NJMA NEWS

THE OFFICIAL NEWSLETTER OF THE NEW JERSEY MYCOLOGICAL ASSOCIATION

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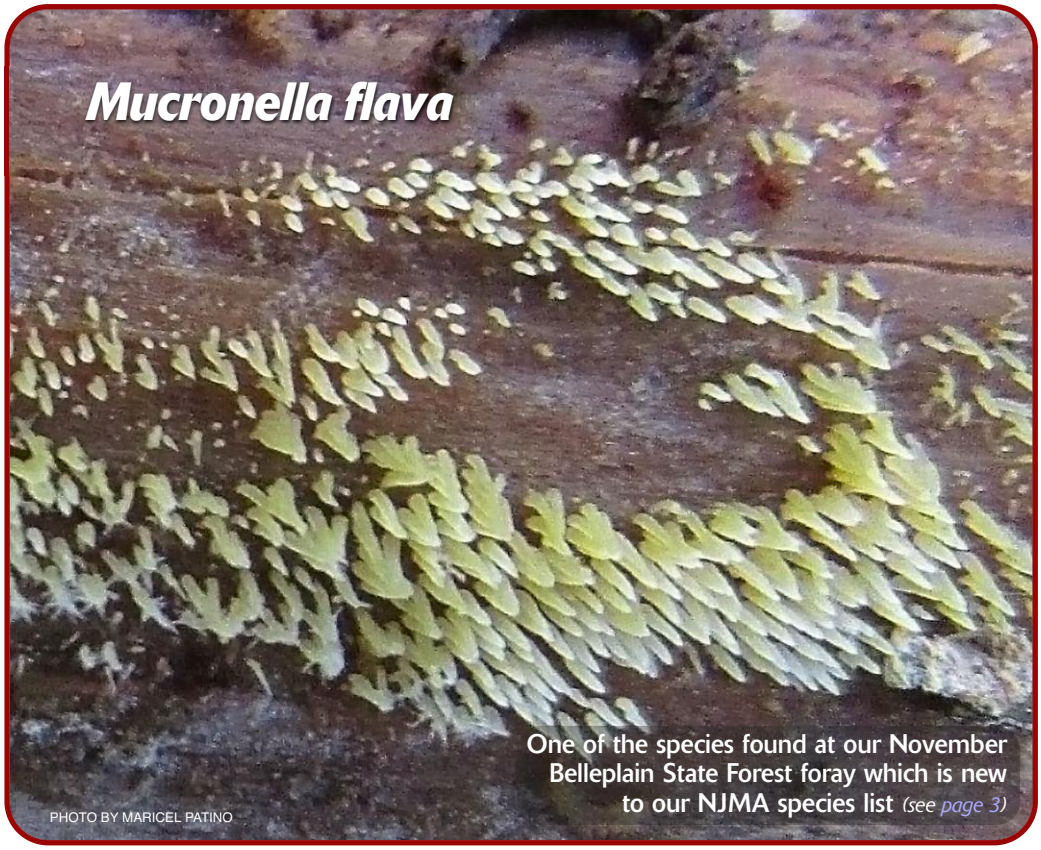


One of the species found at our November Belleplain State Forest foray which is new to our NJMA species list *(see page 3)*

WHAT'S INSIDE:

PRESIDENT'S MESSAGE

NJMA is a volunteer organization. This club has done amazing things with the kind hearted help of its volunteers. The Holiday Party was awesome with Virginia Tomat, Aluen and Richard Kelly doing the decorating; Luke Smithson organizing the food; Igor Safonov doing registration and food list; Mike Mudrak with maintenance; Jim Barg with the photo contest; Nina Marra and Dave Wasilewski as volunteer photo judges, and so many others in the kitchen and clean up.

Currently, NJMA dues are well below other clubs'. The tremendous benefits for NJMA members include: forays, Fungus Fest, lectures and workshops. This is why I am recommending that the dues be raised from $10 to $20 for individuals and $15 to $25 for families. In my newsletter article about MycoBoutique (a great mushroom store in Montreal), I mentioned they charged $40 to go on a foray. To stay viable, any organization has to evolve and that brings challenges.

As clubs grow, they find the need to offer stipends and eventually start hiring people. Our Newsletter Editor and Graphic Designer should have their expenses covered. Volunteering time is very generous, but expenses for club purposes should be compensated. These topics need further discussion and a club consensus.

To learn about mushrooms is why I joined NJMA, but it has been the wonderful people in the club that have encouraged me to stay.

– Frank Marra

NJMA News is published bimonthly by the New Jersey Mycological Association. Annual subscription price is included in NJMA membership annual dues.

EDITOR'S NOTES

I will keep this very short since I am sure you have already read enough of my prose in this issue: the Library, Mycophagy, the Culinary Group, etc.

I just wanted to say a little something about the delays in getting *NJMA News* to you on time. As a volunteer organization, all of the costs of living have to be raised in old-fashioned ways, like jobs, etc. Sorry – these do take time away from getting the newsletter published. The Calendar of Upcoming Events in each issue of *NJMA News* lets you put upcoming events on your calendar so that you won't miss anything. We also send out email "reminders" to let everyone know what events are coming up. And this year, all of the monthly events are later than usual so that there is a bit of leeway in planning. Thanks for your patience.

Please keep sending us articles, photos, etc. Links to articles from other sources for the Bits, Bites, and Bytes column should be sent to Sue McClary at ***NJMABBB@gmail.com***. All other submissions should be sent to ***njmaeditor@gmail.com***. The deadline for *NJMA News* 50-2 is February 10th!

See you at Mycophagy! Don't forget that this is Members Only and pre-registration (no cost) is needed. Send a note to membership chairperson Igor Safonov at ***njmycomember@gmail.com*** to let us know that you're coming.

– Jim Richards

Visit the NJMA Discussion Group

facebook

http://tinyurl.com/jjualgz

WELCOME TO THE ONLINE EDITION OF NJMA NEWS

For the great majority of you who are viewing the online PDF of this newsletter, please note that **most web links and email addresses are clickable.** Clicking on a ***blue*** web or email address will launch your web browser and take you to the specified page or open your email software so you can send an instant email. Just look for the "click finger" when you hover your mouse over these items.

FORAY REPORTS

BELLEPLAIN STATE FOREST FORAY
NOVEMBER 3RD

by John Burghardt, NJMA Recorder

We found many interesting species including several new to our list. I was most struck by how few mycorrhizal fungi came in. These fungi live with trees in a mutually beneficial relationship. The fungi receive food energy (sugars) from the trees and provide the trees with access to minerals, water, and protection against disease. By my count, we identified fewer than 20 mycorrhizal species this week: Amanita, Hebeloma, Laccaria, Russula, Tricholoma, Rhizopogon, and Scleroderma. We always see that the fruiting of mycorrhizal fungi drops off in late fall. But we usually see lots of Russula, Cortinarius, Laccaria, Lactarius, Tricholoma, and Scleroderma in the Pine Barrens well into December. Of course, Belleplain is not the Pine Barrens; it lies well to the south of the heart of the Pine Barrens in Ocean and Burlington Counties. Even so, the Belleplain woods had the feel of very late fall.

As so often happens when we don't find many mycorrhizal species, two of those we did find were new to our list. Igor has made several collections of a Hebeloma species over two recent seasons, which were dried and sent to Dr. Henri Beker, a European expert on the genus. Dr. Beker is currently studying North American Hebeloma. Dr. Beker confirmed that Igor's collections were *Hebeloma brunneifolium*. The collections made at Belleplain were the first ones made at one of our forays.

A second species identified for the first time is *Suillus weaverae*. A recent genetic study led to the naming of this new species. Several people made collections of it at Belleplain, and Igor made the identification. I believe this taxon was formerly misidentified as *Suillus granulatus*.

A third new species is *Mucronella flava*, which Maricel identified. It is a delicate yellow, branching coral-like fungus. *(See front page photo)* Like many of Maricel's finds, this one is best viewed through a good loupe.

A fourth interesting find remains unnamed, but is probably a Pouzarella. Jason collected this one and Nina took it home for study. The fruiting body looks for all the world like a Mycena. The fresh fruiting body had a dull grayish-brown cap with dull brownish-cream gills. (The cap dried to distinctly zonate and the gills dried to pinkish brown.) But a smash mount of a gill edge revealed very unusual-shaped ("funky") spores that seem to fit Pouzarella. This one remains a work in progress.

