LONG ISLAND MYCOLOGICAL CLUB

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LI SPOREPRINT

Happy Holidays!

1973-2015

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VOLUME 23, NUMBER 4, WINTER, 2015

FINDINGS AFIELD

Out-of-range Southern mushrooms continue to show up here, particularly Amanitas, and this collection appeared during a very dry season, and so was doubly unexpected. They were collected on our annual Picnic Day by Carol and Rich Capaldo, and at first seemed like just another unremarkable white Lepidella, of which we have many. Initially, I took it for *A. subsolitaria*, because of signs possible "yellowing syndrome" a yeast infection which infects the latter.

Amanita praelongispora

But the presence of a slightly marginate bulb (arrow above) gave me second thoughts, so I returned to Jenkin's key, and also used Rod Tulloss' online sporograph, and the identification of *Amanita praelongispora* fit exactly, particularly the spore measurement of 9-11 X 3-4.5, which produced a Q value of 2.66, an exact match. Additionally, the gills dried brown, also noted by Jenkins.

A part of the collection went to Rod Tulloss, who kindly verified this I.D. Its reported distribution is the southerly coastal plain, from Florida to S. Carolina. This seems to be the first record north of S.C. It will be added to our checklist and the remainder of the collection donated to the NYBG herbarium as part of our Mycoportal project participation.

NAMA 2015 BLUE RIDGE FORAY REPORT

Mushroomers welcome rain, but not particularly during the foray itself, but that is precisely what occurred during this foray, and for almost the entire time, so many (including Peggy & I) opted for attending lectures and workshops, which were many and varied, to suit all levels and interests. Although the rainfall in preceding weeks had not been ample, nevertheless by the foray's end, a respectable total of species had been collected, but as the promised list never materialized online, the number and composition is not public, a major failing. Field trip attendance had been predetermined by an online choice process, which was unwieldy and not to everyone's liking.

The collection tables: Giant *Amanita ravenelii,* with cap over a foot wide.

Hosted by the Asheville Mushroom Club, the foray was headquartered at the YMCA Blue Ridge Assembly center in Black Mt., NC, situated on a 1200 acre wooded site. Several other groups were also being hosted, adding up to a total of 750 guests, so that meal times were somewhat hectic, and the food itself of such poor quality that it drove some to "eat out". It is a tribute to the dedication of mushroom enthusiasts that they are willing to overlook such negatives with good cheer. However, the mycophagy session, which included cooking demonstrations and recipe sharing, was superb. In fact, that served as our evening meal that day.

Other than the opportunity for collecting and seeing new species, (as well as old acquaintances) the faculty lectures and workshops are the great attraction of regional and national forays, and these were of the highest quality, revealing the wide and profound current research into theoretical and practical aspects of fungal investigations. In addition to familiar names such as Tom Volk, Rod Tulloss, Alan & Arleen Bessette, and others, were some dynamic newcomers such as Todd Elliott, a far ranging dynamic researcher of seemingly inexhaustible energy who not only lectured but serenaded his audience as well. That other academics were not lacking musical

(Continued on page 6)

MEMBERSHIP RENEWAL FORM ENCLOSED.

PRESIDENT'S MESSAGE

What a year this has been! The beginning was outstanding with oyster mushrooms in multiple locations. The middle was lackluster to say the least. The Autumn, especially the last two forays of the season was great with many mushrooms that I had given up on seeing this year. The last part of the local mushrooming season is now almost at an end but quite a few members are still finding perfect oyster mushrooms. Wonderful if you consider that it is mid-December. Go out and look for old maples; maybe you'll get lucky. (So far, I haven't found any.)

At the end of the year, as always, I want to thank all of our board members for their continuing help and suggestions. Thanks to all, new members as well as old that actively participated in our forays . Thanks to Maria for her flourishing Yahoo site and to those who use it. Members that send in recipes are helping out, too. (I wish some would write a short article or two for our news letter.)We appreciate those like Amy who have found new sites for us to explore . (A lot of the foray sites we use today are the result of members sharing them with us. If you find a site that has an abundance of mushrooms, let us know. Sharing is what we do.)

I want to remind everyone that dues time is here. As most of you know, the membership year is from January to December regardless of which month you originally signed up. It is a lot of work for us to take member details off our list if people don't pay on time only to have to put them back when dues are finally paid. So, please keep this in mind and respond ASAP to the enclosed renewal.

