LONG ISLAND MYCOLOGICAL CLUB

http://limyco.org

L.I. SPOREPRINT

EST. 1973

Available in full color on our website

VOLUME 27, NUMBER 1, SPRING, 2019

FINDINGS AFIELD

Cortinarius pseudorubricosus

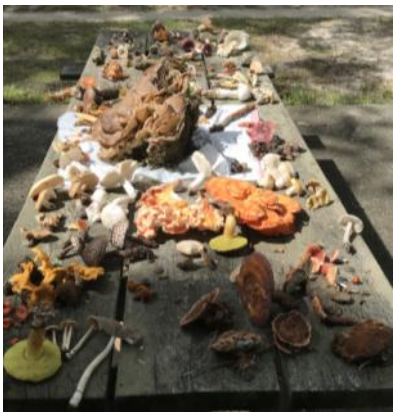
Cortinarius is the largest genus of Agaric, with an estimated 2000 species worldwide: the recently published protochecklist of NA Fungi contains over 800, while our L.I. list has a paltry 42 species.

In Cranberry Bog on November 4, 2017 we collected an impressive, large brown Cortinarius with a bulbous base which was unknown to us. With only one sporocarp to examine, unfamiliar Cortinarii are difficult to identify, as the early stages display crucial identification clues, and it would take DNA sequencing to puzzle this one out.

Macroscopically, this robust specimen had a 9 cm., reddish-brown, undulate, radially streaked, depressed cap with a low umbo. The long, down curved margin is characteristic. Gills were medium spaced, dark brown, up to 1.5 cm. wide. Stipe about equal to the cap diameter, brownish striate over a paler background, bulbous (4 cm. wide), perronate with a whitish sheath at base.

cont. on page 4)

THE SEASON'S BOUNTY



Southaven Picnic Collection Sept.15

Long Island recorded the second highest annual rainfall in the past 70 years, 68.53 inches, barely exceeded by the year 1989, which registered 68.66 inches. We have now had 2 years of above average rainfall, so considering the tendency to revert to the mean, we may expect closer to normal rainfall this year. The National Weather Service does not predict an increased chance of above-normal rainfall until August-September, and an equal chance of either above or below normal the rest of the year.

Last year's generous rainfall enabled the collection of the 35 new L.I. Checklist species listed on page 3, along with the name of the collector- (if other than your editor). Additionally, another 11 species shown were removed, mostly on the basis of DNA sequencing provided by the grant we received from the Mycoflora Project. In two cases, sequencing services were purchased from Alvalab. One of these, *Inocybe grammopodia*, represents a new species for N.A., and was previously on our list as *Inocybe* aff. *pusio*. The other, *Xerocomus* aff. *bubalinus,* (a European species) we had previously called *Boletus patrioticus,* (an American species). They may be synonyms, but additional research will be required to establish that. *Amanita elongata* and *Xerocomus hypoxanthus* could not be confirmed by DNA and will revert to the common *A. flavoconia* and *X. illudens*, both of which are more greatly varied in appearance than commonly thought.

(If you would like to access further details of our Mycoflora project —species, collectors, images, sequences, etc.— or any of the

(Continued on page 4)

PRESIDENT'S MESSAGE

Welcome spring! There are buds on the tress and daffodils and snowdrops are cheering us up. Can mushrooms be far behind?

We recently had our annual board meeting and Richard Capaldo was appointed Membership Secretary. The Board needs two more members to join to get 11 members that we need according to our by-laws. We need this club to continue into the future so please consider volunteering. Many, many thanks to all of you who help the club run smoothly!

It was also decided that anyone renewing after the March 31st cutoff date will have to start as a NEW member.

Joel and I have found two new venues to explore this year that might be fruitful. One is DEC property along the power lines in Ridge where we found some nice Tricholomas and Albatrellus last fall so keep tuned. The other site is in the former Grumman property in Calverton now known as Epcal. There is now a hiking/ bicycle path that runs for 8 1/2 miles (some say more) that all around the perimeter. There are no designated parking areas but there are plenty of roadside areas were you can park safely. The trail wends through introduced pine, larch, spruce and mixed hardwoods so there is reason to think it may be productive.