Our list this week includes several lichens, which are organisms comprised of a fungus (usually an ascomycete) and a plant (either an alga or cyanobacterium). The fungus and plant live in a symbiotic relationship. Lichens form crust-like, leaf-like, and branching structures on rocks and tree trunks. I believe each of these structures is represented on our list. Lichens do not affect the trees and rocks they live on. Thanks to Jason and Elizabeth for making these collections and identifying them.

A word of caution about collecting lichens. Please don't collect them unless you know what you're doing. Lichens grow very slowly. I stopped collecting them after I once collected a piece from a rock that Dorothy Smullen, our club lichen expert, told me had taken many, many decades to reach the very small size of the organism I had collected.

Thanks to everyone who participated in collecting, sorting, and putting names to the fungi we found at Belleplain and throughout the season. I also want to acknowledge all that Nina Burghardt, the NJMA Foray Chair, does to organize the forays, get everyone involved, and harass the unnamed fungi after each foray until at least a few of them surrender a name. It is great fun, and a privilege, to visit all corners of New Jersey, meet people interested in learning about fungi, and walk in beautiful forests, each with a distinctive habitat and feel.

Please let me know of additions or corrections to the Belleplain list. Our NJMA activities go indoors for the months of December to April. Check out our website ***www.njmyco.org*** for information about our programs. Hope to see you next year, if not before then. All the best!

BYTES, BITS, & BITES
TASTY LITTLE TIDBITS FROM OUR MEMBERS

Have you read something interesting concerning mushrooms or foraging? Send it to ***njmabbb@gmail.com*** *and share with the rest of our members!*

from Liz Broderick:

The Gospel of Mushrooms: How Foraging Became Hip

https://tinyurl.com/y3wynxes

from the Editor:

Everything you need to know to become a "Mushroom Person":

https://tinyurl.com/y3yglxa2

from Paul Sadowski:

NYC unveiling video of Gary Lincoff Way, made by Alan Esner, October 18, 2019, 95th Street (10 minute video may not work on mobile device)

https://tinyurl.com/r22a4ho

from Sue McClary:

How Mushrooms came to symbolize good luck on the holidays

https://tinyurl.com/y4b3x97j

(continues on page 12)

WASH THOSE MUSHROOMS BEFORE COOKING

from Sally br's 17 October 2015 ***Bewitching Kitchen*** *blog (****bewitchingkitchen.com****) reviewing "The Food Lab" by J. Kenzi Lopez-Alt)*

In one of my favorite chapters (Soups, Stews and the Science of Stock), he shares a great recipe for Creamy Mushroom Soup. In that recipe, Kenji tackles the persistent WRONG statement that they should not be washed under running water because "mushrooms are like sponges." I swear, every time I hear a reputable chef spitting this nonsense, I scream at the screen. Who on Earth came up with that idea and, why oh why, it gets repeated over and over? Kenji patiently goes over his experiments washing mushrooms and weighing them. Actually, you can soak them and after draining they will retain between 1 and 2% water, all on the surface. If you are paranoid about watering down your mushroom saute (keep in mind you don't water down anything with 2% water), dry them slightly with a paper towel, or cook them 10 seconds longer…Wash your mushrooms, folks! Toss that silly mushroom brush, it's one big gadget scam. OK, I feel better now. So much better that I will step off my soap box...

WELCOME TO ALL OF OUR NEW NJMA MEMBERS!

We'd like to extend a warm welcome to the following members who joined us between November 6, 2019 and January 11, 2020. We look forward to seeing you at lectures, forays, and other NJMA events.

Happy 'shrooming!

Marie Alfano	Rochelle Park, NJ
Leslie Aufseeser	Ocean, NJ
Bonnie Carsia	Shamong, NJ
Maria Castles	Blairstown, NJ
John Forrestal	Winthrop, MA
Maryellen Gabay	West Milford, NJ
Roberto Gambino	Moonachie, NJ
Jack Giller	Frenchtown, NJ
Neil King	Collingswood, NJ
Thomas Kovacs	Oak Ridge, NJ
Samantha Lee	Brooklyn, NY
James Lemieux	Jackson, NJ
Michael Palmisano	Keyport, NJ
Cathy Pfeiffer	Ridgefield, NJ
Jeffrey Porter	Asbury Park, NJ
Connor Rath	Freehold, NJ
Olivia & Damon Smith	Egg Harbor Twp., NJ
Chas Surran	Salem, NJ
Lisa Thompson-Eisler	Collingswood, NJ
Laura Wangerin	Summit, NJ

"FANTASTIC FUNGI" - THE FILM FINALLY ARRIVES IN NJMA'S BACK YARD

Hi Jim,

Here is a link to the "Film Society of Summit":
https://www.summitfilmsociety.com

Scroll down to 1/24/20 event and you will find a documentary "Fantastic Fungi" that will be shown on that date and 1/31/20, along with panel discussions afterwards.

And then I came across the following:
"Only 9 films got 100% Rotten Tomatoes in 2019 ... Fantastic Fungi is one of them."
– Janeen Pisciatta

AND...Another showing in Lambertville on **Saturday, February 8**, 5:45pm at the ***Acme Screening Room***:

"Fantastic Fungi" is a consciousness-shifting film that takes us on an immersive journey through time and scale into the magical earth beneath our feet, an underground network that can heal and save our planet. Through the eyes of renowned scientists and mycologists, we become aware of the beauty, intelligence and solutions the fungi kingdom offer us in response to some of our most pressing medical, therapeutic, and environmental challenges. Chris Darrah of Mainly Mushrooms will bring a display of his mushrooms for purchase in the lobby. Joining us for discussion and Q&A will be Luke Smithson, former president of the NJ Mycological Association. Then Luke will join us for a 3-course "mushroom themed" dinner at Lambertville Station. Purchase tickets at ***https://tinyurl.com/s4qkn9x***.

Watch the trailer:
https://www.youtube.com/watch?v=bxABOiay6oA

Editor's note: I have also requested a review copy of the companion book for our club library.

FINDING FUNGI: ZOOS, HERBARIA, AND SCIENCE MUSEUMS

by Sue McClary

Zoos? If you are a member, you know fungi are not animals and would not be in a zoo!

But a myxomycete, a slime mold (*Physarum polycephalum*), went on display on October 19, 2019 at the Paris Zoological Park (***https://tinyurl.com/y5sjhqfn***). It moves to find food. If you attended one of our Fungus Fests, you would have already seen Phil Layton's slime molds in action.

Herbaria? Yes, herbaria often have collections of fungi. Today, herbaria are digitizing their collections of fungal drawings, paintings, and photographs and creating short videos about their collections. Here is one from the New York Botanical Gardens on Kohlmeyer's Marine Fungi Herbarium move to the NYBG from several years ago (***https://tinyurl.com/y48aumkn***). You can also view the NYBG mushroom paintings online (***https://tinyurl.com/wojvsxg***) or explore the NYBG's C.V. Starr Virtual Herbarium on your own (***https://tinyurl.com/rrwaqtv***).

Are you interested in more? *Mycoportal.org* now includes links and/or data from over 100 herbaria, university, or museum fungi collections mostly from those within the US or Canada (***https://tinyurl.com/s736spl***).

You can see the online exhibit for *Amanita phalloides* (death cap mushroom) at the Harvard University's museum website (***https://tinyurl.com/u79zdfq***) or read about the history of mycological illustration (***https://tinyurl.com/vpvvnqf***). Read about Charles Horton Peck and his 33,600 mycological specimens at the New York State Museum (***https://tinyurl.com/vsyo7qy***). Or at the Canadian National Mycological Herbarium, read about how Amanita jacksonii is connected to the famed Canadian Group of Seven artists (***https://tinyurl.com/rzetzby***).

But how about a place to visit a permanent fungi exhibit, the old-fashioned way, in person? Surprisingly, exhibits at natural history or science museums seem hard to find. Their exhibits seem as temporary as the mushroom fruiting bodies themselves. One company is renting a traveling mushroom exhibit. You can find out what city it currently is at by using this link (***https://tinyurl.com/wtxaxc3***).

For those who have been interested in mushrooms for a while, you may remember that Phillips Mushroom Farms, Kennett Square, PA used to have a mushroom museum, but it is now listed as being closed. What remains is at a nearby mushroom store.