In closing, I wish you all a happy 2016. I hope see more of you along the trail next season.

EDITOR'S NOTE

Entering the woods to search for fungi we leave our mundane affairs and worldly troubles behind. Concentrating on this kingdom of life so far removed from our own focuses our attention away from ourselves and imparts a peacefulness perhaps akin to meditation. Psychological studies have shown that simply being immersed or even exposed to natural surroundings has a host of healthful, healing effects.

But in another sense, the concerns of the world follow us in our woodsy quest. This is not a stationary state, but a changing, dynamic one, with species disappearing before our eyes and habitats destroyed. Unfortunately, a great deal of this is not a natural progression but a man-made condition. For the most part, we are merely witnesses to these events, but witnessing and reporting has a crucial part to play as well. "Citizen science" is becoming a more important part of natural science in many venues and mycology is one of these; here we can play our small part.

So, in the words of Thoreau, let us remember that "..The humblest fungus betrays a life akin to our own….it is a successful poem of its kind…"

MATERIAL FOR THE SPRING, 2016 EDITION SHOULD REACH THE EDITOR BY MARCH 1ST.

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

(All unsigned articles authored by editor.)

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LONG ISLAND HEBELOMAS AS IDENTIFIED BY DR. HENRY BEKER

Hebeloma mesophaeum 1

Hebeloma cavipes 1

Hebeloma brunneifolium **cf**

Hebeloma marzipan **nom prov**

Hebeloma crustiliniforme

Hebeloma naviculosporum

Hebeloma melleum **cf**

Hebeloma colvinii 1

Since 2007 we have been collecting Hebeloma species with and for Dr. Henry Beker, the Belgian Hebeloma expert, and he has recently supplied us with a list of his identifications of our collections and their molecular relationship with European species. Some appear to be the same or very close while others differ discernibly and will eventually be assigned different names. Below are Dr. Beker's comments:

"*Cavipes 1* is close to *cavipes* but appears to be a North American species.
***Colvini 1* is close to *cavipes* but appears to be a North American species.**
***"Marzipan"* sect Theobromina is the unusual species we keep finding on Long Island but...no records from anywhere else..**
***Melleum* cf sect Scabrispora appears close to melleum but different..we only have the one collection.**
***Mesophaeum 1* is close to mesophaeum but appears to be a NA species....**
***Naviculosporum* cf probably is naviculosporum....we do have other US colls."**

FORAY RESULTS SUMMARY

Southaven C.P., Sept 12, Foray & Picnic: After two months of cancellations due to continued drought, we resumed our forays on this annual picnic date. It was not a banner day, with only 24 species collected, but it was good to get back in the game, and amazingly, one previously unrecorded species, *Amanita praelongisporia,* was found by Carol & Richard Capaldo.(See page 1.) This seems to be the first NY State record of this species.

X. megalospora

Prosser/Cathedral Pines, Oct 4: By this time, the season was in full swing, and a total of 55 species were collected, although edibles were few. Amanita dominated, followed by Russula and Mycena. *Xerula megalospora* (found by Rosario Cardonna) was new to our list.

Southaven C.P., Oct. 10: Old reliable produced 47 species this day, with good amounts of edibles such as Agaricus, Armillaria, Grifola, Lycoperdon & Suillus.

Edgewood Preserve, Oct 17: With the rains returning, this pre-Mushroom Day foray produced 39 species, about average, with good amounts of *Suillus brevipes* and *S. grevellei*, and some *Leccinum*.

Leccinum aurantiacum

Peconic Hills/Cranberry Bog, Oct. 24: The total of 36 species does not reflect the satisfaction our forayers felt with their bounty of Gypsies (now *Cortinarius caperatus), Leccinum. Suillus, Albatrellus* and *Tricholoma focale.* We again encountered *Suillus neoalbidipes,* which we find at no other site. *Inocybe curreyi* was a new addition to our checklist.

Brookhaven SP, Oct 31: Thirty-six species were collected, including goodly amounts of Leccinum and *Suillus brevipes. Amanita muscaria, Cortinarius mucosus,* and *Rhodocollybia maculate* in abundance made for impressive displays.

Rocky Pt Preserve, Nov 7: The expected crop of Tricholomas did not fail us, and collecting bags were full of *T. equestre, T. portentosum*, and *T. niveipes.* Also a favorite among pot-hunters, *Hygrophorus ponderatus* was added to the mix, as was I and *H. amygdalinus,* the local "Almond Hygrophorus". The toothed *Bankera fuligineoalba*, smelling of curry, is always interesting to find.

