LONG ISLAND MYCOLOGICAL CLUB

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MUSHROOM DAY
OCTOBER 13

PLANTING FIELDS ARBORETUM
1 PM —4 PM

MUSHROOM DAY 2018

It is once again time for 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.

Last year's copious rainfall provided good collecting but in contrast this year has been disappointing and major efforts will be needed to ensure a satisfactory display. We ask all members to make an extra effort to pitch in and bring specimens so as to help make this day another successful one. Low lying damp areas and riverine sites can be productive.

We particularly invite new members to take this 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 2019 43rd SAMUEL RISTICH FORAY
LOCK HAVEN UNIVERSITY
LOCK HAVEN, PA
AUG 1-4

For those of our newer members who are unfamiliar with NEMF, this is the Northeast Mycological Federation, of which LIMC is one of twenty-one clubs, from Maine to New Jersey, that comprise this organization, which was formed in 1976 by four of these clubs. The first NEMF foray was held in 1977 at Dingman's Ferry, and annually thereafter at various location in the northeast, usually college campuses, where the dorms are vacant during the summer recess. Most are therefore scheduled for an extended weekend (Thursday to Sunday) in August, which is not necessarily an

Collection Tables, previous NEMF foray (from their website)

optimal collecting time

In 1995 the annual foray was named "The Samuel Ristich Foray" in honor of its namesake, the beloved founder of the Maine Mycological Association, whose infectious enthusiasm for all things mycological, down to earth demeanor, and profound knowledge of the intimate connections in nature inspired several generations of mycologists, among them Gary Lincoff.

There were great expectations prior to this foray, but for inexplicable reasons, collecting in the Northeast this year has been below par, despite adequate rain. Nevertheless, a grand total of 369 species was collected, including slime molds and lichens. A good number of these were types normally ignored or unnoticed by pothunters, tiny dots and bumps on plants or decaying wood, which have their fascination for some. Of the grand total, twenty-one were new to the cumulative NEMF checklist, which now numbers 2,515.

(Continued on page 5)

PRESIDENT'S MESSAGE

Where are the Boletes, masses of Grifola and other wonderful mushrooms we find this time of year? Their appearance has been much reduced, due in part to diminished rainfall. The temperatures have been warm for quite awhile and the little rain that does fall disappears very quickly. I hope that this is just a cycle we are going through but who knows.

With 33 members present, our annual picnic was the best attended ever! Homemade dishes that people brought were varied and delicious. I think that a good time was had by all. Many thanks to all of you who helped me set up and clean up. I couldn't do this every year without you.

Mushroom Day at Planting Fields is on October 13 this year. If you cannot make it, Please give someone else your finds so that they can be displayed. I think this year's display will need more efforts to fill the tables. Please help.

In the last few years, we have had an increase in memberships with many young people signing on. This is wonderful because our club will hopefully continue on into the future.

For those of you who are newbies, consider getting a few new books. The older ones are useful but are somewhat behind the times in revised names and new species. (Even new ones are getting dated as mushrooms are being reclassified and new species are found. DNA changed everything.) Use the internet to keep up to date. Index Fungorum and Mycobank should have the latest changes.

Don't think that you must remember every name. I have been a mushroom fan for many, many years and still can't name everything; no one can. You should aim at first for telling the edible from toxic ones. BTW, I urge you to sign up with our private Facebook page. There you will find photos members have taken and discussions about them.

Hope to see you along the trail!

EDITOR'S NOTE

As part of the movement toward natural and organic foods, and with a renewed interest in natural history perhaps with dawning recognition of imminent losses, mushrooming as a hobby is increasing in popularity. This seems to be particularly so with vegans and vegetarians, likely based on the knowledge that mushrooms contain essential proteins missing from plant foods. In fact, a good percentage of mushroomers are foragers in the sense that only edible species are of interest to them. This is perfectly acceptable, contrary to the misgivings of the uninformed, who mistakenly believe that picking a mushroom is equivalent to destroying an organism, like felling a tree or digging up a plant. The fact is, it is equivalent to gathering berries, where the organism itself is unharmed.