A reminder, that some areas in Suffolk require a DEC permit to enter. You can get one by accessing our club website, clicking on "Resources" and then "NYS DEC Access Permit". Check off "hiking."

So start studying your mushrooms to be prepared….I hope to see you along the trails this year.

EDITOR'S NOTE

One of the benefits of club membership is the opportunity to share our mushroom related adventures with like minded persons, and there are always animated interchanges of this sort at our forays. It is just a small step beyond that to commit these tales to paper, i.e., to write it up and submit it to the editor for publication. In this way, interesting and informative information can be shared with a greater audience, and there is personal gratification with doing so.

At this time, I am asking for all members to become more involved in this newsletter by actively pursuing a topic which interests them and writing a short article about it. It can be anything mushroom related, be it a recipe, a personal incident, or a news item. Topics such as mushroom cultivation, medicinal uses, a description of a good day's hunting, a surprising outcome or a cartoon could also be submitted. Photographs of seasonal finds, interesting species, unusual arrangements, etc., will also be considered for publication on the "From our Members" page. Technical expertise is not required....

Suggestions as to content you would like to see addressed are welcome. The object is to freshen up this newsletter with many points of view and to hear new voices.

MATERIAL FOR THE SUMMER 2019 EDITION SHOULD REACH THE EDITOR BY JUNE 1ST.

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

(All unsigned articles authored by editor.)

NEW SPECIES ADDED 2019

NEW SPECIES ADDED	COLLECTOR (If other than editor.)
Akanthomyces aculeatus	Anthony Sama
Boletus miniato-olivaceus	Peggy
Boletus nobilissimus	Jacques Brochard
Camillea punctulata	Tom Bigelow
Clavaria fumosa	Andrew Rockwell
Coprinus sterquilinus	Peggy
Cortinarius pseudorubricosus	
Cortinarius rubeus	
Dentipellis fragilis	
Guepinopsis buccina	Les Falcone
Gymnopilus aeruginosus	Peggy
Gymnosporangium clavipes	Peggy
Humaria hemispherica	Peggy
Hydnellum aurantiacum	
Hygrocybe aurantocephala	
Hygrocybe flavescens	
Hygrocybe irrigatus	Roger Eklund
Hygrocybe parvula	Peggy
Hygrocybe singeri var singer	
Hypholoma tuberosum	Aaron Norarevian
Hypocrea lixii	
Inocephalus luteus	
Lactarius petersenii	
Mycena megaspore	Jacques
Ossicaulis lignatilis	Bill Leibhart
Phaeomarasmius proximans	Roger Eklund
Pleuteus aurantiorugosus	Emily Snyder
Radulodon copelandii	
Radulomyces paumanokensis	Aaron
Ramaria xanthosperma	
Stereum gausapatum	
Stereum sanguinolentum	
Trichoglossom rasum	
Tricholoma subluteum	Maria Saffioti
Xerocomus sclerotiorum	

REMOVED*	NEW OR REVERT TO
Amanita elongata	A. flavoconia
Boletus patrioticus	Xerocomus aff. bubalinus
Cantharellus cibarius	Cantharellus tenuithrix
Geastrum coronatum	Trichoglossom walteri
Inocybe intricata	I. aff. margaritispora
Inocybe calospora	Inocybe subfulva
Inocybe aff. pusio	Inocybe grammopodia
Leccinum aurantiacum	Leccinum vulpinum
Tulostoma simulans	T. aff. pulchellum
Xerocomus hypoxanthus	X. illudens

**Based on DNA evidence. See "The Season's Bounty" page 1 for more information.*

Boletus miniato-olivaceus

Dentipellis fragilis

Pheomarasmius proximans

Hygrocybe irrigatus

Hydnellum aurantiacum

Hygrocybe aurantocephala

Humaria hemispherica

Inocybe subfulva

Trichoglossom rasum

SEASON'S BOUNTY *(Continued from page 1)*

other projects nationwide, access mycomap.com).

Despite the ample rainfall, not all our esteemed edibles were equally productive, but some fruitings were unprecedented. Once again, the dependable Spring Oysters (*Pleurotus populinus)* erupted in large numbers, but only at our Edgewood site, which also produced an ample early fruiting of the formerly named *Leccinum aurantiacum,* now ***L. vulpinum*** based on DNA of that day's collection.

