Pocono Environmental Education Center (PEEC)

Dingman's Ferry, PA www.peec.org

September 21 - 23, 2012

Join your fellow NJMAers for two nights' accommodations in newly-built family duplex cabins and three days of forays and fun in the beautiful Pocono Mountains. Price includes 2 breakfasts, 2 lunches, and 2 dinners in the recently-built (2007) dining facility. All meals are prepared on-site by a professional food service staff and served buffet style.

PEEC is located within the 77,000-acre Delaware Water Gap National Recreation Area, along the Delaware River, just minutes from the New Jersey border and one hour 20 minutes from Morristown.

Fees for Forays - September 21, 22, 23:

- $140.00 for 2 nights' accommodations* and meals from Friday evening dinner to Sunday afternoon lunch.
- $50.00 for Saturday only. Includes lunch and dinner only; no overnight accommodations.

*No single occupancy. Price does **not** include linens. Participants must bring their own bedding, pillows, toiletries, and towels. Duplexes sleep 3-6 and have private bathrooms and showers!

PEEC Pocono Environmental Education Center

Register early! Space is limited!

Deadline for registration is Wednesday, August 22, 2012

NJMA 2012 VICTOR GAMBINO FORAY REGISTRATION FORM

NAME 1: _____

NAME 2: _____

PHONE: _____

EMAIL: _____

ADDRESS: _____

(CIRCLE YOUR CHOICE)

VEGETARIAN MEALS? Yes / No

ROOMMATE PREFERENCE: Male / Female

ROOMMATE NAME(s): _____

Total number of people attending full event Sept. 21-23 _____ x $140 = $_____ *(Enclose check)*

Total number people attending Saturday, Sept. 22 only _____ x $50 = $_____ *(Enclose check)*

Liability waiver: By signing below, I release New Jersey Mycological Association and Poconio Environmental Education Center, and their officers and members, from any and all liability and loss arising from any accident, injury, or illness which may result from activites of the September 21, 22, 23, 2012 weekend foray.

SIGNATURE NAME 1: _____

SIGNATURE NAME 2: _____

Make your check payable to "NJMA" and send payment, along with this completed form, to:

Lynn Hugerich, 871 Rowe Street, Lanoka Harbor, NJ 08734

Telephone: 201-424-7737 • Email for info: lhugerich@comcast.net

NJMA NEWS
c/o Jim Richards
211 Washington Street
Hackettstown, New Jersey 07840

FIRST CLASS MAIL

NJMA is a non-profit organization whose aims are to provide a means for sharing ideas, experiences, knowledge, and common interests regarding fungi, and to furnish mycological information and educational materials to those who wish to increase their knowledge about mushrooms.

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...plus more!

Leotia lubrica
Jelly Babies

PHOTO BY JIM BARG

So slippery that they're often difficult to hold with your fingers, *Leotia lubrica* is aptly named, whether you're using the scientific name or the common name. It is a small ascomycete (1-2" high) that usually grows gregariously in the same areas as the prized Black Trumpet. It fruits more-or-less around the same time.