LONG ISLAND MYCOLOGICAL CLUB

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L.I. SPOREPRINT

1973-2017

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VOLUME 25, NUMBER 3, AUTUMN, 2017

MUSHROOM DAY
OCTOBER 15
PLANTING FIELDS ARBORETUM
1 PM —4 PM

This display, for educational purposes, is our major public event, and we ask all members to participate by collecting samples and arriving between 11:30 AM-12 to help set up. Members can inform the booth attendant of that and avoid the fee.

Unlike the last two year's drought conditions, normal rainfall provided good collecting until recently, so if the present lull continues, extra effort will be required to ensure a satisfactory display. We rely on all members to pitch in and participate to make this day a successful one.

If you are a new member, this is a perfect opportunity both to meet the others as well as to gain familiarity with a wide variety of species from every corner of Long Island.

NEMF 2017 41st SAMUEL RISTICH FORAY

Stratton Mountain, VT
July 27-30

In a departure from tradition, this foray was not sited in the several host clubs' home state, New York, but in a Vermont area that the NYMS, the primary host, was intimately familiar with from their annual Chanterelle excursions. It was extremely well organized and smoothly run, and accommodations at the Stratton Mt. Resort, a skiing facility, were above the norm. And as anyone who has been watching the weather is aware, rainfall in the Northeast this year has been bountiful. These factors came together to produce a very successful foray, with the second highest species total ever: 562, which includes slime molds and lichens. (The highest total was 601 in 1986 at North Adams, MA.) Fifty-one species were new to the NEMF list, which included eighteen new genera.

AT THE TABLES: Identifying & Sorting

As usual, whether to go on a foray or attend a lecture posed a dilemma. I focused on the lectures, but by loitering at the collection tables and helping with the sorting and identification, was able to see many of the fungi collected in their fresh state. Thus I was able to familiarize myself with species that are not normally collected on Long Island.

The lectures were of the highest quality, with both academic mycologists presenting their research findings and the latest nomenclatural developments, and devoted amateurs lecturing on mushroom families and their identification, regional species, as well as presenting microscopy and other classes for beginners. I was particularly pleased to attend Rick Kerrigan's lecture on the genus Agaricus, on which topic he recently published, "Agaricus of North America" the first systematic treatment of that genus on this continent,

(Continued on page 3)

PRESIDENT'S MESSAGE

This has been an interesting year in regard to fungi. Some regularly seen species have not been abundant and some have shown themselves weeks early. For instance, Black Trumpets have been scarce except for the picnic foray and Hen-of-the-Woods has been abundant but about 3 weeks early. Next year who knows what will show up and when.

The NEMF foray in Vermont was a wonderful event thanks to Paul Sadowski and helpers who did a great job in coordinating the whole affair. It is a very tough job. The NAMA foray was excellent as well. These events take place in interesting locals across the country so you can explore as well as attend the foray. I do wish some of our members would come to at least one in the future. You won't be sorry.

Our annual picnic was a success with 30 members attending. Fun people, a foray and great food, what more could you want?

October 15th is our scheduled Mushroom Day at Planting Fields. Please collect what you can to display...no rotten things! If you have made a mushroom craft, please feel free to bring it for display. A special thank you to Anthony and Cathy Sama who crafted a beautiful fall wreath for LIMC which will displayed. (Please come early to set up.)

If you are interested in mushroom crafts, go Jill Bliss' site at http//bit.ly/mushroomphotos or just look up her name. She uses dried mushrooms and other natural objects in unique ways that may inspire you to attempt some creations of your own.. (Keep in mind that she is on the west coast so some fungi do not appear here.)

Hope to see you along the trails.

EDITOR'S NOTE

While much disinformation is rampant on the internet, mushroom lovers are fortunate to have available diverse and plentiful trustworthy resources to explore the fungal realm. Elsewhere in this issue we touch upon two of them: a Bolete key (page 5) and a 270 page Polypore guide (page 6) in pdf format.

