*LONG ISLAND MYCOLOGICAL CLUB*

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**VOLUME 22, NUMBER 3, AUTUMN, 2014**

## MUSHROOM DAY
## OCTOBER 19
### *PLANTING FIELDS ARBORETUM*
### *1 PM—4PM*

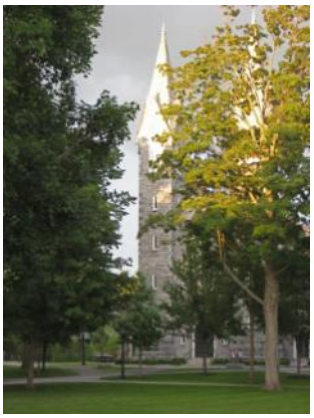

Another year has rolled around and it is once again time for our annual public display. We do not know what conditions will be at that time, but judging from the recent past, the rains will not be plentiful and we will need all our members to do their best to find specimens to bring. Last year was successful despite the dry weather by everyone pitching in and collecting widely. Let's make sure that this year is also a success.

We need volunteers to set up the exhibition, so if you wish to help, please arrive at 12 noon so that specimens can be arranged and labeled by the opening at 1 PM. Inform the booth attendant that you are here to help set up the mushroom exhibit, and the fee may be waived.

After the exhibit closes, we will have a short business meeting if there are enough members present so that suggestions and concerns may be voiced and addressed.

## NEMF 2014 SAMUEL RISTICH FORAY BRUNSWICK, MAINE

The two previous forays in Maine that Peggy and I attended (Sugarloaf in 1999 and Orono in 2007) were marked by drought, with resultant disappointing collecting conditions, and we were resigned to the possibility of a repeat. But this year, the rains had been ample, with all the storms that had snubbed Long Island replenishing southern Maine, where it had not only rained before our arrival, but also on every day we were there, but not interfering with the organized forays. The appearance of a downpour during the final banquet, held outdoors under a huge tent, was greeted with a round of applause that drowned out the thunderclaps. Mushrooms were plentiful everywhere on the Bowdoin College Campus where the foray was headquartered, and a total of 419 species were collected, of which 20 were new to the NEMF cumulative list. While this total is among the top ten in NEMF's 36 year history, 611 species in North Adams, Massachusetts in 1986 has never been surpassed. However, none of the targeted award species, regional specialties such as *Amanita ristichii,* was collected. Surprisingly, *Fistulina hepatica,* so common here, was one of these.



**Bowdoin College campus**

**The collection tables**

Forays were a delight to participate in, with moderate temperatures, and such a plenitude of fungi that the more ordinary species were spurned. Lectures were diverse, ranging from introductory botany (tree identification) to the more abstruse Ascomycete microscopy workshop. Renee Lebouef of the Montreal Mycological delivered another of her informative identification lectures, this time on Lepiotoid species of the NE, and has constructed an 11 page key which covers most of our species. (An in-

***(Continued on page 6)***

## PRESIDENT'S MESSAGE

I have a perfect spot that does not fail me when it comes to finding mushrooms. Over the last week there have been several types of boletes, suillus, an array of russulas, chanterelles, puffballs, agaricus and others. Everyday there is something new to find. Alas, it is only in my yard where the sprinklers reach. Elsewhere it has been dismal with just a few finds recently. I feel bad about this but in actuality there is nothing to be done….one must try to take the good with the bad. ( I scatter mushroom scraps, their cleaning water and over-the-hill mushrooms right on the ground and maybe that's why there is such a variety of species in my yard.)

Anyway, at this writing, the annual picnic is coming in a few days and it looks like we will have a record turnout. Next issue will describe how it all works out.

Joel and I will be in Washington State in the beginning of October to attend the Puget Sound Mycological Society's NAMA foray. This is always an interesting foray if the weather permits.

We will be back in time for the annual Mushroom Day at Planting Fields. As always, we will need a lot of specimens and I hope you all can find some on the Saturday before or on your own. If you can't attend, perhaps you could drop them off at our place or contact someone who will be attending.