What about the American Museum of Natural History in NYC? Surely it would have a permanent mushroom exhibit. And indeed it does. But it was only after another member, whose daughter visited the museum, confirmed that it existed, that I was successful in finding online proof as nothing was findable using the museum website. Here is a close-up photo of the Hall of Biodiversity fungi (***https://tinyurl.com/v9blkxq***). Contrast this to the mushroom display from 1931 near the bottom of these historical pictures (***https://tinyurl.com/sxde99d***).

Does the Liberty Science Center in Jersey City, NJ current microbe exhibit contain any fungi? (***https://tinyurl.com/tka752d***). I do not know, but keep an eye out for future science exhibits that might cover mycoremediation and other applications for fungi.

Why are there not more permanent mushroom exhibits? The British have a history of 'models of fungi', as far back as 1844, to help the public learn to distinguish poisonous and edible fungi (***https://tinyurl.com/rc4mpo4***). Museum fungi exhibits made of wax, paper mache, glass, and even freeze-dried specimens have and continue to exist. Below are some places to look for fungi 'indoors'.

Linville, NC, Grandfather Mountain, the Nature Museum has Paul Marchand wax mushroom creations. At the time of his death in 1996, Paul Marchand's work was displayed in more than 40 other institutions in the United States and Canada, including the Smithsonian Institution, the Natural History Museum of Los Angeles, and Chicago's Field Museum of Natural History (***https://tinyurl.com/vnkj5pr***).

Cambridge, MA - Harvard Museum of Natural History held an event in October 2019 with interactive ways to get children involved with fungi, changing known games like 'Operation' to 'Fungi Operation' and having them remove gills (***https://tinyurl.com/y26wl8hv***).

Warner, NH - Little Nature Museum. A 14 species fungi exhibit and an exhibit with many lichen (***https://tinyurl.com/tbv3bq7***). They prove a museum does not have to be big to display fungi.

Providence, RI - Nature Lab, Rhode Island School of Design's Micropolis collection includes glass slides of fungal spores to explore with a compound microscope, or in Tiny Town, you can see mushrooms online under a stereomicroscope (***https://tinyurl.com/yx6ptlgk***).

Roanoke, WV - Science Museum of West Virginia has a fungi kingdom exhibit (***https://tinyurl.com/y29j3866***).

Adelaide, Australia - Santos Museum of Economic Botany in the Adelaide Botanic Gardens. A collection of 210 paper mache models of fungi in different stages of growth, by Heinrich Arnoldi of Gotha, Germany, dating from 1872 to 1888. A stucco finish gives them a

(continues on next page)

realistic look (*https://tinyurl.com/rf2bpzk* and *https://tinyurl.com/rskoumv*).

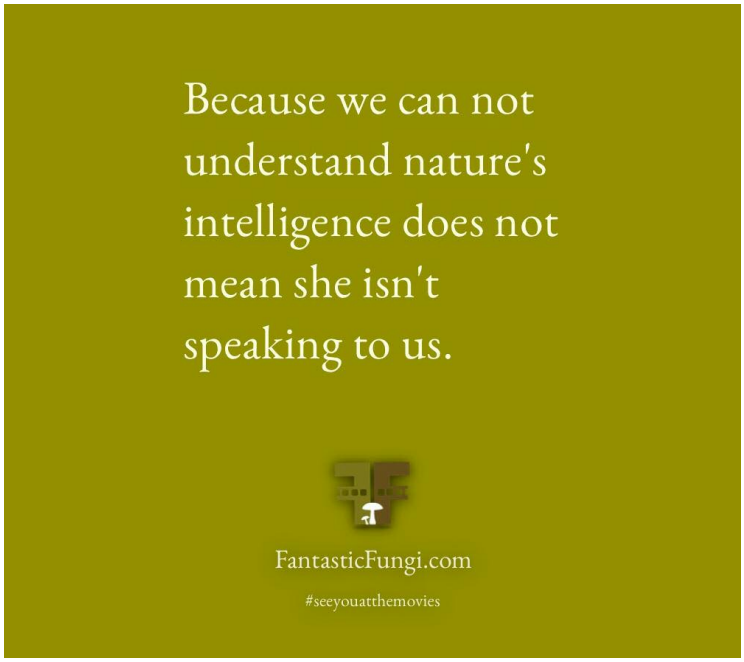
Zagreb, Croatia - A 250 square meter mushroom museum opened in 2013 that is entirely different. They have display cases of freeze dried (lyophilized) mushrooms side by side, like a rock collection display. No explanatory info, but the mushrooms look very much alive, maintaining form, color and size (*https://tinyurl.com/u6fkeq7*).

Estonia - In 2014, its Natural History Museum made a temporary exhibit with real-life mushrooms (*https://tinyurl.com/yxytqos9*). (Sorry we missed this one).

Kalampaka, Greece - The Natural History Museum of Meteora & Mushroom Museum uses realistic painted sculptures in dioramas. Be sure to play the video, with English subtitles, on their webpage. It is a wonderful summary of fungi diversity (*https://tinyurl.com/y4vhy174*).

Amsterdam, Netherlands - A permanent exhibition at Micropia, a museum dedicated to microbes, "A Fungal Future" showcases an array of everyday objects made from fungi. (*https://tinyurl.com/sh8f657* and *https://tinyurl.com/s9jj7zz*)

Cambridge, UK - The Whipple Museum displayed its microscopic fungi made of glass in 2010. You can still see its downy mildew model online (*https://tinyurl.com/qjw3wlh*).



MANY THANKS TO OUR 2019 PHOTO CONTEST JUDGES

On behalf of all of the members of NJMA, we'd like to thank the judges of the 2019 Photo Contest: **Klaus Peter Steitz**, **Dave Wasilewski**, and **Nina Marra**. You had a big job and your time does not go unrecognized!

COMPLETE LIST OF WINNERS NJMA PHOTO CONTEST 2019

NOVICE DIVISION

PICTORIAL

FIRST Stef Bierman
SECOND Shawn Delanni
HONORABLE MENTION Stef Bierman

TECHNICAL

FIRST Stef Bierman
SECOND Keara Giannotti
HONORABLE MENTION Keara Giannotti

JUDGES' OPTION

FIRST Keara Giannotti
SECOND Keara Giannotti
HONORABLE MENTION Keara Giannotti

ADVANCED DIVISION

PICTORIAL

FIRST Maricel Patino
SECOND Lyla R. Meader
HONORABLE MENTION Lyla R. Meader

TECHNICAL

FIRST Lyla R. Meader
SECOND Maricel Patino
HONORABLE MENTION Maricel Patino

JUDGES' OPTION

FIRST Susan Hopkins
SECOND Maricel Patino
HONORABLE MENTION Susan Hopkins

BEST IN SHOW
Maricel Patino

Congratulations to the winners, and a big "thank you" to all those who entered – and thank you to all of the judges and NJMA officers and volunteers who helped to make this year's photo contest a wonderful success!
View the winners on our website – www.njmyco.org

NJMA PHOTO CONTEST 2019

BEST IN SHOW

Mycena haematopus

MARICEL PATINO

PHOTOGRAPHER

NJMA PHOTO CONTEST 2019
GALLERY OF FIRST PLACE WINNERS

ADVANCED PICTORIAL – **MARICEL PATINO**
Mycena haemotopus

NOVICE PICTORIAL – **STEF BIERMAN**

ADVANCED TECHNICAL – **LYLA R. MEADER**
Neoflavus alveolaris

NOVICE TECHNICAL – **STEF BIERMAN**
Pleurotus ostreatus

ADVANCED JUDGES' OPTION – **SUSAN HOPKINS**
"Elk Lake Variety"

NOVICE JUDGES' OPTION – **KEARA GIANNOTTI**
"Blue Ridge Lobster"

(A complete list of all winners is on page 6.)

CALENDAR OF UPCOMING EVENTS

Sunday, January 26
1:00pm

GENERAL MEETING
Frelinghuysen Arboretum, Morristown
– Beginners' Q&A: NJMA will host a panel of experienced members to answer any and all questions from curious mushroom enthusiasts.
– Best of 2019: A review of NJMA's best finds of 2019

NOTE NEW DATE!
Saturday, February 29
1:30pm

MYCOPHAGY AND MYCOAUCTION *OUR MOST POPULAR ANNUAL EVENT*
Unitarian Society, Tices Lane, East Brunswick **Members only**– *Registration required.*
Contact Igor Safonov at ***njmycomember@gmail.com*** if you're planning to attend.