As the first club to have its species checklist on Mycoportal, this resource can be used as a handy reference to explore our local species. After navigating to our list (Checklist Projects—Macrofungi (North America):Local—Long Island) click on *Games* and then select either Name Game or Flash Card Quiz. The latter displays a photo of a species on our checklist and asks you to guess its identity by selecting from a list. If stumped, there is the option to request the answer. This is a good way to learn our species. Or one can simply go through our checklist and click on a species of interest, and a photo of the species will in most cases appear, sometimes our own, when only we have submitted a photo or a specimen.

Another method is to go to the Options tab on the upper right and check Display as Images, then Rebuild List. All available species photos will then be displayed in alphabetical order. Click on a photo will then show the geographic range. Have fun!

MATERIAL FOR THE WINTER 2017 EDITION SHOULD REACH THE EDITOR BY DECEMBER 1ST.

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

(All unsigned articles authored by editor.)

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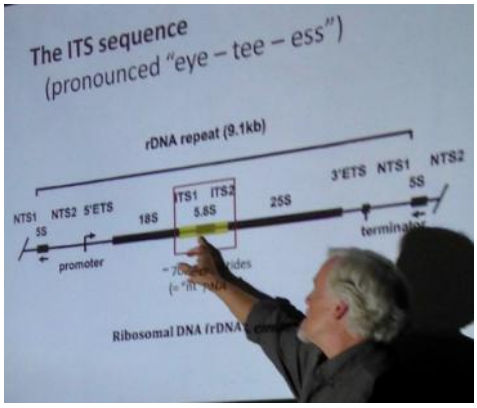
NEMF 2017 *(Continued from page 1)*

and likely to remain a milestone for many decades. In addition to addressing the technical aspects of Agaricus delineation, he delved deeply into the problems and limitations of utilizing DNA sequencing which despite its objectivity is but one data point among a set and not always the court of last resort. One surprising detail was that the "true" *Agaricus campestris* of Europe has, in NA, been thus far found only in the Rocky Mt. area.



Rick Kerrigan on the DNA of Agaricus.

To give you the flavor of the classrooms, I'll discuss a few more presentations. Firstly, Henry Beker's lecture, which was entitled, "Nothing Like a Hebeloma" and dealt with his research on that genus in Europe, which culminated in last year's publication of *Volume 14 of Fungi Europaei, Hebeloma (Fr.) P. Kumm.*, together with Ursula Eberhardt and Jan Vesterholt (deceased). As many of you know, LIMC has been aiding Henry with his collecting in NA since 2007. At this point he is able to inform us that compared to Europe, which has 84 species, in NA 64 species have already been confirmed, but collections are still continuing and it is predicted that NA will have greater diversity than Europe. In the Northeast we have 29 species (not all named yet) 17 of which are known from Europe. This represents a great advance over the scant 4 named species collected by NEMF from 1976 to the present!

Roy Halling, of the NYBG, attempted to distill for us the history of Boletaceae studies and the bewildering proliferation of new genera, an ongoing process. In 1971 Smith & Thiers' Boletes of Michigan dealt with a total of 12 genera, which by the time of Singer's work (1949-1986) had increased to 25, and at last count is now about 76. (According to LifeMap, the total number of species worldwide is currently 1,552.) Realignment and reclassification continue as additional DNA sections are utilized for finer refinement. This does not always result in universal accord, and various researchers can differ on the phylogenetics of a species whose taxonomy is agreed upon.

Additional presenters included Rod Tulloss, the Amanita authority; Tim Baroni, Entoloma expert; Renée Lebeuf, accomplished Quebecois fungal photographer and field mycologist; Walt Sturgeon, renowned field mycologist and author, and many others. Renée received the NEMF Amicus Tironum (Friend of the Amateur) award for her invaluable assistance to amateurs. Links to pdf's of several of these presentations are available online at http://nemforg.ipage.com/mycologists-nemf-foray-slide-presentations.html

Of course, the pleasures associated with the love of mushrooms are not purely cerebral. Thankfully, there is always mycophagy. And in the last few years, we have been fortunate that mycophagy at these events has been in the hands of The Three Foragers, a culinary trio that has upgraded the art of mushroom cookery to sublime heights. This year, their eagerly awaited dishes included Bolete Bread, made with *Tylopilus alboater;* Chanterelle Zucchini Squares, made with *Cantharellus cibarius* and zucchini; and Chicken Corn Bread Muffins, made with *Laetiporus sulphureus,* peas and cornmeal.