A happy and fruitful autumn to you all and I hope to see you along the trail!

## EDITOR'S NOTE

"Biophilia" a term popularized but not coined by the renowned biologist EO Wilson, literally means love of life, and is used to express the human tendency to orient our attention to living things. Partly, this is based on self-interest: the survival mechanism of the hunter and gatherer. Although speculated to have a "partial genetic basis" it is a vague concept which is less theoretically expressed if referred to as a "love of nature". This way, one does not have to posit its opposite "biophobia", to explain the destroyers of rainforests. As of yet, no researcher has claimed finding the genes of either.

No longer mentioned in this regard is the esthetic sense, or a love of beauty, which arguably can more easily thought of as having a genetic basis. Think of the propensity of certain species of birds to collect shiny baubles or of babies reaching for bright lights and colored objects. Who would deny that " lovers of nature" be they birders, botanists, even hunters or fisherman, are wont to exclaim over the beauty of their quest?

Mushroomers are moved as much by the extraordinary color, entrancing and whimsical forms, and unending variety of species, as they are by their possible edibility. Call it biophilia, esthetics or love of nature, it enriches our lives immeasurably.

**MATERIAL FOR THE WINTER, 2014 EDITION SHOULD REACH THE EDITOR BY DECEMBER 1**

(Submissions may be forwarded by email in any format or typed.)

 (All unsigned articles authored by editor.)

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# Some Thoughts on Chicken Mushrooms

By Dennis Aita

*(from the Summer 2014 issue of the NYMS newsletter- by permission)*

Chicken mushrooms just happen to be one of my favorite mushrooms for the table. I love them but not everyone does and I can understand why. Too often they are collected when they are too old and are tough. And many methods for cooking them don't bring out their best qualities.

In our area we have at least 2 species: the yellow-pored *Laetiporus sulphureus* and the white-pored *L. cincinnatus*. I slightly prefer the former as I think that they have a stronger aroma and they are prettier with more intense orange colorations on their caps and the yellow pores. In the field one should only collect tender specimens. As they mature it may be such that only the outsides of the shelves are still tender. There seems to be a trade-off between texture and aroma. When young and very tender they have less of an aroma but develop more flavor (up to a point) as they get more mature.

I like them best deep-fried. Of course, many foods taste wonderful when deep-fried. But in this case, chicken mushrooms really shine with this method: crispy on the outside, tender and often still juicy (if not picked too mature) with quick cooking, and colorful on the plate.

If using this method then high heat is essential for this absorbent polypore. As with eggplant, one doesn't want to use the combination of low heat and lots of oil—a perfect scenario for a greasy, oily end result. But unlike eggplant, which must be thoroughly cooked to become softened, chicken mushrooms cook very quickly and lengthy cooking with high heat will only dry them out. There are some mushrooms that must be cooked for a period of time to remove toxins or to soften them. Not so with chicken mushrooms.

I prefer to use breadcrumbs to get the best crispy texture. A dusting with flour or cornstarch really doesn't work that well. A batter such as with the tempura method can be very good but is more complicated as it takes more skill, can be very messy, and often results in a less crispy, dried-out, or even an oily product as the water in the batter will lower the temperature of the oil.

Using only tender pieces (the larger the better) I dip them in beaten egg (plenty of salt and pepper is best), and then coat them with breadcrumbs. One can also toss with flour as a first step before putting them in the egg. Fry at high heat, at least 375 degrees, for a couple of minutes in enough oil to at least submerge the mushrooms (I use a fat fryer with lots of oil). They will brown and crisp quickly. Don't overcook.

Once in awhile I luck out and find chicken mushrooms with large shelves that are also still tender. Then I make chicken mushrooms parmigiana. As soon as the mushrooms are cooked I top them with some grated Parmigiano-Reggiano (or some other good cheese) and some shredded mozzarella, and then quickly bake them in a hot oven (or use a top broiler) until the cheese melts. No tomato sauce is needed.