We have noted, that after an initial period of picking and consuming many of the recognized edibles, many that started as pot-hunters become enraptured by the bizarre beauty and never ending variety that they encounter and are led to become naturalists and field mycologists, going to great lengths to know as many species as possible. And because of the large numbers of unknown and undescribed species, this is a quest that can never end, and that one can pursue with undiminished pleasure.

MATERIAL FOR THE WINTER 2019 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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FINDINGS AFIELD

Cortinarius rubeus- a Nova Scotian species found on Long Island

Cortinarius rubeus was first described as a new species in 1981 in the "Proceedings of the Nova Scotian Institute of Science" by TL Robar, KA Harrison, and DW Grund, following two years of collecting *Cortinarius* section *Dermocybe*. There were a total of three collections of *C. rubeus*, all in October of 1979. Although the holotype is said to be deposited in the E.C. Smith Herbarium of Acadia University, no reference to it exists in this herbarium's database on Mycoportal. Neither is there a voucher specimen in any other herbarium, nor any reference to it in "The Protochecklist of North American Nonlichenized Fungi". We must therefore be led to believe that this is a rarely occurring species.

TL Robar et al provide a very detailed description in their 1981 paper, which has only black and white photos of the sporocarp. It is described as being "1 -3 cm. broad, convex to plano-convex, somewhat depressed around the disc; margin incurved to decurved, thin, entire, becoming lacerate in age; surface dry, appressed fibrillose to fibrillose-scaly, especially on the upper margin, brown to deep reddish brown…on the margin, dark golden brown to dark rusty brown… on the inner margin, dark red-brown on the disc;…Lamellae …at first deep orange…to brownish orange..Stipe 1.7-4.3 X.2-.4 cm, equal, enlarging somewhat toward the base; apex… Ochraceous-Buff…becoming more reddish…overlaid with scattered to dense rust-brown to deep reddish brown…fibrils.. toward the base; …context firm, stuffed, …(Light Ochraceous-Buff to near Cinnamon-Buff) or reddish at the base, near the surface reddish rust-brown..Cortina dull buff-yellowish..Universal veil remnants reddish brown to rusty red.."

***Cortinarius rubeus* Dec. 2016**

This is a very close description to the three collections that we found in the months of November and December in 2016-2018 adjoining the outlet stream of a pond situated with mixed hardwoods (Salix, Ilex opaca, Quercus and Vaccinum) in Southaven C.P. The photos on this page illustrate the salient descriptive features mentioned above. The only discrepancies noted were size, in that several of our specimens were larger than the Nova Scotian collection, the pileus reaching 6 cm, the stipe 6 X 1 cm, although most were within the stated limits. Also, we cannot ignore the fact that some of ours were strongly hygrophanous, a feature not recorded in the original paper. We can only speculate that this may be environment and/or weather related, our specimens growing in a "damp meadow" site while the type specimens were all in moss on a sandy wood trail. Odor and taste "pungent to not distinctive" in the latter while sharp and raphanoid in ours.

***Cortinarius rubeus* Nov. 2017**

Microscopically, no hymenial cystidea were present as reported by Robar et al, the spores 6-8 X 4 -4.5 µm, and verrucose, which matches ours exactly. Stipe context, pileus and lamellar trama red-brown in KOH, also a match.

DNA sequencing and editing was performed by AlvaLab. Initial results suggested a close similarity to *Cortinarius timiskamingensis,* on the basis of which we contacted David Malloch and Joseph Ammirati at Washington University, whose sequence that was. Although the reported similarity was the result of an error, this was serendipitous, as they (along with the Northern European researchers Kare Limatainen & Tuula Niskanen) have been conducting an extensive study of Cortinarius; Ammirati graciously studied the material that I provided him with. He eventually concluded that *Cortinarius rubeus* Robar, Harrison & Grund was identical with our specimens genetically. Additionally, although GenBank contains only our sequence of *C. rubeus*, (MG050102) the UNITE database contains a "locked" sequence of *C. rubeus* attributed to Tuula Niskanen but with an origin in Canada, which Ammirati confirms is the genetically identical sequence he refers to.