An overview of the season shows that 21 forays were originally scheduled, of which 7 were cancelled due to a poor showing, but 4 added (as Flash Forays) so that the total held was 18 . Many of these set records for the number of species collected, with, for example, 86 species on August 19 at West Hills, and 101 species at Peconic Hills and Cranberry Bog on October 14.

This season was notable for the reappearance of Black Trumpets (now ***Craterellus*** *fallax*) in prodigious amounts, after an absence for several years. Chanterelles (now *Cantharellus tenuithrix*) burgeoned mightily from July through late September, producing the best year in living memory, popping up on lawns and backyards throughout Suffolk County. *Craterellus ignicolor* was also abundant and *Cantharellus appalachiensis* made one of its locally infrequent appearances. *Stropharia rugosoannulata*, (Winecap) was not much in evidence on our forays, although independent foragers reported them throughout both counties in Spring.

Summer brought Boletes in good variety, the best of these being *Boletus nobilissimus,* newly found and identified by Jacques at our Bethpage S.P. foray; and *Boletus atkinsonii,* formerly *B. reticulatus*. Other numerous Boletes were unfortunately inedible, namely the Ash Tray Bolete (Leccinum rubropunctum) whose aroma reflects its name, and the recently named *Xerocomus sclerotiorum,* of unknown edibility. Who among us will be adventurous enough to be the first to try it?

The noxious *Chlorophyllum molybdites* was much in evidence and several of our members luckily checked with us before consuming it as misidentified "parasols". Unhappily, this was not a good year for *Agaricus campestris,* the Meadow Mushroom, but that was remedied by many reports of the Horse Mushroom (now *Agaricus crocodilus)* later in the Summer. Later in the season, the largest crop of *Hydnum repandum* (Hedgehog) ever seen here greeted intrepid foragers.

Agaricus crocodilinus

Autumn's Honey Mushroom season was good, and the Maitake (*Grifola frondosa*) fruitings did not disappoint. For reasons unknown, late Autumn in the pine barrens (*Tricholoma, Hygrophorus*) did not live up to its usual standard, being below expectations for both species numbers and fruitbody production.

To sum up, 35 new species names were added plus another 11 existing names were changed based on DNA evidence, and of these 9 were new. Our total species checklist now stands at 1,056.

Findings Afield *(Cont'd from p.1)*

Odor indistinct. The spores were small 5.5-X.7.5 X 4-4.5 µm, verrucose and obovoidly ellipsoid, a good match with examination of the holotype (see references below).

DNA sequencing was performed by Alvalab, resulting in a 99.32% match with *C. adustorimosus* and four specimens of *C. pseudorubricosus,* including the holotype (the original specimen). The former species is considered a synonym of the latter, according to the Finnish *Cortinarius* experts T. Niskanen, I. Kytovuori, and K. Liimatainen who were consulted through the good offices of Dr. Joseph Ammirati of the Univ. of Washington, to whom I am grateful.

The holotype of this taxon was collected in France in 1986 and is described in the *Atlas des Cortinaire,* 1990. However, it is more to be expected in the Scandinavian countries, although "presumably fairly rare" even there, occurring in mesic to dry coniferous forests, mostly with *Picea* but also with *Pinus,* as was the case here on Long Island, with *Pinus rigida.* GenBank also contains a sequence from British Columbia, Canada. Mushroom Observer has several photos from northern California associated with a sequenced but privately vouchered collection. It appears widespread but rare.

Ours is the first eastern North American collection and the first for NY State. It has been added to our LI Checklist, and the specimen will be deposited with the NYBG Herbarium with the GenBank accession number MH819730.

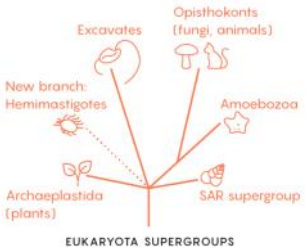
References:

Cortinarius sect. Brunnei (Basidiomycota, Agaricales) in North Europe, Tuula Niskanen, Ilkka Kyotvuori, Kare Liimatainen, Mycological Research 113, 2009, 182-206.