Less interesting to me is to sauté them. There are mushrooms such as the common white button Agaricus mushroom that are often sautéed with high heat to first drive out the water to intensify the mushroom flavor at which point the high heat creates additional flavors with the browning of the mushroom. I don't think that this method works well with chicken mushrooms as they contain less water than most mushrooms and they cook quickly. Further cooking with high heat will quickly make them dry and tough. Does it intensify their flavor and is the trade-off worth it?

Recently NYMS club member Claudine Michaud mentioned that she was soaking her chicken mushrooms in milk for an hour before sautéing. So I decided to try this method and soaked some *L. cincinnatus* pieces in rich organic milk for several hours, then sautéed them with fairly high heat in butter and a little salt and pepper. Quite good.

But then, using the same batch of chicken mushrooms that were still sitting in my fridge for several days and starting to dry out I then soaked them in the same milk and they remained in the fridge for several days. At a recent Monday night ID session, Juniper Perlis cooked them up with great results. She cooked them with only butter and a little salt over medium heat for a few minutes on each side to brown, then raised the heat and added the milk, which got absorbed and reduced into a sauce. They were really delicious this way. I am thinking that the lactic acid in the milk probably softened and tenderized the mushrooms.

(See Peggy's "Easy Chicken Mushroom" recipe on next page.)

## Recipe Corner

***Easy Chicken Mushroom for Two***

1/4 lb. bacon cut into 1/2 " pieces
1 Shallot chopped
2 gloves garlic minced
3 cups very fresh Chicken Mushroom* cut into fork size pieces
Sprigs of fresh thyme or oregano
Broth (Chicken or Vegetable)
1/4 cup of cream
Salt and pepper.
Grated Romano cheese

Cook bacon in a skillet until crisp. Remove to paper towel to drain.

Lower heat and add shallot and garlic and sauté until just soft. Add Mushrooms and stir so that nothing browns. Add broth to keep juicy as needed. When mushrooms have turned a nice orange, add thyme or oregano. Then add cream and salt and pepper to taste. Mix in bacon pieces and serve over noodles, pasta, rice etc. Udon noodles recommended.

* (Either *Laetiporus sulphureus* or *L. cincinnatus)*

## MUSHROOMER'S LAMENT

*Sung to the tune of "Both Sides, Now"*
*(with apologies to Joni Mitchell)*

**Fields and trails with fungal things**
**Growing wild in fairy rings**
**And colors rampant everywhere**
**I've looked at 'shrooms that way**

**But now they've changed their every name**
**And it's not clear who is to blame**
**They have just failed to stay the same**
**Things known have slipped away**

**I've been to NEMF and NAMA too,**
**Both east and west, with much ado**
**But little now do I recall**
**I really don't know 'shrooms at all**

**Brilliant hues and perfumes sweet**
**Twirl 'round about and grandly meet**
**As fine illusions everywhere**
**I've looked at 'shrooms that way**

**But now its just another year**
**With rainy weather soon turned clear**
**Really much too much to bear**
**Dry weather every day**

**I've looked at 'shrooms from both sides now**
**From hit and miss, but still somehow**
**Just the illusions I recall**
**I really don't know 'shrooms at all.**

jlh

## FOSSIL FUNGI

"Some of the oldest terrestrial fossils of any sort are large fibrous things called **nematophytes**. They are part of what is known as 'phytodebris' and provide the earliest evidence for land organisms. They have been found from the mid Ordovician (460 million years ago) to the early Devonian, suggesting that they lasted a period of at least 40 million years. This phytodebris certainly contains fossils of bryophyte-like plants, but it has been suggested that some of the nematophytes (particularly the genus ***Prototaxites***) were terrestrial fungi.

Two remarkable things about these fossils are that they were extremely large and so common that they were a major component of these early terrestrial ecosystems, both in terms of abundance and diversity. They included by far the largest organisms present in these ancient environments. Indeed, 'specimens of *Prototaxites* over a meter wide have been reported'.