***C. rubeus* Nov. 2018**

Our collection of 2016 has been deposited with the NYBG herbarium where it is the process of being accessioned. It will be the first US example of *C. rubeus* so represented. The collections of 2017-2018 will also be donated to NYBG

This species may be more widespread than thought: a 2018 environmental study established its genetic presence on ectomycorrhiza of Scots pine in the Tuchola forest of NW Poland.

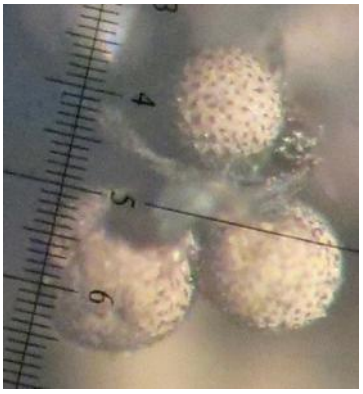
FORAY RESULTS SUMMARY

HECKSCHER S.P. JULY 6:
Forty-six species was a nice total for this time of year. The Russulaceae predominated with 12 species, but few edibles, followed by 7 species of Boletes (including the locally uncommon *Gyroporus subalbellus).* *Helvella macropus,* a tiny ascomyte cup, infrequently collected, also made an appearance. Edibles included some small Chanterelles, Black Trumpets, and *Lactarius hygrophoroides.*

Helvella macropus

BETHPAGE S.P July 13:
Cancelled.

WEST HILLS C. P. JULY 20: Cancelled
.



***Cribaria megacarpa* (Diameter about .4 mm.)**

BLYDENBURGH C.P. JULY 27:
(Switched from the scheduled Planting Fields.) Only 35 species were collected compared to over 80 at this site in early August last year, illustrative of the lower level of activity generally this season. It was damp enough to produce some slime molds, including one new species, *Cribaria megacarpa,* shown on the left. Other interesting species found were *Agaricus floridanus, Pluteus seticeps*, and *Simocybe centunculus.*

HECKSCHER S.P. AUG.17:
We returned here for an unscheduled Flash Foray, and were rewarded with 69 total species. New to our list were *Boletus billeae*, previously found only on Cape Cod and N.J., and *Amanita cataraugana* nom. prov. Tulloss. Russullaceae dominated with 21 species, 9 of which were edibles. There were about a dozen Boletes, some Chanterelles (*C. tenuitrhrix*) and Black Trumpets. A young specimen of *Sparassis spathularia* was found, associated with Oak, although it can also be found with Pine. Another new species was a member of the Entolomataceae with remarkably shaped cuboidal spores, bearing the eponym *Leptonia cuboideum.*

Boletus billeae

Leptonia cuboideum

HECKSCHER S.P. AUG. 31:
We forayed here for an unprecedented third time, as it was the most productive site, warranting a cancellation of Brookhaven S.P. We found 65 species, of which 27 were collected on the previous weeks foray. Put it another way, 38 new species appeared within a week. Otherwise, the mix was reflective of the time of year, with Russullaceae predominating (21 species) and a fair number of Chanterelles and Black Trumpets, followed by 13 species of Boletes, including one new to our list: *Boletus rufomaculatus* (left), closely related to *B. bicolor.*

SOUTHAVEN C. P. FORAY & PICNIC:
A perfect day notwithstanding the recent lack of rain. With over 30 picnickers we split into two foray parties which returned with a total of 68 taxa. The most notable find, by Roger Eklund, was *Calliderma indigofera,* a beautiful deep blue member of the Entolomataceae previously known only from the N.J. pine barrens. Also new was *Gymnopilus fulgens,* the only member of this genus growing among mosses. Although Amanitas and Russullaceae continued to predominate, Boletes declined, reflective of the changing season, as was the three species of *Armillaria (mellea tabescens,* and *ostoyae*) along with three of *Suillus (americana, granulatus, & spraguei*). The picnic itself was also a great success, with many contributing delicious varieties of mushroom dishes, salads, homemade desserts, and wines. (See picnic photos on page 7.)