Mycophagy began in 1978 as a way to teach our members how professional chefs cook mushrooms. For the first few years, our members supplied the mushrooms that they had collected and dried or frozen for the chefs to work with. When Phillips Mushroom Farms of Kennett Square became involved, the range of mushroom recipes available to demonstrate expanded exponentially – both in varieties available and techniques that could be used with them. Come and learn from one of NJMA's highest rated chefs, Luke Smithson. Dishes will be sampled and recipes will be distributed.
Newcomers, take note: Space is strictly limited and pre-registration is a ***must****!*

A Myco-auction will be held before, during, and after the cooking demo.
Start collecting contributions of any mushroom-related items, *i.e.* dried mushrooms, books, china, photographs, art, curios, etc., etc., etc.!!! Please email Jim Richards (***jimrich211@icloud.com***) to let him know what you will be contributing.

WE NEED YOUR STUFF!

Sunday, March 22
1:30pm

MEETING & LECTURE
Frelinghuysen Arboretum, Morristown
Speaker and topic to be announced.

Saturday, March 28
6:00pm

NJMA CULINARY GROUP DINNER – A MUSHROOM SAMPLER
Unitarian Center, Tices Lane, East Brunswick
Pre-registration required (***pamarjavo@gmail.com***) See article on ***page 11***.

Sunday, April 19
1:30pm

MEETING & LECTURE
Frelinghuysen Arboretum, Morristown
Guest speaker: **Christian Schwarz**. *Topic to be announced.*
Christian Schwarz is a mushroom enthusiast and taxonomist and citizen science advocate from Santa Cruz, the land of milk (caps) and honey (mushrooms). He studied at UCSC, and now spends his time photographing, teaching about, and making scientific collections of macrofungi. He is coauthor of *Mushrooms of the Redwood Coast*, and is slowly building a mycoflora for Santa Cruz County. He also writes a blog called *Notes of a Mycophile.*

SAVE THE DATES!
June 26 - 28

NJMA'S VICTOR GAMBINO WEEKEND FORAY
Kirkwood Retreat Center, Bangor, PA
Guest mycologist: **Dr. Roy Halling**, Curator Emeritus, Mycology, NY Botanical Gardens
The Kirkridge Retreat Center is along the Appalachian Trail near Bangor, Pennsylvania in a dorm-like setting. Forays will take place in the southern portion of the beautiful Delaware Water Gap National Recreation Area. Room and board for the weekend will run about $280.00 – 300.00. We will send an email blast with more information as we have more specific information on registration, which will be available online. Contact Liz Broderick at ***medhead72@gmail.com*** with any questions.

WHO'S IN A NAME?
The family *Bankeraceae*

by John Dawson (seventy-sixth in a series)

The family *Bankeraceae* comprises several genera of tooth fungi, including *Phellodon, Hydnellum,* and *Sarcodon* (and until recently, *Bankera*, now subsumed under *Phellodon*). It was named after the American mycologist Howard James Banker, who was born in Schaghticoke, New York, on 19 April 1866 and died in Huntington, New York, on 13 November 1940.

I have found little information about Banker's youth, but he attended college at Syracuse University, from which he graduated in 1892. For three years thereafter, he taught at Troy Conference Academy, a Methodist institution in Poultney, Vermont, that was founded in 1834 and eventually became Green Mountain College, an environmentally-focused school that closed due to financial exigency in the spring of 2019. At the Academy, Banker prepared to become a Methodist pastor, and while there, on 23 August 1894, he married Mary Eugenia Wright. His career in the ministry, however, was short-lived: He was pastor at Union Church in Proctor, Vermont from 1895 to 1898, but then enrolled at Columbia University, from which he received an A.M. in 1901 and a Ph.D. in 1906.[1] Among his teachers, there was Lucien Marcus Underwood, profiled in the twelfth installment of this series.

Howard J. Banker

It was at Columbia that Banker first began to study the Hydnaceae, the principal focus of his work in mycology. His first mycological paper appeared in 1901 while he was teaching mathematics (not biology) at Dickinson Seminary in Williamsport, Pennsylvania.[2] He then taught biology for three years at Southwestern Normal School in California, Pennsylvania (now California University of Pennsylvania), before accepting a position in 1904 as professor of biology at DePauw University in Greencastle, Indiana.

While studying for his master's degree, Banker had joined the Torrey Botanical Club, and in 1902 he became a member of the American Association for the Advancement of Science. He was elected a fellow of the Academy three years later and a life fellow in 1923. In 1909, he joined the newly reorganized Botanical Society of America and became an associate editor of the journal *Mycologia* that was founded that year. He continued in that post until 1933, the year both that he retired and that publication of *Mycologia* was taken over by the Mycological Society of America.

Of Banker's eighteen mycological papers,[3] all but two were published either in *Mycologia* or in journals of the Torrey Botanical Club, sixteen of them during the ten years he was at DePauw. His most important contributions were "A contribution to a revision of the North American Hydnaceae" (1909) and the seven-part series "Type studies in the Hydnaceae" (1912–14) that summarized the results of his examination during the summer of 1910 of type specimens of hydnums in European herbaria. His last mycological article appeared in 1929.

Fifteen years before that, Banker had resigned his professorship at DePauw and changed careers. He had long had an interest in genealogy and, in 1909, had published an extensive genealogy of the Banker family, recording not only dates of births, deaths and marriages, but "height, weight, hair color, and eye color" as well as "temperament, memory, … talent" and causes of death of the individuals listed![4] In pursuit of that interest, he moved to Cold Spring Harbor, Long Island, in 1914 and spent the rest of his working life on the staff of the Eugenics Record Office of the Carnegie Institution of Washington's Station for Experimental Evolution. His studies there focused on human genetics, in later years in an effort to advance the theory of aristogenesis (defined in Merriam-Webster as the then widely-held, but now discredited, view that "evolution is the product of a continuous orderly creative faculty innate in living matter" that is "manifested in response to external stimuli at such a rate that perfection of an adaptation anticipates the need for that adaptation.")

Following Banker's death, his wife Mary donated his herbarium to the New York Botanical Garden.

[1] According to the obituary memoir of Banker by John Hendley Barnhart, published in *Mycologia*, vol. 33, no. 4 (July-August 1941), pp. 341– 343 — the source for most of the information in this profile, as well as for the portrait of Banker. The *Wikipedia* article on Banker, however, gives 1908 as the year Banker received his Ph.D.

[2] A preparatory school for Dickinson College that eventually evolved into Lycoming College.

[3] A complete list of those papers is given at the end of the obituary memoir by Barnhart cited above in footnote 1.

[4] Quoted from the obituary memoir by Barnhart.

A CULINARY GROUP "REVIVAL"
SATURDAY, MARCH 28TH, 6:00PM
UNITARIAN CENTER, EAST BRUNSWICK, NJ

by Jim Richards, Culinary Group Chairperson

What is the Culinary Group and where did it go? The NJMA Culinary Group was started in 1983 as a way for members to get together and enjoy a planned meal.

While NJMA has a number of potluck events where food is shared, the Culinary Group differs in offering set menus – usually based on the foods of a particular cuisine. Mushroom dishes are a significant part of most of the menus. We have had Mushroom Pates at some of the French dinners, Mushroom Ceviche at an Argentinian Cookout and *Lactarius corrugis* Pizzas at a Locavore Picnic. The dinners offer members a chance to enjoy great food in a relaxed setting and to get to know their fellow members over a glass or two of wine, beer or tea and coffee.

In the past, a few members have done the work of planning the theme, finding the recipes and assigning them, setting up the tables, etc., and cleaning up afterwards. Ideally, we would do three dinners a year: one in the Spring, another in the Fall, and a cook-out in Summer. If you are interested, I will be glad to send you a list of the dinners and the menus.

Each cook submits a copy of their expenses for the ingredients used in preparing their dish. The costs are added together and divided by the number of attendees. The average price for these multi-course feasts has been about $18.00 per person.

After the meal, the participants are sent copies of all the recipes along with any comments by the preparers.

We are looking for people that are willing to help revive the group. There is a small group of members that have been helping with set-up, clean up, and so on, but they need a "leader".

If you are interested in helping the Culinary Group get started again, please contact me (Jim Richards) at ***jimrich17@icloud.com*** and we can plan on getting together. We can always talk at the winter meetings, as well.

To sign up for a mushroom-themed dinner at the Unitarian Center in East Brunswick at 6:00 pm, Saturday, March 28th, contact Marja Van Ouwerkerk (***pamarjavo@gmail.com***) to register.