So the current understanding is that the **first really large terrestrial organisms** were large multicellular fungi that developed to take advantage of 2 billion years' worth of accumulated bacterial, protist and bryophyte debris. "

Artist's rendition by Geoffrey Kibby, Field Mycology

(From "21st Century Guidebook to Fungi by David Moore, Geoffrey D. Robson and Anthony P. J. Trinci, 2011, Cambridge University Press")

Gleanings

■**ANOTHER TOXIC TRICHOLOMA?** It has been fifteen years since the fatal *Tricholoma equestre* poisonings in France were reported. (See LI Sporeprint, Winter, 2001.) Now Chinese scientists think they have found the toxin that caused the rhabdomyolyis (toxic muscle wasting) which caused the fatalities, not in the suspect *T. equestre,* but in *Tricholoma terreum,* apparently widely consumed in Europe, but less frequently in the USA; we do not often encounter it on L.I. The investigators collected the mushrooms in SW France and isolated two toxins with an average lethal dose of 70 mg/kg of body weight, considered to be medium toxicity, meaning that a person would have to eat several large meals of *T, terreum* over several days to reach lethal dosage. In fact that was precisely the case in the 2001 *T. equestre* poisonings. Different toxins were found in T. equestre and that data remains unpublished. The authors' conclusion that the 2001 poisonings were caused by *T. terreum* is unlikely, since the two species are easily differentiated by even novice collectors. Whether precisely the same species occur in the USA is an open question, according to Alan Bessette. (*Chemical and Toxicological Investigations of a Previously Unknown Poisonous European Mushroom Tricholoma terreum, Xia Yin et al, Chemistry– A European Journal, Vol.20, issue 23, June, 2014. Summary in Chemistry World, June 23, 2014)*

***T. terreum* on L.I.**

■ ***ASTREUS HYGROMETRICUS*– CURIOSER AND CURIOSER:** One by one, our certainties are slipping away. Field mycologists never thought twice about this common, cosmopolitan "Barometer Earthstar" other than to note that it should be relegated to the Sclerodermatales rather than the Lycoperdonales like its Geaster sisters. Not only has this recently been proved wrong, with an affiliation to the Boletales, but it now turns out that it may not occur in North America at all. A recent comprehensive macrological and molecular study reveals that there are cryptic (that terrifying term again) species, which necessitates the erection of new species. In a nutshell, there are now seven species of *Astreus* worldwide, three of which occur in the USA: *A. morganii* sp. nov.., *A. pteridis*, and *A.smithii* sp. nov., while *A. hygrometricus* occurs only in Europe and Turkey. Our northeastern Astreus is now *A. smithii* and is characterized by some "Inner peridium ..matted fibrillose….blackish rhizoids" and " spores 7.5– 15 µm, globose with a hyaline sheath overlying thickened warty layer composed of pegs." *(Astraeus: hidden dimensions, Phosri, Martin, & Watling, IMA Fungus, Vol. 4, No.2, 347-256.)*

■ **SUPERTASTERS DETECT VIRUSES:** Some of us (called supertasters by researchers) can more easily detect bitter tastes, such as that of *Tylopilus felleus* or most *Gymnopilus* species. Recent research shows that the nose's bitter receptors also detect the chemicals that bacteria use to communicate. This elicits antibacterial responses from cells in the nose and upper airways. But non-tasters do not react as strongly and are therefore more prone to chronic sinus infections; a survey of chronic sinus patients revealed almost no supertasters among them. *(Taste receptors in the nose battle bacterial invaders, Scientific American, Sept., 2014, p. 28.)*

*(Compiled by editor from cited sources)*

**IN MEMORY**

**Our oldest member, Dr. Milton Aisenson, died at the age of 97, at home, in May of this year. His wife of 65 years, Bernice, known to us all as Bunny, remains an active member. Milton practiced as a pediatrician in Queens for many years, having worked his way through NYU, graduating Phi Beta Kappa in 1940. He loved caring for the children in his practice.**