GLEANINGS.. from the research literature

■ **Fungi Defend Themselves:** It has been surmised that the mushroom toxins that affect humans are designed to interfere with the biology of fungivores such as nematodes, but how the presence of invasives is communicated has not been demonstrated until now. Recent Swiss research used time-lapse fluorescent microscopy to visualize the mycelial defense response of a *Copriniopsis cinerea* colony to locally confined predation by a fungivorus nematode. Long-distance propagation of the response was demonstrated by the hyphae illuminating and producing an anti-nematode toxin. The exact nature of this signaling is still unknown, but was slow acting and thought to be chemical in nature. *Bidirectional Propagation of Signals and Nutrients in Fungal Networks via Specialized Hyphae, S.S. Schmieder et al, Current Biology, Vol.29, Issue 2, P.217-228, Jan. 21, 2018.)*

■ **The Tree of Life has a New Kingdom:** These strange microscopic creatures, Hemimastigotes, were previously known, but their placement in the tree of life was not. Now the soil of Nova Scotia has yielded a new species, *Hemimastix kukwesjijk,* which was subjected to advanced DNA sequencing called "single-cell transcriptics" which enables sequencing of a large number of genes from just a single cell. The research team sequenced more than 300 genes, and "modeling" their evolution resulted in the stunning find that they did not fit anywhere on the existing tree of life and had a lineage different than any other super group. Their lineage goes back more than a billion years and predates the split of Opisthokonts (Animals and Fungi) from the other Supergroups. (See diagram.) *Hemimastigophora is a novel supra-kingdom-level lineage of eukaryotes, G. Lax et al, Nature 564,p.410-414, Nov. 14, 2018.)*



■ **Extinct Moas ate Truffles:** Not the famed European delicacies but sequestrate (enclosed spores) New Zealand underground "false truffles" descended from gilled species of *Cortinarius, Inocybe* and *Armillaria*, which are numerous in both New Zealand and Australia. On other continents these and similar species have their spores disseminated by small mammals which are attracted by their aromas, consume them, and pass them through their digestive systems; New Zealand historically had no mammals (other than bats) until the arrival of humans 700 years ago. The mystery of how truffles there spread their spores has been addressed by a study of ancient Moas' (extinct large ostrich-like birds) and Kakapo's (a critically endangered large parrot) coprolites (fossilized dung). Specialized DNA sequencing of the coprolites revealed the presence of the genera mentioned above, only from sites dominated by southern beech forests, with which these genera (*Cortinarius* and *Inocybe*) are mycorrhizal or parasitic (*Armillaria*). There was also evidence of the consumption of saprobes (decomposers): *Lepiota, Geastrum*, and *Lycoperdon*. Since birds are not known to have a well developed sense of smell, it is noteworthy that New Zealand "truffles" are known to be colorful, presumably to attract birds.*(Coprolites reveal ecological interactions lost with the extinction of New Zealand birds, A.P.Boast et al, PNAS, Feb 13, 2018, 115(7) 1546-1551)*

■ **Fungi Influence World Plant Distribution:** This wide-ranging international multi-author study utilized a vast dataset if 213,710 flowering plants, encompassing 1,437,761 plant occurrences across 1,103 regions to test for "patterns of plant species mycorrhizal status in island and mainland floras. Results find "compelling evidence" that mycorrhizal species are under-represented in island flora, consistent with the limited ability of mycorrhizal fungi to disperse to islands, compared to seed plants. This phenomenon increased with distance from the mainland, where mycorrhizal plants were significantly more common. Naturalized island flora, those introduced by man, display a greater proportion of mycorrhizal species, as they are brought in along with soil and associated microbes. Lastly, it is concluded that the variation along climatic and latitudinal gradients, with the percentage of mycorrhizal plants being highest near the equator and decreasing toward the poles, suggest the strong influence of mycorrhizal fungi upon global plant biogeography. *(Mycorrhizal fungi influence global plant biogeography. C.S. Delavaux et al, Nature Ecology & Evolution, Vol 3, March 2019, pp.424-429.)*

(Compiled by editor from above-cited sources.)