Stay close to anything that makes you glad that you're alive.

—-Hafiz

BORROWING FROM NJMA'S ROBERT H. PEABODY LIBRARY

by Jim Richards

Did you know that your NJMA Membership Card is also a library card? Well, it is!

Thanks to the generosity of members, NJMA has one of the finest mycological libraries of any "mushroom club" – over 700 titles and 1100 volumes. The addition of many "review copies" of the latest titles means that our members can "test drive" field guides, cookbooks, monographs, and so much more before adding them to their home libraries. If there are titles you are looking for, contact Jim Richards, our Librarian, at ***njmalibrary@gmail.com*** to see if they are available.

Library Borrowing Guidelines and Procedure:

1. New members with less than one year's membership must provide a driver's license or similar identification before they can borrow books. All other borrowers should be willing to leave a phone number, email address or home address so Jim Richards can keep track of the materials.

2. Loans will be limited to one book at a time unless special arrangements are made.

3. It is the responsibility of the borrower to return the book to Jim when due (the lending period is generally four weeks). Books can be returned at meetings or forays. If Jim is not there, the book can be returned to Nina Burghardt or one of the club officers.

4. If it is not possible to return borrowed material in a timely manner at a club event, the borrower is responsible for the cost of shipping the book back to Jim Richards.

5. Contact Jim (***njmalibrary@gmail.com***) two weeks before you would like to borrow materials and he will arrange to have them brought to the next event.

6. Because of value or rarity, some material does not circulate. Arrangements can be made for members to examine the material on-site by contacting Jim. The library is housed in three locations: Jim's home (review copies, cookbooks, wild foods), the Burghardt's (taxonomy, collectibles) and Terri Layton's (the older collection)

A random selection of books is available at most winter meetings and forays. A complete library catalog will be listed on our website shortly.

NJMA will accept books, magazines, and educational DVDs from those who would like to donate them. Contact Jim (***njmalibrary@gmail.com***) or Frank Marra (***njmaprez@gmail.com***).

BYTES, BITS, & BITES *(continued from page 4)*

from the Editor:

Turning Paris's underground car parks into mushrooms farms:
https://tinyurl.com/y5n63nds

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from the Editor:

Cautions on consuming Chicken mushrooms
https://tinyurl.com/ybaa9ozl

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from Sue McClary:

Russians, chanterelles, and pie:
https://tinyurl.com/usahnll

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from the Editor:

Kentucky's bourbon industry is covering its neighbors in black fungus:
https://tinyurl.com/yykabp6c

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from Sue McClary:

Lactic acid fermentation of edible mushrooms:
https://tinyurl.com/y3d3ogbv

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from Sue McClary:

Are mushrooms the new meat?
https://tinyurl.com/y2k7jfnv

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from Sue McClary:

IKEA switches to mushroom-based packaging:
https://tinyurl.com/y2aqxrpb

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from Sue McClary:

Best places in the World to Travel If You Love Mushrooms:
https://tinyurl.com/y6qtka8z

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*from **The New York Times**:*

On the Hunt for Mushrooms in Central Oregon:
https://tinyurl.com/qvg72qa

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from the Editor:

A Wave of Colorful 'Coral' Fungi Is Washing Over Wales:
https://tinyurl.com/tbr3tlu

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from Judy Glattstein:

Rare *Clavaria zollingeri* found on the Wales' Llyn Peninsula:
https://tinyurl.com/yypmoqwj

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from Gary Makus:

Some mushrooms are on the endangered list:
https://tinyurl.com/rqsbfml

from the Editor:

Copenhagen Wants You to Forage on Its City Streets:
https://tinyurl.com/vn2r9ag

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from Sue McClary:

Mycoremediation after the California fires:
https://tinyurl.com/yyewkyab

---

from Gary Makus:

China Medicinal Mushroom Conference (NJMA makes no endorsement):
https://tinyurl.com/uubqm5q

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from Sue McClary:

Mushroom chitosan fiber as an all-natural preservative ingredient:
https://tinyurl.com/y67e2yl2

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from Warren Marchioni:

Maybe it is the convergence of fungi season and Halloween, but there seems to be inordinate interest in the fungus Cordyceps lately in literature and film. David Kopp's novel "Cold Storage", M.R. Carey's novel "The Girl With All the Gifts", and now a videogame "The Last of Us":
https://tinyurl.com/wnz2oor

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from Richard Silber:

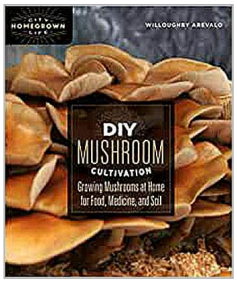
Greetings, fellow Mycophiles:
I'm Rick Silber, and I'm on the Board of Directors of the Mycological Association of Washington, D.C. I recently launched a new project that is a longtime dream of mine. I created International Mountain Trekking, Inc. (IMT), a small company that offers custom-designed trips to the Himalayas, one of the most beautiful and fascinating regions in the world. I want to let your members know about a very special mushroom-oriented trek IMT is offering this June to Everest Base Camp, at the height of Nepal's mushroom season. The trek will be led by Shiva Devkota, Ph.D., Nepal's leading mycologist. Dr. Devkota will join experienced Sherpa guides to lead this trek through rugged forested terrain, deep river-carved gorges and multiple climate zones that support dozens of rare and interesting mushrooms, plants and medicinal herbs. We will stay at comfortable mountain lodges, and our evenings will be spent learning about (and, when possible, cooking and eating) the mushrooms we've found during our forays, and about the ecological and evolutionary processes at work in this mountainous region. Here's a video about the trek: ***https://tinyurl.com/trwojbx***. The 16-day trek, which runs from June 13 through June 28, 2020, will culminate at the picturesque village of Phortse, home to our Sherpa guides and the Khumbu Climbing Center, and will coincide with the Buddhist festival of

(continues on next page)

BOOK REVIEW

DIY MUSHROOM CULTIVATION: GROWING MUSHROOMS AT HOME FOR FOOD, MEDICINE AND SOIL

a review by Stef Bierman



DIY Mushroom Cultivation: Growing Mushrooms at Home for Food, Medicine and Soil
by Willoughby Arevalo

New Society Publishers (June 2019)
208 pages

ISBN-10: 0865718954
ISBN-13: 978-0865718951

When the opportunity to review this book for the newsletter came along, I jumped on it! Despite my history with cultivation of mushrooms, I've never actually read a cultivation book. I've learned everything by watching and doing. I attended a class taught by the author along with Robert Rogers and Olga Tsogas, which was quite intimate and intense – about 20 strangers in a house in the woods for three days, eating and learning together. Willoughby was knowledgeable and entertaining, but researching more after the class, I found no website, Facebook or other way to easily get more from him, until this book.

The book is informative and thorough. The artwork and diagrams were helpful, and enhanced my grasp of the topics. Some of his refreshing views, such as shifting our way of speaking from old terms such as "colonization" (a rather European/human term) to "myceliation" come through in the text. And "gasteroid". Do you know of any other beings that make their reproductive units in stomach-like structures? I think we should call these species the uteroid fungi. These ways of thinking carry over into his cultivation methods as well.

Chapter 1 covers mushroom basics, including taxonomy and life cycle.

Chapters 2 and 3 discuss the many details of designing your business, workspaces, tools, lab setup. Options for growing spaces range from hanging a bag in your shower to larger climate-controlled fruiting rooms, the many details of which are discussed.

Chapter 4 covers sanitation, the contamination that inevitably will occur, how mushrooms are made to deal with it, and how we should deal with it. I laughed at a method for dealing with insects – vacuuming them up from the air, which works but looks quite silly if you don't know what is going on!

Chapter 5 is about starting and maintaining cultures from spore prints to liquid syringes, agar and cardboard – all with step-by-step instructions.

Chapter 6 covers grain spawn and the many methods of sterilization and transfer.

Chapter 7 is all about the fruiting and the many vessels and substrate options that exist for fruiting.

Chapter 8 covers outdoor growing and what to do with your spent blocks, which often end up outside.

Chapter 9 is the final product and how to harvest, process, cook, use for medicine, mycoremediation and different art you could create.