Tricholoma scalpturatum

Edgewood Preserve, Nov 14: Returning to Edgewood after a month produced a new array of species, mostly duplicating other pine barren sites, with Tricholoma and Hygrophorus species continuing their seasonal appearance. One previously unrecorded species, *Tricholoma scalpturatum,* was found by Roger Eklund. A white form of *H. amygdalinus* was unusual. Over 40 species in all.

Leucogloea compressa

Welwyn Preserve, Nov 21: For the last foray of the season, we departed the pine barrens for this hardwood forest, and a different species assortment. Although only 25 species were found, there was a great amount of edibles including Oysters, Brickcaps, and Honeys *(Armillaria ostoyae).* Since we looked very closely at every fallen log, 3 new species were found, all identified by Aaron Norarevian: *Leucogloea compressa, Botryobasidium aureum*, and *Trametes cervina,* the first two tiny and inconspicuous.

Timothy & Bricktops

■ **"HOW THE CHILI GOT ITS SPICE":** This is the intriguing title of a PhD thesis by Noelle Machnicki at University of Washington that examines the coevolution of wild chili peppers, fungal pathogens and insect vectors. By sampling chilies across 185 miles of mixed terrain in Bolivia, she demonstrated that chilies vary in pungency depending upon the humidity of their habitat, and that this in turn is dependent upon the amount of capsaicin, the alkaloid that produces their "hotness'. Ancestral chilies developed in a dry environment, where fungi are not an important pathogen, and so were devoid of capsaicin, which developed in wetter environments to combat fungal pathogens, which she showed can kill the seeds of chili plants. But they can be slowed or halted by the alkaloid, which also repels mammals while not affecting the birds which are effective dispersers of seeds. This is an evolutionary "arms race" with fungi developing resistance and chilies ramping up their defenses, which accounts for the existence of superhot varieties. So if you love spiciness, thank the fungi. *(As recounted in "The Triumph of Seeds", by Thor Hansom, Basic Books, 2015. The original paper may be accessed at https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/24300/Machnicki_washington_0250E_12325.pdf?sequence=1&isAllowed=y*

■ **SPORES HELP THE RAIN TO FALL:** A recent paper utilizing a variety of basidiomycete spores, (Russula, Geastrum, Suillus, etc.) exposing them to conditions of varying humidity and pressure and then scanning them by electron microscopy showed that droplet formation occurred on their surfaces. To be exact, on the hilar appendage and adaxial surface, forming large droplets with the increase of relative humidity, their size often exceeding the size of the spores. This occurred only on "ballistospores" from gilled mushrooms while non-ballistosporic spores from, e.g., *Lycoperdon pyriforme,* formed only a thin water coating. The authors suggest that "the dispersal of vast numbers of hygroscopic basidiospores into the atmosphere above forests may have a significant role in the condensation of water in clouds and the formation of raindrops". To see a really neat video clip of this process taking place on a spore of *Russula aeruginea*, access the following reference link. (*Mushrooms as Rainmakers: How spores act as nuclei for raindrops. MO Hassett, MWF Fischer, NP Money. PLOS One, Oct. 28, 2015.*http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0140407)

■ **WHITHER LACTARIUS VOLEMUS?** We recently were instructed that this name is no longer correct, *Lactifluus* being the newly erected genus into which it should be placed. Now an exacting molecular and microscopic study of European collections concludes that there are actually three species masquerading under this name in Europe (*L. oedematopus* and *L. subvolemus).* Although the authors consider the delimitation of North American species beyond the scope of their study, they did include some NA collections of *L. volemus* and *L. corrugis* in their sampling. This demonstrated that "none of the NA look-alikes of *L.volemus* are conspecific with the European species and therefore in need of new names" No doubt this will eventually result in another series of epithets with "ameri" as a prefix, which we have seen take place in other genera. *(Lactarius volemus in Europe:Three species in one..K. Van de Putte et al, Fungal Biology 120 (2016) 1-25, online Sept 2015)*