Henry Beker discussing his Hebeloma research.

Many of their recipes can be found online at http://the3foragers.blogspot.com/

Mycologists' awards were presented to those persistent foragers who found interesting and rare species, among them: *Pseudomerulius aureus,* a resupinate member of the Bolete family; *Physalacria inflata,* the Bladder Fungus, not yet collected on L.I.: *Syzygospora mycetophila,* the Collybia Jelly parasite; and *Neocudoniella radicella,* a tiny, translucent Ascomycete.

The 2018 42nd Sam Ristich NEMF Foray will take place July 26-29 at the State University on NY at Geneseo, in the Finger Lakes region, hosted by four clubs: Central NY Mycological Society, MidYork Mycological Society, NJMA, and the Susquehana Valley MA. We strongly encourage all LIMC members to attend. To see a short promotional video, go to:

https://www.youtube.com/watch?v=xd5PIFXsWRM

FORAY RESULTS SUMMARY

BETHPAGE S.P., JULY 9:
Originally scheduled for Heckscher, but that site had been mowed. A total of 48 species were collected, with 10 species of Boletales including *Boletus floridanus.* Other edibles were Black Trumpets, and Yellow and Orange Chantarelles, New to the list was *Amanita russuloides,* I.D.'d on sight by Aaron Norarevian.

Amanita russuloides

WEST HILLS NORTH, JULY 15:
62 species were collected, Amanita predominating with 13 species. Other than some Russulas and *Marasmius oreades,* there were few edibles.

PLANTING FIELDS, AUG. 5: Cancelled, few fungi.

WEST HILLS MAIN, AUG 16:
This was an unscheduled, "flash" foray, held in late afternoon to avoid the exorbitant $15 fee. We collected 37 species, with members of the Russula family predominating. There were a few Boletes, and some edible Lactarius, and one small *Laetiporus sulfurous.* An interesting find was *Russula earlei*, (pictured here) looking very unlike the standard Russula, and thought to be an earlier, more primitive species.

Russula earlei

BLYDENBURGH C.P., AUG 26:

Xerocomus hypoxanthus

A grand total of 84 species, with Amanitas and Boletes predominating, and adequate amounts of edible Lactarius and Russula. Three species were new to the LI checklist: *Amanita rhacopus, n.p., Clavaria rubicundula,* and *Xerocomus hypoxanthus,* (verified by Alan Bessette via email). This represents the first record north of N.Carolina Interesting also was a pure white *Megacollybia rodmani* form *murina* (with projecting cheilocystidea) not previously reported in the literature, found by Anthony Sama.

SOUTHAVEN C,P., SEPT 2:
(Switched from Brookhaven S.P.) 72 total species, the Boletes taking the lead with 16 species, with *X. hypoxanthus* being encountered again, along with large amounts of *Boletus (now Leccinum) rubropunctus.* Although no new species were encountered, it was interesting to find *Agaricus floridanus* here, probably the 4th or 5th time we have encountered this species. Puzzling at first was what turned out to be the largest and most regularly formed example of *Tremella foliacea* I have ever seen, collected by Rich & Carol Capaldo.

PROSSER & CATHEDRAL PINES, SEPT 9: (List compiled by Roger Eklund.)
About 40 species including edibles such as Honeys, Meadow Mushrooms, Suillus, Russulas and Boletes. The parasitical *Asterophora lycoperdoides* (above) made its expected appearance here, growing on the Blackening Russula, *R. dissimulans.*