Appendix 1 has basic, but nice, species profiles covering mushroom descriptions, ecology, methods of cultivation, difficulty level and yield, growth parameters, medicinal and nutritional properties, culinary value and use for twelve of the most commonly cultivated food and medicinal mushrooms. Appendix 2 has a lengthy list of resources which covers everything from spores, supplies, further reading, stores, education, and gatherings.

I think this is a great book for a beginner or someone looking to grow some mushrooms as a hobby or small-scale production. As a more experienced grower, I was excited to learn a few new tricks and methods that I've never ventured into, like liquid cultures and different sterilization techniques. Some of them I'd never bother with personally (unless I'm a survivor of the apocalypse), but I can appreciate that anyone, anywhere, can attempt to grow mushrooms to feed themselves. He covers options for spawn expansion for people who can't obtain or afford to spare the simple grains (the usual medium for spawn expansion) to use to grow a crop through more advanced lab techniques requiring sometimes-expensive equipment. He encourages using various containers that could be found in the trash and/or recycled for growing in (something once again accessible to almost everyone). Anyone can use this book to start growing mushrooms – from those with incredibly limited resources, in urban settings and very small spaces, to farms with large amounts of land and natural resources. He touches on many ideas of eco-consciousness like using invasive plant material for substrates and other waste for substrate. The problem so many of us growers battle with (horrible single-use plastics) is mentioned and alternatives offered. There is a fun section encouraging us to think like a mushroom with twelve or so actions to follow.

(*Editor's note:* Stef is co-owner of Smiling Earth Mushrooms in Long Branch, NJ. (***www.smilingearthfarm.com***) and Secretary of NJMA)

BYTES, BITS, & BITES *(continued from previous page)*

Dumji. I would love to have some of your members participate in this trek. Space is limited, however, and interested participants need to reserve spots as soon as possible. I would greatly appreciate if you would pass this information on to your membership. If you or any of your members are interested in participating in this trek, or would like to receive additional detailed information, please click on our website: ***www.imt-nepal.com***, email International Mountain Trekking at ***info@imt-nepal.com***, or call me directly at 202-255-1191.

NJMA 2020 – PEOPLE YOU NEED TO KNOW

OFFICERS

President	**Frank Marra**
Vice President	**Sue McClary**
Treasurer	**Igor Safonov**
Secretary	**Stefanie Bierman**

TRUSTEES

Melanie Spock
Dorothy Smullen
Liz Broderick
Luke Smithson
Jim Richards

NJMA 2020 COMMITTEE CHAIRS AND ACTIVITY/INTEREST GROUP LEADERS

*(**bold** and ** indicate Permanent Functions specified in by-laws)*

Archives/Historian	**Phil Layton**
Cultivation	**Frank Kushnir**
Dyeing/Arts	**Ursula Pohl**
Education*	**Luke Smithson**
Forays*	**Nina Burghardt**
Ray Fatto/Gene Varney Herbarium**	**Dorothy Smullen**
Fungus Fest	**Liz Broderick**
Robert H. Peabody Library	**Jim Richards**
Membership*	**Igor Safonov**
Microscopy	**Mike Rubin**
NAMA representative	**Ursula Pohl**
NEMF representatives	**Mike Rubin**, **Dorothy Smullen**
Newsletter*	*Editor* – **Jim Richards** *Art Director* – **Jim Barg**
Nominating*	**John Burghardt**, **Nancy Addotta**, **Dorothy Smullen**
Outreach*	**Nancy Addotta**
Recorder	**John Burghardt**
Ray Fatto Scholarship*	**Mike Rubin**
Social Media	**Maricel Patino**
Taxonomy*	**Nina Burghardt**
Special Events	
Mycophagy	**Jim Richards**
Holiday Party	**Virginia Tomat**
Photo Contest	**Jim Barg**
Victor Gambino Foray	**Liz Broderick**
Website	**Jim Barg**

(To contact any of the above, click on a name to begin to compose an email to that person)

REPORT ON 2019 COLLECTIONS AT NJMA FORAYS

by John Burghardt, Recorder
New Jersey Mycological Association

The 2019 collecting season brought many enthusiastic mushroomers to our forays. On the whole, conditions were very good, and we found many interesting fungi. True, the mycorrhizal fungi, and especially boletes, got off to a slow start in July and early August. And, as spring rains gave way to drier conditions by mid-summer, I remember wondering each week whether the upcoming foray would be the one where our luck ran out. That finally happened at a couple of our late season forays. Cattus Island was dry. At Estelle Manor, a fine drizzle while we were collecting became a hard rain and we identified under cover of a picnic pavilion. Both of these forays were very productive, memorable and great fun despite (or maybe because of) the adverse conditions. In the end, we found about as many mycorrhizal fungi this year as we found in 2018 and nearly as many taxa, after adjusting for the smaller number of forays in 2019.

The accompanying table lists the 708 taxa identified alphabetically within "form groups", which are defined by the characteristics of the spore-bearing surface of the fungus. The table also shows the date and location of each foray. We had 14 regular weekend forays, and recorded as separate "forays": 1) the fungi from a Friday foray with middle school science teachers at the NJ School of Conservation near Stokes State Forest, 2) our Fungus Fest, where the public brings fungi from various locations for display and identification, and 3) our ongoing survey of fungi at Franklin Parker Preserve.

All form groups were represented in our collections this year. By far, the most prevalent form group was the gilled fungi with 335 taxa. Ascomycetes and Polypores each had 80 taxa and Boletes had 54. We also had an unusual number of Crust fungi with 39 species.

A total of 72 species were recorded for the first time at an NJMA foray in 2019. These new-to-the-list species fell in 13 of the 15 form groups. Eleven individuals contributed these first-time identifications, although Maricel Patino and Nina Burghardt together contributed over two-thirds of these new identifications. We also benefitted from visits by guest experts from other clubs. Ethan Crenson attended the Wawayanda Foray in September, which was held jointly with the New York Mycological Association. John and Kim Plischke visited in early November and went to Wells Mill Park, Franklin Parker Preserve, and our final regular foray at Belleplain State Forest. Ethan contributed three new species names, and John contributed six.

I wanted to briefly discuss three of the Tomentella species that Maricel identified for the first time in the Crust group. One of these, *Tomentellopsis echinospora,* was originally described from Newfield, New Jersey by JB Ellis, a mycologist who lived and worked in Newfield from the mid-1870s until the early 1900s. This species, as well as *Tomentella ferruginea* and *Tomentella lapida* are fuzzy white or whitish crusts that most of us pass by because we have no hope of identifying them. The really neat thing about them is that they are mycorrhizal, not saprobic. Most crusts are saprobic – they draw nutrition from the dead wood they live on by dissolving lignin and/or cellulose in the wood. But the Tomentella species, like Amanitas or Boletes, obtain their nutrition by extending their hyphae to find tree roots, which they encrust to establish a pathway for the exchange of resources with the host tree. Kudos to Maricel for more than doubling the number of Tomentella species on our cumulative list.

I also wanted to say a word about our foray at Chestnut Branch Park in Mantua Township, Gloucester County. This was our first venture into the southwestern part of New Jersey along the Delaware River. Chestnut Branch is a tributary of Mantua Creek which flows into the Delaware River near Paulsboro, NJ, directly across from Philadelphia International Airport. The foray location is a trail along the stream through a steep ravine filled with a beautiful mature, mixed hardwood forest. The many species of nut trees confer what, to my north Jersey sensibility, is a very southern feel to the landscape. It was a lovely walk, with NJMA members from the area as well as members of the Gloucester County Nature Club. Not surprisingly, the walk was also very productive – 128 species were identified, of which 24 were collected only at this location in 2019 and five were new to our cumulative NJMA list.

In closing, I want to thank all the members and many nonmembers who came to our forays. Your interest, questions, carefully collected specimens, help with sorting, and help with identification make this activity fun. Please be aware that your collections contribute to the documentation of the diverse fungi of New Jersey.

I hope to see you at one of our winter meetings and in the woods again in 2020.