Calliderma indigofera

Gymnopilus fulgens

NEMF 2019 *(Continued from page 1)*

There is always a conflict between attending classes or workshops or participating in a foray, as they take place during overlapping time periods. I participated in one Saturday morning foray. Conditions were not very productive and although I came across species of interest to me (*Galerina, Lepiota*) these did not appear on the final list. Identification often depends on the presence of a specialist in a particular genus, who may or may not be in attendance.

There were many lectures and workshops to chose from, and Peggy attended Alan and Arleen Bessette's Lactarius identification workshop. Participants were provided with a sheet of corrections to "Milk Mushrooms of N.A." If you would like a copy kindly let us know. A revised key to Milk Mushrooms of the Eastern NA was also made available, and if there is enough interest in receiving it, we will make it available on our website if possible.

Between forays, lectures, workshops, collection viewing, not to mention meals and evening socialization, the days are crammed full of activity, and are both stimulating and exhausting, but not to be missed.

The evening lectures are a showpiece where both professionals mycologist, other academics and knowledgeable mushroomers offer topical presentations. We heard details of the local natural history from a resident biologist and an overview of white nose bat disease from another Lock Haven University professor on Thursday evening. Subsequently, John Plischke of the Western Pennsylvania Mushroom Club showed us a presentation titled "Foraging for Boletes by Car" which stimulated the audience's envy with pictures of sites overflowing with vast quantities of Boletes. He claims to have four freezers full of Boletes in his garage – and I believe him.

Dr. Tom Bruns lecturing

Other classes dealt with interpreting the data from DNA analysis, given by Rod Tulloss, which concentrated on Amanita; identifying Lichens; photographing fungi through a microscope; identifying Pyrenomycetes; and others. I attended Tom Bruns workshop on Crusts which consisted in supplying the participants with a key to European crusts, and then assigning us microscopes and specimens to work on; an assistant offered instructions if needed. All specimens identified will be sequenced as a Mycoflora Foray Project.

A much anticipated highlight of the NEMF foray is the mycophagy session, which featured offerings by Chef Luke Smithson, who also offered a mushroom cooking lecture. His mycophagy did not disappoint, featuring fungi in classic and novel combinations. For example, a classic duxelle of cultivated Agaricus bisporus, canola oil, white wine, ramps, salt, filo dough, sour cream, and chives. Delicious.

We are proud that our own Anthony Sama was a winner of this year's Homola scholarship award to attend NEMF's foray. Although his interest focuses on the biochemistry of fungi (in which he is self-taught) he also is making strides in the sequencing of fungal DNA, and is fast becoming proficient in identification after being introduced to fungi only a few years ago. He is a great asset to our club and is pictured here accepting his award certificate from NEMF Pres. Rick Van de Poll.

Mycologist's awards for interesting species finds included *Pseudofistulina radicata, Thelephora anthocephala,* and *Amanita roosveltensis* nom prov Tulloss, bestowed upon Peggy by Rod Tulloss for her extra-foray find in Highland cemetery adjoining the university.

The next NEMF annual foray will be held in Joliette, Quebec from September 4—7 2020 with an estimated cost of $450 Canadian (about $340 US).

The Bolete of your dreams:

***Phlebopus marginatus*,** a pantropical species found in Australia, New Zealand, Indonesia, Malaysia and Sri Lanka can grow to huge proportions, weighing up to 70 lbs. Although often insect infested, it is edible and consumed in Thailand, Laos, southern China, etc. It is closely related to Boletinellus species, and both in turn are members of the Boletinelllaceae family, which is more closely related to the Sclerodermas than to other Boletes.

FROM OUR MEMBERS & THE PUBLIC!