■ ***CORTINARIUS VIOLACEUS*, GLOBAL CITIZEN:** Another wide ranging molecular study focused on the *Cortinarius violaceus* group, analyzing collections worldwide, from Europe, NA, SA, CA and Australasia, and resulted in the delineation of eight "species-level lineages" with interspecific variation of 2% or greater. *Cortinarius violaceus* auct. mult. was widely spread throughout eastern and western NA and Europe. No genetic difference was found between individuals associated with different hosts, i.e., hardwoods and conifers. Some of these lineages, particularly in the Americas, represent undescribed species, and will require new names, as will some in Australia and New Zealand. The authors postulate an initial diversification at about 12 million years ago in Australasia in association with angiosperms, with subsequent long-distance dispersal into the neotropics, and across the Panamanian land bridge, ultimately establishing a holarctic distribution, perhaps due to its ability to associate with a wide range of hosts. (*Long-distance dispersal and speciation of Australian & American species of Cortinarius sect. Cortinarius, E. Harrower et al, Mycologia,107(4), 2015, 697-709.)*

NAMA Foray 2016 ***(Continued from page 1)***

talents as well was proven by a concert of blue-grass (photo p.6)at an evening social.

The evening lectures were kicked off by Dan Lazars' introduction to Blue Ridge ecosystems, explaining how this region, based on its long geological history, has the greatest biodiversity in the nation, and the largest tracts of old growth forest in the Eastern United States. Enlarging upon this theme, Rytas Vilgalys class on the "awesome diversity" of N.C. fungi delved into species found in unusual locales such as Spartina and Eel grass, crab guts, etc., as well as informing us of such factoids as Tremella being a mycoparasite. Further odd fungi and facts about them were replete in Julia Kerrigan's talk on microfungi, which touched upon the recent discovery of an entire new class of soil fungi, Acheorhizomycetes, unearthed by molecular sequencing of global soils. She introduced us to a novel twist in the tale of Fleming's discovery of penicillin, involving the precautionary hiding of the discovery, at the time of the Dunkirk evacuation, by dusting a scientist's jacket with the spores. Those interested may pursue the details in, "The Mold in Dr. Florey's Coat" by Eric Lax.

"Academic Quintet". L to R, Todd Elliott, Rytas Vilgalys, (2 unID'd) Jay Justice.

Brandon Matheny, the master of Inocybe, has delved further afield and in a far-ranging series of papers by himself and others, which he summarized at his talk, a new framework for the Agaricales has been erected, now reduced to seven suborders: *Agaricaceae, Pluteaceae, Tricholomataceae, Marasmiaceae, Schizophyllaceae, Pleurotineae,* and *Hygrophorineae*. While suborders have decreased, genera have multiplied to a mind-staggering degree, with such new names as *Protostropharia, Bogbodia, Pseudotricholoma, Crassisporium, Peudolaccaria*, etc., etc. It will take much time and effort for amateurs to learn and absorb these novel taxa. For the indefatigable myconerds who wish to pursue this further, Brandon's site (http://www.bio.utk.edu/matheny/Site/Publications.html) has links to many recent papers.

Debbie Viess, (aka AmanitaRita) co-founder of the Bay Area Mycological Society, spoke on the topic of Amanita poisoning, providing us with the information that no members of section Validae (A. rubescens, A. flavoconia, etc.) has been demonstrated to contain amatoxins, the major cause of mushroom poisoning fatalities. The same is true for section Caesareae, of which *Amanita jacksonii,* consumed in NA, is but rarely found on LI. (However, A. franchetti, also in this section, has been implicated in a number of deaths in China.) The good news is that a successful treatment of amatoxin poisoning has been developed and successfully used in Europe, and is available as an experimental therapy in the United States. Administered intravenously, it is an extract of milk thistle, *Silybum marianus,* used for over 2,000 years as an herbal remedy for liver health, and marketed as Legalon®SIL.

Alan Bessette was the lead mycologist, and presented several classes, as well as an overview of the collection. His class covered the Russulaceae, with particular emphasis on field characters and identification of Lactarius, Lactifluus, and Multifurca, the latter two newly described genera. Multifurca is formed from a small group of Lactarius and Russula that DNA analysis shows to be a separate clade. They have dark yellowish forked (furcated) gills, dark yellowish spore prints, and zonate caps. These are mostly rare tropical species with one or two representatives in the Southern USA, and need not concern us. On the other hand, genus Lactifluus, former Lactarius species with copious latex and several distinct microscopic features, do occur here and are represented by *L. allardii, L. luteolus,* and *L. subvellereus*, among others.