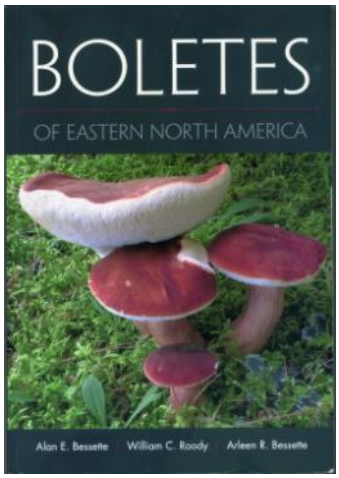
SOUTHAVEN C.P. SEPT 16:
Another banner day, with 88 species collected! Southaven, perhaps due to its riverine habitat, seems to produce when other nearby areas do not. There were 15 species of Amanita, with *A. crenulata* and *A. muscaria var guessowii* being the most numerous, present in scores. But these were equaled in number by very abundant *Leccinum rubropunctum.* There were so many Hen-of-the-Woods that there was enough for everyone. Also collected in fair numbers were Black Trumpets, which have been rather scarce in the last several years. Three species of *Suillus (americanus, granulatus,* and *pictus/spraguei)* and two of *Agaricus (sylvaticus* and *sylvicola)* rounded out the edibles. New to our list was the Earthtongue *Geoglossum fallax,* collected by Hayley Grote, and the coral mushroom *Ramaria fennica,* collected by Alexandra Grzesik.

Geoglossum fallax

Ramaria fennica

BOOK REVIEW CORNER

***Boletes of Eastern N.A.*, by Alan E. Bessette, William C. Roody, and Arleen R. Bessette. 2016. 469 pp. 362 color photos. Syracuse University Press.**



In the sixteen years since the publication of the authors' *North American Boletes,* there has been a revolution in the taxonomy and phylogeny of every group of fungi but those changes seem to be more startling in the Boletaceae than anywhere else, perhaps because collectors and field mycologists are more focused on this iconic, favored group. Not only have the authors fully dealt with explaining these changes to the layman, they have done so in a very attractive and accessible "field guide", the quotation marks denoting that the size of this work will not easily lend itself to transporting along on forays, unless it becomes available in pdf form in the future. But as a reference work, perhaps back in your auto, it is indispensible for all would-be Boletologists, as the late Ernst Both was fond of referring to himself.

This guide is not merely a rehash or a cut and paste job of the Eastern species of the original work, which is soon apparent by the quality of the 362 color photographs, many of them new, which grace this book, often with multiple images of a single species. All are large-scale, clear and well lit, often occupying half a page, and in an improvement over the previous work, interspersed to accompany the written descriptions rather than being relegated to a rear section. Each genus is introduced by a short descriptive explanation of its characteristics, origin and rationale. And while *NA Boletes* had only to utilize about twenty genera (some now obsolete) for the entire continent, this number has now doubled to forty in order to deal with only the eastern part, (extending to Louisiana to the west, and Manitoba to the north).

In their introduction, the authors point out that they have modified species descriptions to include their personal observations on features both macro and microscopic, habitat and edibility. This expansion of traditional descriptions can prove very useful in the field. Often, field guides simply reiterate previous descriptions without a reality check; that is not the case here. And while geographic ranges have been modified, these can rapidly change with every new collection, so that even the most current publication cannot keep up with electronic data. A Mycoportal species search will uncover all specimens deposited in US herbariums, which are continually updated.

The seasoned collector will find the keys, necessarily the heart of any extensive field guide, to be fairly smooth going and not overly elaborate, utilizing macro characters, and reaching a species choice point with a minimum amount of dichotomous choices. Success is not foreordained with each attempt, as the authors point out, but persistence pays, and I have personally identified several species this season that I might have overlooked before.

For the very beginner, this is a user friendly guide, with the introductory material providing a clear and accessible gateway to the study of Boletes, made more so by the pertinent glossary and appendix of chemical reagents, microscope procedures, and, not least, cooking and preservation methods. Another useful feature is the indexing by epithet, so that a change of genus can easily be accessed.