NJMA 2019 FORAYS SPECIES LIST (page 1)

(names in **bold** *indicate species which are new to our list)*

MUSHROOMS - Fragile cap with gills, with or without stem

Agaricus campestris
Agaricus placomyces
Agaricus silvaticus
Agaricus sp.
Agaricus vinosobrunneofumidus
Amanita abrupta
Amanita albocreata
Amanita amerifulva
Amanita amerirubescens
Amanita atkinsoniana
Amanita bisporigera
Amanita brunnescens v brunnescens
Amanita brunnescens v pallida
Amanita canescens
Amanita citrina v citrina
Amanita cokeri
Amanita crenulata
Amanita daucipes
Amanita dulciarii
Amanita elongata
Amanita farinosa
Amanita flavoconia
Amanita limbatula
Amanita longipes
Amanita microlepis
Amanita muscaria v guessowii
Amanita mutabilis
Amanita onusta
Amanita phalloides
Amanita polypyramis
Amanita rhacopus
Amanita rhopalopus
Amanita sagittarria
Amanita sect. Lepedella
Amanita sect. Phalloideae
Amanita sect. Vaginatae
Amanita sp.
Amanita sp. bisporigera 05
Amanita subcokeri
Amanita vaginata v vaginata
Armillaria gallica
Armillaria gemina
Armillaria mellea
Armillaria ostoyae
Armillaria sp.
Armillaria tabescens
Asterophora lycoperdoides
Chlorophyllum molybdites
Chroogomphus vinicolor
Clitocella mundula
Clitocybe candida
Clitocybe diatreta
Clitocybe gibba
Clitocybe intermedia
Lactarius chrysorheus
Lactarius cinereus v fagetorum
Lactarius corrugis
Lactarius deceptivus
Clitocybe metachroa
Clitocybe odora
Clitocybe truncicola
Clitopilus prunulus
Collybia cirrhata
Coprinellus micaceus
Coprinus disseminatus
Cortinarius alboluteus
Cortinarius alboviolaceus
Cortinarius armillatus
Cortinarius caperatus
Cortinarius corrugatus
Cortinarius croceus
Cortinarius distans
Cortinarius iodes
Cortinarius lilacinus
Cortinarius malicorius
Cortinarius marylandensis
Cortinarius mucosus
Cortinarius privignoides
Cortinarius purpurascens
Cortinarius sanguineus
Cortinarius semisanguineus
Cortinarius sp.
Cortinarius squamulosa
Cortinarius torvus
Cortinarius violaceus
Crepidotus applanatus
Crepidotus crocophyllus
Crepidotus kaufmanii
Crepidotus sp.
Crepidotus stipitatus
Crinipellis zonata
Cuphophyllus virgineus
Entolma unicolor
Entoloma abortivum
Entoloma formosum
Entoloma lividocyanulum
Entoloma luteum
Entoloma sericellum
Entoloma serrulatum
Entoloma sp.
Entoloma striatum
Entoloma strictius
Entoloma strictius var. isabellinus
Entoloma watsonii
Flammulaster erinaceellus
Flammulina velutipes
Galerina marginata
Galerina paludosa
Gerronema strombodes
Gliophorus laetus
Gymnopilus junonius
Gymnopilus liquiritiae
Mycena inclinata
Mycena leaiana
Mycena luteopallens
Mycena megaspora
Gymnopilus luteus
Gymnopilus penetrans
Gymnopilus sapineus
Gymnopus dichrous
Gymnopus dryophilus
Gymnopus sp.
Gymnopus subnudus
Hebeloma brunneifolium
Hebeloma sp.
Hebeloma sterlingii
Hohenbuehelia petaloides
Humidicutis marginata
Humidicutis marginata
Hygrocybe acuticonicus
Hygrocybe cantharellus
Hygrocybe conica
Hygrocybe miniata
Hygrocybe mintula
Hygrocybe psittacina v psittacina
Hygrocybe punicea
Hygrocybe squamulosa
Hygrophoropsis aurantiaca
Hygrophorus hypothejus
Hygrophorus parvulus
Hygrophorus ponderatus
Hygrophorus pustulatus
Hygrophorus sp.
Hygrophorus subsordidus
Hymenopellis furfuracea
Hymenopellis radicata
Hypholoma capnoides
Hypholoma fasciculare
Hypsizygus ulmarius
Inocephalus quadratus
Inocybe pallidipes
Inocybe rimosa
Inocybe sp.
Laccaria amethystina
Laccaria bicolor
Laccaria laccata v pallidifolia
Laccaria longipes
Laccaria nobilis
Laccaria ochropurpurea
Laccaria ohiensis
Laccaria proxima
Laccaria sp.
Laccaria striatula
Laccaria trichodermophora
Laccaria trullisata
Lacrymaria lacrymabunda
Lactarius argillaceifolius
Lactarius caespitosus
Lactarius camphoratus
Lactarius chelidonium
Russula cyanoxantha
Russula dissimulans
Russula flaviceps
Russula foetentula

NJMA 2019 FORAYS SPECIES LIST (page 2)

(names in **bold** *indicate species which are new to our list)*

Lactarius griseus
Lactarius helvus
Lactarius hibbardae
Lactarius hygrophoroides
Lactarius indigo v indigo
Lactarius lignyotus v lignyotus
Lactarius mucidus v mucidus
Lactarius paradoxus
Lactarius piperatus
Lactarius proximellus
Lactarius psammicola
Lactarius quietus v incanus
Lactarius sp.
Lactarius subplinthogalus
Lactarius subpurpureus
Lactarius subvellereus v subvellereus
Lactarius subvernalis
Lactarius vinaceorufescens
Lactarius volemus
Lactifluus petersenii
Lentinellus cochleatus
Lentinellus ursinus
Lentinellus vulpinus
Lentinus levis
Lentinus sp.
Lentinus tigrinus
Lepista irina
Lepista nuda
Leucoagaricus leucothites
Leucoagaricus rubrotinctus
Leucocoprinus fragilissimus
Leucopaxillus albissimus
Lyophyllum sp.
Macrolepiota procera
Marasmiellus candidus
Marasmius rotula
Marasmius scorodonius
Marasmius siccus
Marasmius sp.
Marasmius strictipes
Marasmius sullivantii
Megacollybia rodmanii
Melanoleuca alboflavida
Melanoleuca gravis
Melanoleuca niveipes
Melanoleuca subsejuncta
Mycena abramsii
Mycena epipterygia
Mycena galericulata
Mycena haematopus
Mycena haematopus v marginata
Tricholoma venenatum
Tricholomopsis decora
Tricholomopsis formosa
Mycena pseudoinclinata
Mycena pura
Mycena sanguinolenta
Mycena sp.
Mycena subcaerulea
Myxomphalia maura
Neolentinus lepideus
Nolanea murrayi
Omphalina chrysophylla
Omphalotus illudens
Panellus stipticus
Paxillus panuoides
Pholiota limonella
Pholiota sp.
Pholiota squarrosa
Pholiota veris
Pleurotus dryinus
Pleurotus ostreatus
Pleurotus pulmonarius
Plicaturopsis crispa
Pluteus admirabilis
Pluteus cervinus
Pluteus fibrillosus
Pluteus flavofuligineus
Pluteus leoninus
Pluteus petasatus
Pluteus sp.
Pouzarella nodospora
Psathyrella candolleana
Psathyrella delineata
Psathyrella sp.
Psilocybe coprophila
Psilocybe ovoideocysistydiata
Resupinatus alboniger
Resupinatus applicatus
Rhizomarasmius pyrrhocephalus
Rhodocollybia butyracea
Rhodocollybia maculata v maculata
Rhodocollybia maculata v scorzonerea
Rickenella fibula
Russula aeruginea
Russula albonigra
Russula angustispora
Russula aquosa
Russula brevipes
Russula brunneoalba
Russula brunneola
Russula brunneoviolacea
Russula claroflava
Russula compacta
Russula crustosa
Tricholomopsis rutilans
Xeromphalina campanella
Xeromphalina kauffmanii
Russula fragilis
Russula fragiloides
Russula fragrantissima
Russula heterophylla
Russula heterosporoides
Russula humidicola
Russula incarnaticeps
Russula mariae
Russula modesta
Russula nigrescentipes
Russula ochroleucoides
Russula parvovirescens
Russula peckii
Russula pectinatoides
Russula perlactea
Russula praeclavipes
Russula pseudolepida
Russula pseudopeckii
Russula pulchra
Russula pusilla
Russula redolens
Russula rosea
Russula rubripurpurea
Russula sericeonitens
Russula silvicola
Russula sp.
Russula subgraminicolor
Russula variata
Russula ventricosipes
Russula vesicatoria
Russula vinacea
Schizophyllum commune
Sphagnurus paluster
Stropharia hardii
Stropharia rugosoannulata
Tapinella atrotomentose
Tetrapyrgos nigripes
Tricholoma aestuans
Tricholoma caligatum
Tricholoma caligatum var.glaucescens
Tricholoma equestre
Tricholoma focale
Tricholoma imbricatum
Tricholoma magnivelare
Tricholoma myomyces
Tricholoma odorum
Tricholoma pardinum
Tricholoma pessundatum
Tricholoma portentosum
Tricholoma sp.
Tricholoma terreum
Xerula megalospora
Xerula sp.