Armillaria mellea
from a former member

Scleroderma cepa & S. citrinum
called "Beach truffles" by the finder

Chanterelles
from Shelter Island

Calvatia cyathiformis
by Jim Lampert

Agrocybe sp.
from a student in the Phillipines

Tremella reticulata
found by Dan Migliorino in PA

GLEANINGS….from the Research Literature

- **THE BIGGER THEY ARE…** Although it may be counterintuitive to think that our mightiest and most venerable forest giants are the most vulnerable to succumb to environmental stress, recent studies (in tropical rain forests in Panama and California's Sierra Madre Mtns) appears to have confirmed exactly that. Not only are they more vulnerable to lightening strikes (which accounts for 40% of large tree mortality) they are also more severely affected by drought, perhaps because "they must pull water longer distances from the roots to their crowns." Lastly, infestation by pests such as the Emerald Ash Borer causes the most damage and increased mortality in the larger diameter trees. Like elderly people, they may be less robust and more likely to succumb to stress. "*Forest giants are the trees most at risk. Science, Sept 6, 2019, Vol. 365, Issue 6457, pp. 962-3."*

- **DEEP FUNGI:** We know that there are marine fungi, and that they are present in deep-sea environments. Now we have been made aware that they, along with other eukaryotes are present in deep subterranean ecosystems, by a Japanese study conducted in the Horonobe Underground Research Lab. of the Japan Atomic Energy Agency, located at depths of 250 meters in sedimentary rock. The use of molecular techniques established the presence of varied microscopic life forms including three fungal phyla: Cryptomycota, Basidiomycota and Ascomycota. In fact, fungi dominated the population of life forms, with Ascomycota and Basidiomycota comprising 73% of the total, (Asco's alone 60%)and resembling those of deep-sea and other anaerobic communities.*(Genetic survey of indigenous microbial eukaryotic communities,mainly fungi,in sedimentary rock matrices of deep terrestrial subsurface. Y. Saitoh et al, Ecological Genetics and Genomics, Vol.12, Oct. 2019)*

(Compiled by editor from above-cited sources.)

LIMC PICNIC 2019- A PHOTOESSAY

LIMC MEMBERS CHOWING DOWN

Photo by Cathy Sama

THE COLLECTION TABLE

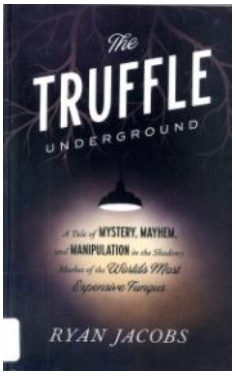
Photo by Cathy Sama

SUILLUS, TYLOPILUS, etc..

WHAT'S THAT ONE?

LUNCHEON IS SERVED

BOOK REVIEW



The Truffle Underground. A Tale of Mystery, Mayhem, and Manipulation in the Shadowy Market of the World's Most Expensive fungus. Ryan Jacobs. Paperback, 280 pp. Clarkson Potter Publishers, Crown Pub. Grp., Penguin. $16

The subtitle is perhaps a little overblown. There is little mystery and the one recorded death by gunfire is a bit short of mayhem. Nevertheless, for mushroom collectors and truffle lovers who also happen to be true crime aficionados, this is a happy convergence.

The author is an investigative journalist who traveled extensively in the Black Truffle and White Truffle producing areas of Italy and France, interviewing professional collectors, middlemen, law enforcement personnel, high end chefs, and shadowy characters. While tracing the history of truffle trading and culturing, he introduces us to a louche cast of characters who in their effort to avoid taxes, have adopted a culture of omertá which often works against them. The science of these immensely expensive tidbits (a kilo of the white truffle, *Tuber magnatum pico,* routinely wholesales for $7,000) is addressed in a chapter devoted to an interview with Jim Trappe, the dean of truffle researchers.

This is a product that, like illegal drugs, is harvested in secret, sold in darkness by cash, is stolen from its purveyors, replaced by inferior substitutes, but somehow retains its allure and strange fascination, to almost a mythical degree. The author himself is not immune, describing his reaction to taste truffles as producing "unspeakable pleasure...the form that comes with measures of silence and involuntary purrs." Who can resist?

IN THIS ISSUE

"To learn something new, take the path you took yesterday."
John Burroughs, NY naturalist

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