**Members since the '70's, he and Bunny faithfully attended NEMF forays annually. He was fond of chuckling over seeing one mycologist strike out an I.D. of another on the collection tables and substitute his own. He will be missed.**

## *2014 NEMF Foray*

*(Continued from page 1)*

teresting side note was her observation that *Leucoagaricus* (formerly *Lepiota) americana* stains urine red.) Another lecture I attended was John Plischke III's on obtaining free mycological literature on the web, where he has unearthed an amazing trove of books and journals. If there is sufficient interest in his lists, or Renee's key, we can post them to our website, or distribute them to interested members.

Rod Tuloss's lecture covered his and other recent research developments in the study of Amanita. His new website amanitaceae.org is a must for anyone interested in the identification of members of this genus. (Many of these keys require the use of a microscope.) Some interesting factoids emerged, such as the finding that the amatoxins of section Phalloidaea are not secondary metabolites but direct genetic products, possibly of ancient origin on the urcontinent of Gondwana about 65 million years ago. The most primitive Amanitas were saprotrophs, digesting cellulose, and subsequently evolved into mycorrhizal species, spreading to the Americas via the Bering Land Bridge. Among other characters, spore shape is influenced by climate, with small, round spores characteristic of wet tropical forests and more elongated shapes seen in dry ecosystems. More recently, DNA analysis has demonstrated the existence of unsuspected "hybrid swarms" with hidden taxa that cannot be distinguished morphologically.

***Brandon at the lecture podium.***

P. Brandon Matheny delivered the flagship lecture of this foray, "Origins and Patterns of Diversification in Ectomycorrhizal (ECM) Fungi", a scholarly address which many found challenging. Drawing on recent research by himself and others, he set out to surprise his listeners with unexpected findings, the major one that ECM fungi did not evolve slowly through the mists of time (145-65 million years ago [MYA]), but rather more recently, (65-24 MYA) and underwent rapid radiation. Moreover, while many had a paleotropic origin, their greatest diversity and speciation took place in temperate climates, where their biodiversity is now greatest, contrary to the recognized biological rule of species richness peaking at lower latitudes, i.e., tropical rain forests. It has also been established that white spored mushrooms are more ancient than brown spored ones.

The concluding talk by Raymond Archambault of the Cercle des Mycologuues de Montreal was a comic presentation wherein he took the opportunity to chide the English speaking world for continuing to use "herbarium" for mycological collections rather than the more European term " fungarium". As it is said, "a distinction without a difference." In practice, the two terms are equivalent.

***At the collection tables.***

This was a fruitful and well organized foray that was well attended and smoothly run, for which the organizers of the Maine Mycological Association deserve full credit. The only jarring note was the mycophagy session, served cold in pre-arranged portions, probably to save time but met with almost universal rejection by experienced mycophages who are used to better. Revenge may be a dish best served cold, but not mushrooms.

Next year the 39th Annual Samuel Ristich foray will be hosted by the Connecticut Valley Mycological Society at Connecticut College, New London, CT, from July 30- Aug. 2, 2015. This is within easy reach of Long Islanders, by auto, or ferry across LI Sound, and we hope to see many of our members there.

## *FINDINGS AFIELD*

*Continued from page 7)*

of *P. nothopellitus*. Likewise, collections in the University of Michigan Herbarium collected by Smith (as *P. pellitus)* and determined by Kauffman were examined by Justo and found to be *P. nothopellis*.

***Spore of P. nothopellis***

While the absence of a characteristic (clamp connections) is questionably enough for an identification, the positive finding of significantly larger spores clinches the identification. ( P. pellitus spores average 6.5 X 4.6.) Our specimen better fits the description of *P. nothopellis* and will be added to our checklist and submitted to Mycoportal.