Gary Lincoff Memorial Mushroom Foray
September 19, 2019 | North Park, Pennsylvania

The Western Pennsylvania Mushroom Club will hold what is now the memorial 19th Annual Gary Lincoff Mushroom Foray, due to the sad death of the eponymous author last year. This one-day event takes place in the Rose Barn, Pearce Mill Rd., in North Park, McCandless Township. Driving instructions are on the website. On Saturday activities include walks, presentations, auction, sales, table walk,and a mushroom feast. Guest mycologists Bill Russell, author, and others. The $55 fee for non-members includes 2019 & 2020 membership but does not include lodging, for which you must make your own arrangements

Details and prices will shortly be posted on the club website: http://wpamushroomclub.org/lincoff-foray/ For more information, contact the Foray Chair, Fluff Berger: 724-601-8382 Lincoff-Foray@wpamushroomclub.org

2019 NEMF
43rd Annual Samuel Ristich Foray
August 1-4 Lock Haven, PA

Accommodations are in the Lock Haven University campus (about 250 miles from western Suffolk) in duplex dorm rooms (2 rooms with shared bathroom) at cost of $390 pp double occupancy (Single, $405) for the entire 3 night stay with all meals. Only some rooms have A/C. There are commuter options available ($240 incl meals) but local motels are filling up fast. Faculty have not been publicized at this time, but check the NEMF website.

For more info or to register access:: http://www.nemf.org/samuel-ristich-foray/registration/

2019 NAMA REGIONAL FORAY
August 8-11
Paul Smiths, New York

Cited at Paul Smith's College, in the Adirondaks, where it was last held in 1991 . The price ranges from $340 to $400 for the full 3 night program. There are some limited camping sites on campus for $240. Faculty includes Roy Halling, Rick Van de Poll, John Plischke III, Elinor Shavit, Matt Schink, etc.

Registration is not yet open, but the NAMA Foray website will be updated in early April with more details.

For more information or to register access: http://www.namyco.org/

Mushroom Festival in Oaxaca Mexico
17-24

Crooked Trails, a non-profit travel organization, supportive of local communities, has scheduled a tour that is a mash-up of mycology, natural history and culture. Taking place in the heavily pine forested Sierra Norte, at an altitude of 10,000 feet centered on the local Feria Regional de Hongos Silvestres (Wild Mushroom Festival), an annual event. After a foray with local villagers, there are seminars on mycology and mushroom cookery sessions. Following this, there is participation in the local *Guelaguetza* indigenous celebration and parade. This culminates in the Mezcal festival, a tasting of the local liquor.

This 7 day, 6 night tour is priced at $1,995 from Oaxaca City, with most meals included. For further details, or to make an inquiry access http://www.crookedtrails.org/itinerary/mexico-wild-

COMA's
41st Clark Rogerson Foray
Aug 30-Sept 2

This annual event will be held at the completely refurbished Camp Hemlocks in Hebron, Ct. where faculty will include Alan & Arleen Bessette, Roz Lowen, John Plischke III and others. Housing is in hotel style rooms, air conditioned and with en-suite bathroom. All meals included. Attendees may register for 1-3 nights or simply as day visitors for either or both of the 2 full days, Saturday or Sunday.

This year's rates and registration details will shortly be available on the Connecticut-Westchester Mycological Association website with registration open by early May. Access: comafungi.org/and click on "Special Events".

2019 Annual SOLD OUT **Wildacres Regional Foray Sept 26--29**

EAGLE HILL INSTITUTE MYCOLOGY WORKSHOPS STEUBEN, MAINE

May 26-June 1 Old Growth Forest Lichens & Allied Fungi: Steve Selva & Troy McMulin $545

This seminar focuses on calicioid lichens and fungi and their use in assessing continuity of forest ecosystems. Students will learn to locate, collect, identify and utilize this assessment method for old forests.

June 16– 22 Independent Study: Topics in Fungal Biology Donald Pfister

To understand the biology of fungi students will collect specimens and learn techniques to raise them in pure culture and other methods to elucidate aspects of their biology. Current fungal classification schemes will be introduced and examined. Some prior knowledge of fungi is desirable.