Alan's evening address focused on the research and collecting he and Arleen are doing in Georgia (where they now reside), where field work sometimes requires the wearing of shin guards to deter snakebites. Among their finds is a new species of Boletaceae, *Lanmaoa roseocrispans; Lanmaoa* is a recently erected genus which now includes *B. pseudosensibilis.* Ultimately, this will culminate in the publication of a guide to Mushrooms of the Gulf Coast. Prior to that, perhaps by Autumn of 2016, we may expect the issuance of a guide devoted to the NE, "Boletes of Eastern NA".

Paul Stamets, the Steve Jobs of mycoceuticals, wearing his permanent headgear made of *Fomes fomentarius,* dedicated his address to Tom Volk, and

(Continued on page 7)

Pepper & Mushroom Salad*

Contributed by Carol Capaldo. A great hit at our Picnic!

1 each green, red & yellow bell pepper, halved and seeded
2 tablespoons virgin olive oil
1 shallot finely chopped
1 garlic clove, pressed or minced
6 ounces wild mushrooms, cut into large pieces (we added more)
1-2 tablespoons red wine vinegar
1/2 teaspoon dijon style mustard
salt & pepper to taste
2 ounces feta cheese, crumbled
parsley sprigs for garnish

1. Preheat broiler. To prepare peppers place on baking sheet, cut sides up, broil 3 minutes, turn and broil 5 more minutes or until skin blisters and blackens. Peel off skin, cut peppers into 3/4" pieces and arrange on individual serving plates. Set aside.

2. In a frying pan, heat oil. Add shallot and garlic, saute 2 minutes or until softened. Add mushrooms, cook 2 minutes. Using a slotted spoon, arrange mushroom mixture over peppers.

3. Add vinegar and mustard to pan juices; boil over high heat until reduced to 1-2 tablespoons. Season with salt and pepper, then drizzle over peppers and mushrooms. Let cool, then chill at least 30 minutes. Before serving, adjust seasoning; sprinkle with cheese and garnish with parsley sprigs.

Makes 4 servings.

*A Gourmet's Guide to Mushrooms & Truffles by Jacqui Hurst & Lyn Rutherford.

LONG ISLAND MUSHROOMS YAHOO GROUP REMINDER

This LIMC Yahoo Group was started and is overseen by Maria Safioti. Members can post photos, messages and links re mushroom related topics, and is the place to find where the latest action is: sites where members are reporting their finds. If you failed to receive an invitation to join (one is required) contact Maria at msotolongo@optonline.net and she will respond with an invitation to join. See you online!

WELCOME, NEW MEMBERS!

Chet Henry	**Irene Stern**	**Dawn & Peter Ferguson**
Carmela & Michael Trani	**John Pancrazi**	**Jean & Michael McCormick**
Diane & Stephen Menutti	**Joseph Wing**	**Tina Marie Bebry**
Daniel & Thelma Medina-Corpas	**Kimberly Boodoosingh & Vyacheslav Makarov**	
Bill McLoughlin & Rose Nigro	**Jing Zhang & Carlos Montero**	**Heather & John Lamphere**
Tamara Koss & Michael Binder	**Timothy Schweitzer**	**Yvonne & Pietro Palmari**

NAMA 2015 *(Cont'd from page 6)*

updated us on his latest anticancer research utilizing polypore extracts, and the development of a mycelium based bee food that lengthens honeybee lives. While space limitations prevent us from going into the many other worthy lectures, suffice it to say that they are never less than deeply absorbing and informative, a mini-education from the cutting edge of mycological research.

The NAMA Award for Contributions to Amateur Mycology has been rechristened the Gary Lincoff Award, and this year was given to Dr. Andreus Voitk, a retired surgeon, for his many years of work in establishing and directing Foray Newfoundland and Labrador.

NAMA 2016 will revisit the Appalachians and take place at the 4H Center, Front Royal, VA from Sept 8-11, where the hosts will be the Mycological Association of Washington, D.C.

IN THIS ISSUE

Findings Afield	1
NAMA 2015 Blue Ridge Foray Report	1
President's Message	2
Editor's Note	2
Long Island Hebelomas	3
Foray Results Summary	4
Gleanings	5
Yahoo Groups Reminder	7
Welcome, New Members!	7

"...It is to us more realistic to arrange the species of Hygrophorus in a natural classification within a large genus than to distribute them among a number of genera, and thus create the impression of a degree of discontinuity which we believe does not exist."

North American Species of Hygrophorus, LR Hesler & AH Smith, 1963

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MEMBERSHIP RENEWAL FORM ENCLOSED.

Please respond before Jan 31, 2016