* Pluteus nothopellis sp. nov. and a review of white species in *Pluteus* section *Pluteus, A. Justo & ML Castro, Mycotaxon Oct-Dec. 2007, Vol102, pp 221-230.*

# FORAY RESULTS SUMMARY

**Blydenburgh CP, June 28:** This first foray of Summer got things off to a slow start, with a total of 30 species, but luckily there was a good amount of Chicken *(Laetiporus cincinnatus)*: 3 fruiting bodies, medium to large, more than enough for all. Otherwise, there was a nice mix of Russulas, Amanitas, some Boletes, and one species new to our list, that I first took for *Pluteus pellitus,* a small, white Pluteus reported from both Europe and North America. However, a recent paper (2007) differentiates a very similar species that has a larger spore and no clamp-connections, and establishes it as a new species. Please see Findings Afield, below.

***Gliophorus psittacina v. perplexa***

**Heckscher SP, July 5:** Cancelled.

**Bethpage SP, July 12:** Cancelled.

**Heckscher, July 19:** A total of 47 species was collected which included a number of edible Boletes, (discounting the scores of wormy *B. bicolor*), *Agaricus campestris*, and a few yellow Chanterelles. A large number of *Hygrocybe* (now *Gliophorus*) *psittacina* var. *perplexa*, not often encountered here, was a pleasant sight.

***Tylopilus ballouii***

There were two species previously unrecorded: the slime mold, *Brefeldia maxima,* and *Cortinarius croceus.*

***Cortinarius croceus***

**West Hills South, July 26:** Cancelled.

**Prosser/ Cathedral Pines, Aug 2:** Cancelled

**Planting Fields Arboretum, Aug 9:** The small total of only 14 species was compensated for by a nice *Laetiporus cincinnatus*

**Rocky Pt Preserve, Aug 16:** Cancelled.

**Blydenburgh CP, Aug 23:** A successful foray thanks to the optimism of Roger, our appointed leader, with a grand total of 54 species, including both Chicken Mushrooms *(Laetiporus sulphureus and L. cincinnatus)*, as well as several large Beefsteak (*Fistulina hepatica)*. Also welcome were many good-sized *Clitopilus prunulus* (Miller), which were collected for the table. The bitter, but strikingly orange hued *Tylopilus ballouii,* was a feast for the eyes, as was an early *Cortinarius subargentatus*. The many *Russula compacta* we found were unfortunately all worm ridden.

***Cortinarius subargentatus***

## FINDINGS AFIELD

On the June 28 Blydenburgh foray a small, non-descript white mushroom with pinkish free gills was collected, which could be field identified to genus as a Pluteus. Later, I attempted to key it out using the Pluteus key in Bessette's NE book, and the only smooth capped white Pluteus is *P. pellitus,* with prominently horned pleurocystidea and spores measuring 7-8 X 5-6 µm. This fit well except that my specimens spores were somewhat larger, reaching 10 X 8.

A bit of research on the web turned up a 2007 paper in Mycotaxon, a review of white species in Pluteus section Pluteus*. The authors (A.Justo Y ML Castro at the University of Vigo, Spain) describe a new species, *Pluteus nothopellitus,* which is differentiated from *P. pellitus* by larger spores, absence of clamp connections and habitat on broad-leaved wood. Apparently there has been a confusion in the literature, with two concepts of *Pluteus pellitus* being in conflict. They indicate that *P. nothopellitus* is present in both Europe and NA, where it is probably widespread, while they imply that *P. pellitus* may be confined to Europe. This can only be determined by a close examination of existing herbaria specimens and additional collections.

*Pluteus nothopellitus (Mycotaxon Photo)*

No reports of *P. nothopellitus* can be found on the Mycoportal website, and the spore details ascribed to accessible collections of *P. pellitus* are those

***(Continued on page 6)***


**IN THIS ISSUE**



***For man, autumn is a time of harvest, of gathering together. For nature, it is a time of sowing, of scattering abroad.***

***Edwin Way Teale, Autumn Across America.***

LONG ISLAND MYCOLOGICAL CLUB
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