July 28-Aug 3 Mushroom Identification for New Mycophiles: Foraging for Edible and Medicinal Mushrooms- $545 Greg A. Marley and Michaeline Mulvey– A field identification course of the macrofungi focusing on the skills needed to identify common mushrooms using field characteristics, keys and guides while also addressing preparation of edible fungi for the table. For beginning fungiphiles and amateur mycologists interested in expanding their knowledge.

Aug 18-24 Mushroom Microscopy: An Exploration of the Intricate Microscopic World of Mushrooms- $545. **David Porter and Michaeline Mulvey** Learn to use a microscope to explore the strange details of filamentous hyphae; to photograph observations and to become familiar with the terminology of microscopic features to enhance your ability to identify fungi.

Sept 27-29 Fall Maine Mushrooms David Porter and Michaeline Mulvey $150 This weekend workshop is an introduction to the Fall mushrooms of the downeast coast with collecting excursions. It will cover the methods and resources of mushroom identification using keys, field guides and online resources. Toxicity, edibility, cooking and preservation will be addressed as well.

(Other allied Natural History week long seminars include Lichens & Lichen Ecology, Introduction to Bryophytes & Lichens, Lichens, Biofilms and Stone, and Crustose & Foliose Lichens (Weekend Workshops). Unless otherwise noted rates are $495 for the seminar; $195 for accommodations (double); and $278 for the meal plan. Weekend workshop accommodations $30 per nite, meal plan $94. Access http://www.eaglehill.us/ for more detailed information and to apply online.)

WELCOME, NEW MEMBERS!

Wendy Cohen & Jared Caruso **Lingli Lou & family** **Patricia & Anthony Seusa**

Mary & Vinent Grasso **Wendy & Ben Otruba** **Jeanette & Andrew Lerner**

Russel Snider **Liz Camps & Matthew Lamb** **Kamella & Walter Gustafsen**

Nadja & Lorenzo Grobe **Jodi Bentivegna & Nicholas Merville** **William Leibhart**

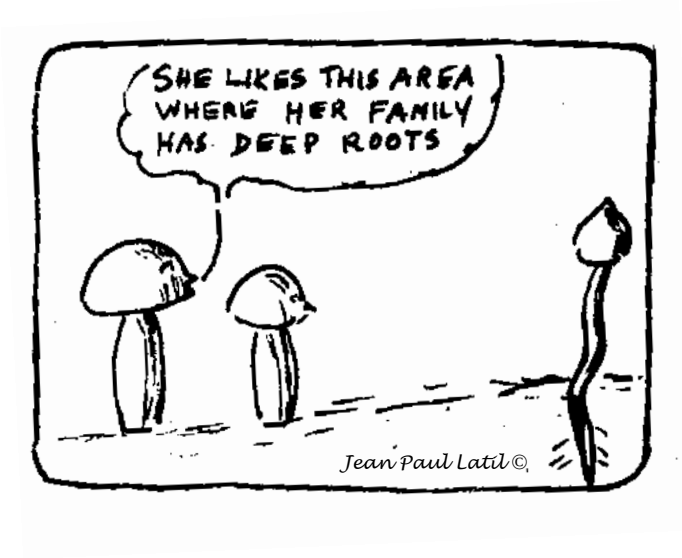
Lee Lubov Love **Vincent & Yuki Calabro** **Milan Verbanac** **Regina & Nicholas Simone**

Pamela & Nicholas Sarin **Janet & Sidney Grabill** **Ashley & Chris Ott**

NEW LIMC CLUB PATCH

This newly designed iron-on club patch is enclosed, one per membership, for those who have not as yet received it. Additional patches are available for $5, including postage.

IRONING INSTRUCTIONS: 1-Set iron to cotton setting. Do not use steam, and remove water from iron.2-A padded ironing board is not hard enough. Try placing a cutting board above padding. 3-Iron design for approximately 30-60 seconds, applying pressure. Do not move iron side to side as this may cause design to shift. 4-Allow time to cool. If all pieces did not adhere, reapply heat for an additional 20-30 seconds. 5-Turn garment inside out and apply iron to back of design area for approximately 30 seconds.



IN THIS ISSUE

(Membership list & Species by Group to be updated online.)

"Never make predictions, especially about the future."

attributed to Casey Stengel

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