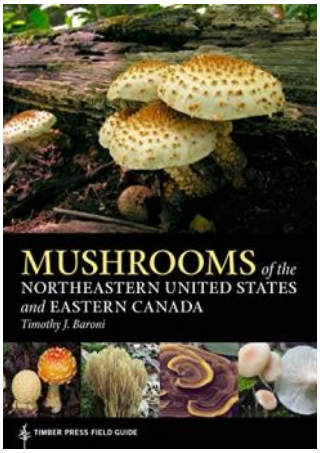
Boletes of Eastern N.A. is highly recommended to all budding Boletologists, pot hunters, and field mycologists. Those who already own *North American Boletes* will find this volume, with its narrower focus, easier to use as well as a needed introduction to the many new genera .

THE BOLETE FILTER

Described as a synoptic key for North American Boletes, and hosted by the W. PA. Mushroom Club, this key can be accessed at;http://boletes.wpamushroomclub.org/WP/ While its functioning is clunky, it does provide easily accessible photos of almost all L.I. Boletes, based upon our checklist. Click on REGION, NORTHEAST, and then Long Island.

***Mushrooms of the Northeastern United States and Eastern Canada,* by Timothy J. Baroni. Timber Press, 2017. 600 pp. 562 color photos**.

(Also available as a Kindle edition on Amazon for $9.44)



In the proliferation of Northeast mushroom field guides in recent years, this volume is a clear and impressive standout which can be recommended without reservation. Tim Baroni is a Distinguished Professor of Biology at SUNY Cortland, and prolific author and researcher who has described 100 new species and 9 new genera. At NEMF forays, he is a well known and well liked figure, whose instructive lectures are delivered in an accessible, informal style which is reflected in this guide's conversational, non-technical voice.

He makes clear in his introduction that edibility is not his main concern, and the descriptions touch upon it mostly in the case of choice, widely collected edibles; clearly, beauty and variety occupy him much more and his love of mushrooms is evident. He promises to present here at least 100 species not listed in any other North American field guide, and this promise is more than fulfilled. In particular, I was very pleasantly surprised to see two species regularly collected on Long Island, *Hygrophorus amygdalinus* and *Hygrophorus ponderatus,* not to be found in any other northeast or general guide. Although I am fairly well versed in mushroom species there were a good number I was unfamiliar with, particularly in the pink-spored taxa which are Baroni's specialty (Entoloma and Allies) and receive particularly full treatment here. While species epithets are usually presented in the most up to date name, this is not always the case, e.g., *Boletus frostii* rather than one of the two newly minted *Butyriboletus* or *Exudoporus;* in a time of rapid and competing concepts, this is perhaps a justified approach.

The organization of this book is along traditional lines, firstly into Basidiomycetes and Ascomycetes, the former then divided into sections based upon the spore print color of gilled mushrooms, with the Boletes; Polypores; Chanterelles; Tooth Fungi; Club, Coral & Fan Fungi; Puffballs, Earthstars & Allies; and Jelly Fungi. The Ascomycetes are split into two: Morels & False Morels; Cup Fungi, Earth Tongues & Allies. The emphasis is on Gilled Mushrooms, which occupy about 60% of the book, Boletes about 12%, Polypores 6%, and so on. Each page is color coded at the top, based on spore print color in the gilled section, with different colors for each of the following sections (Boletes, Polypores, etc.)

Each page usually hosts a single species with a full-color photo, and occasionally a look-alike. The descriptions are brief but to the point, and avoid technical language (including microscopic information other than spores) except when absolutely necessary. A capsule description precedes the main text which succinctly abbreviates it. The commentary section at the end of each description is very informative re look-alike species, I.D. hints, edibility, recent DNA research, etc. Each section begins with a simple key to the genera therein, each of which is accorded a one sentence description; there are no within-genera keys, so flipping through the photos is the only way to match up your find, but this is not an arduous task. The index is less useful than it could have been since all species are listed by genus first, so that a familiar epithet cannot be searched for, a necessity in this era of rapid taxonomic flux.

Despite some minor drawbacks, this is a very useful addition to the Northeast literature and will profit both beginners and more advanced mushroom lovers. It deserves to become a standard reference and will doubtless soon be seen as a faithful companion volume on forays throughout its target area.

POLYPORES OF BRITISH COLUMBIA

In 2017 the Forest Service of British Columbia published Technical Report 104, *Polypores of British Columbia* as an identification aid to foresters and interested others, and has generously made this 270 page document, with numerous color photos, freely available to the public as a pdf download at: https://www.for.gov.bc.ca/hfd/pubs/docs/tr/tr104.pdf A hardcopy costs $68,The majority of species occur in the Northeast as well. A full set of keys to both genera and species is provided. Don't miss this wonderful opportunity.

GLEANINGS.. from the research literature

■ **OLDEST GILLED MUSHROOM FOSSIL:** There have been only ten fossil gilled mushrooms found to date, all embedded in amber deposits dating from about 99 million years (mya) ago to 15 mya. The present specimen, with clearly defined stipe, gills and pileus, is a mineralized replacement in laminated limestone discovered in an outcropping in Brazil, and the oldest to date. Despite its tiny stature, with a pileus 10 mm in diameter, it has been christened *Gondwanagaricites magnificus.* The lack of a veil and other features lead the authors to speculate that it may belong to the Strophariaceae but the absence of spores prohibits assignment to a particular genus. It is concluded that this unique specimen "extends the geological range of gilled mushrooms back by ...14-21 million years and confirms their presence in Gondwana...with a new minimum age of 113-120 Ma." *(The Oldest Fossil Mushroom. S.W. Heads et al.PLoS ONE 12(6): June 6 2017.)*

■ **LAUNCHING SPORES:** Although the basics of the basidiomycete spore dispersal mechanism was explained over a 100 years ago by Arthur Buller, the "Einstein of Mycology" as due to the surface tension of merging water droplets, (Buller's drop) the details remained hazy. Now a study using artificial spores made of polystyrene and an inkjet printer to create the Buller's drop slowed the process enough so that it could be studied; it still took less than a thousandth of a second. Computer simulations showed how this caused the spores be explosively launched in exactly the right direction, at a right angle to the surface, so as to ride air currents for safe dispersal. *(Asymmetric drop coalescence launches fungal ballistospores with directionality. Fangjie Liu et al, Journal of the Royal Society, July 2017, Vol 14, issue 132.)*

Hen of the Woods Jerky

Makes about 2 cups marinade, enough for a large hen.

by The 3 Foragers

For the marinade:
1 c. sweet apple cider
3/4 c. low sodium soy sauce, or tamari
2-4 cloves garlic, chopped
1/2 tsp. ground white pepper
1/2 tsp. ground fennel
5 Tbsp. maple syrup
1/2-1 Tbsp. Sriracha chili-garlic sauce

Place all marinade ingredients in a blender, and puree for a minute. Pour the marinade in a glass or non-reactive shallow pan, preferably one with a cover.

2. Clean the hen of the woods mushroom, making 1/8" thick slices of the core and the larger fronds. All parts can be used, but they will dehydrate at different rates and shrink up quite small.
3. Boil the mushroom for 10 minutes, and drain completely. Place the boiled hen pieces in the marinade while still hot, and refrigerate for 4-8 hours.
4. Remove the pieces of hen from the marinade and drain the excess liquid off before arranging on dehydrator trays. If drying in the oven, use wire racks placed on a sheet pan. Arrange the marinated mushroom on the trays and dehydrate at 120-130°F for 6-12 hours, until dried and leathery. The time will vary based on the thickness and sizes of the pieces, so check it often.
5. Store in an airtight jar or vacuum pack.

From the Autumn 2017 Spore Print, newsletter of the Conn. Valley Mycological Society

(An alternative recipe using Grifola can be found in the Summer 2017 LI Sporeprint.)

IN THIS ISSUE

Mushroom Day	**1**
NEMF 2017 Foray	**1**
President's Message	**2**
Editor's Note	**2**
Foray Results Summary	**4**
Book Review: Boletes of E.NA	**5**
Book Review: Mushrooms of NE USA	**6**
Gleanings	**7**
Hen-of-the-Woods Jerky	**7**

"The test of a vocation is a love of the drudgery it involves."
Logan Pearsall Smith

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