NJMA 2019 FORAYS SPECIES LIST (page 3)

(names in **bold** *indicate species which are new to our list)*

BOLETES - Fleshy, fragile with separable pores instead of gills

Aureoboletus innixus
Aureoboletus projectellus
Austroboletus subflavidus
Baorangia bicolor
Boletinellus merulioides
Boletus auripes
Boletus longicurvipes
Boletus luridiformis
Boletus nobilis
Boletus oliveisporus
Boletus pallidus
Boletus sp.
Boletus subtomentosus
Boletus subvelutipes
Bothia castanellus
Butyriboletus roseopurpureus
Cyanoboletus pulverulentus
Gyrodontium sp.
Gyroporus castaneus
Harrya chromapes
Leccinellum albellum
Leccinum holopus v holopus
Leccinum piceinum (=aurantiacum)
Leccinum rubropunctum
Leccinum scabrum
Phylloporus boletinoides
Phylloporus leucomycelinus
Phylloporus rhodoxanthus
Pseudoboletus parasiticus
Retiboletus griseus
Strobilomyces confusus
Strobilomyces sp.
Strobilomyces strobilaceus
Suillus americanus
Suillus brevipes
Suillus decipiens
Suillus granulatus
Suillus hirtellus
Suillus salmonicolor
Suillus sp.
Suillus weaverae
Sutorius eximius
Tylopilus alboater
Tylopilus felleus
Tylopilus ferrugineus
Tylopilus griseocarneus
Tylopilus intermedius
Tylopilus rubrobrunneus
Tylopilus sp.
Tylopilus violatinctus
Xanthoconium affine
Xanthoconium seperans
Xanthoconium stramineum
Xerocomus hortonii

CHANTERELLES - Gill-like folds, wrinkles, or smooth fertile surface

Cantharellula umbonata
Cantharellus cinnabarinus
Cantharellus flavus
Cantharellus lateritius
Cantharellus minor
Cantharellus sp.
Cantharellus tenuithrix
Craterellus cinereus
Craterellus fallax
Craterellus ignicolor
Craterellus lutescens
Craterellus tubaeformis
Gomphus floccosus

POLYPORES - Dry, tough, woody; tubes not separable from cap; often without stem

Abortiporus biennis
Antrodia serialis
Antrodia sp.
Bjerkandera adusta
Bondarzewia berkeleyi
Byssomerulius incarnatus
Cerioporus leptocephalus
Cerioporus squamosus
Cerioporus varius
Cerrena unicolor
Coltricia cinnamomea
Coltricia montagnei
Coltricia perennis
Coltriciella dependens
Coltriciella sp.
Daedalea quercina
Daedaleopsis confragosa
Dentocorticium portoricense
Fistulina hepatica
Fomes fomentarius
Fomitopsis cajanderi
Fomitopsis pinicola
Fomitopsis spraguei
Ganoderma applanatum
Ganoderma curtisii
Trametes versicolor
Trichaptum abietinum
Ganoderma lobatum
Ganoderma sessile (=lucidum)
Ganoderma sp.
Ganoderma tsugae
Globifomes graveolens
Gloeophyllum sepiarium
Gloeoporus dichrous
Gloeoporus pannocintus
Gloeoporus taxicola
Grifola frondosa
Hapalopilus nidulans
Heterobasidion annosum
Heterobasidion irregulare
Inonotus hispidus
Irpex lacteus
Ischnoderma benzoinum
Ischnoderma resinosum
Laetiporus cincinnatus
Laetiporus sp.
Laetiporus sulphureus
Leiotrametes lactinea
Meripilus sumstinei
Neofavolus alveolaris
Osteina obducta
Oxyporus populinus
Trichaptum biforme
Tyromyces chioneus
Panus neostrigosus
Phaeolus schweinitzii
Phellinus contiguus
Phellinus gilvus
Phellinus sp.
Phlebia radiata
Phlebia sp.
Phlebia tremellosa
Phyllotopsis nidulans
Piptoporus betulinus
Polyporus arcularius
Polyporus badius
Polyporus craterellus
Porodaedalea pini
Postia caesia
Postia fragilis
Pycnoporus cinnabarinus
Schizopora paradoxa
Trametes betulina
Trametes cervina
Trametes gibbosa
Trametes hirsuta
Trametes ochracea
Trametes pubescens
Trametes sp.
Tyromyces galactinus

NJMA 2019 FORAYS SPECIES LIST (page 4)

(names in **bold** *indicate species which are new to our list)*

CRUST FUNGi - thin, soft, or tough flat against wood, with pores, smooth, or wrinkled fertile surface

Amphinema byssoides
Basidioradulum radula
Botryobasidium aureum
Botryobasidium conspersum
Botryobasidium vagum
Bulbillomyces farinosus
Byssocorticium atrovirens
Byssocorticium pulchrum
Byssomerulius corium
Ceraceomyces sp.
Corticium rosea
Dendrothele nivosa
Grandinia sp.
Grandinia subalutacea
Henningsomyces candidus
Hydnophlebia chrysorhiza
Hymenochaete rubiginosa
Hymenochaete tabacina
Hyphoderma setigerum
Hyphodontia sambuci
Leucogryophana sp.
Licrostroma subgiganteum
Mycoacia sp.
Mycoacia uda
Peniophora albobadia
Peniophora cinerea
Peniophorella puberella
Phlebiopsis crassa
Porotheleum fimbriatum
Rhizochaete filamentosa
Rhodonia placenta
Tomentella ferruginea
Tomentella lapida
Tomentella sp.
Tomentellopsis echinospora
Vararia investiens
Vararia sp.
Xylobolus frustulatus
Xylobolus subpileatus

STEREOID FUNGI - Mostly fan shaped, tough with smooth fertile surface

Stereum complicatum
Stereum gausapatum
Stereum ochraceoflavum
Stereum ostrea
Stereum striatum

TOOTH FUNGI - fleshy or woody with spines or teeth on fertile surface

Bankera fuligineoalba
Climacodon pulcherrimus
Hericium coralloides
Hericium erinaceus
Hydnellum aurantiacum
Hydnellum caeruleum
Hydnellum pineticola
Hydnellum scrobiculatum
Hydnellum sp.
Hydnellum spongiosipes
Hydnum repandum
Hydnum sp.
Hydnum umbilicatum
Hymenochaetopsis olivacea
Mycorrhaphium adustum
Phellodon niger
Radulodon copelandii
Spongipellis pachyodon
Spongipellis unicolor
Steccherinum bourdotii
Steccherinum ochraceum

CLUB, CORAL, OR FAN-SHAPED FUNGI

Artomyces pyxidata
Clavaria sp.
Clavaria cristata
Clavaria fragilis
Clavulina cinerea
Clavulinopsis fusiformis
Clavulinopsis gracillima
Clavulinopsis laeticolor
Mucronella flava
Multiclavula mucida
Ramaria stricta
Ramariopsis kunzei
Sparassis americana
Sparassis herbstii
Thelephora anthocephala
Thelephora multipartita
Thelephora terrestris
Thelephora vialis

PUFFBALLS, EARTHSTARS, EARTHBALLS, STINKHORNS, BIRD'S NEST FUNGI

Astraeus hygrometricus
Astraeus smithii
Calostoma cinnabarinum
Calostoma lutescens
Calvatia cyathiformis
Calvatia sp.
Crucibulum laeve
Cyathus striatus
Geastrum fimbriatum
Geastrum saccatum
Geastrum triplex
Hysterangium stoloniferum
Lycoperdon molle
Lycoperdon perlatum
Lycoperdon pyriforme
Lycoperdon sp.
Lycoperdon subincarnatum
Lycoperdon umbrinum
Mutinus elegans
Pisolithus tinctorius
Rhizopogon rubescens group
Rhizopogon sp.
Rhizopogon truncatus
Rhopalogaster transversarium
Scleroderma areolatum
Scleroderma cepa
Scleroderma citrinum
Scleroderma meridionale
Scleroderma polyrhizum
Scleroderma sp.
Sphaerobolus stellatus

JELLY FUNGI

Auricularia auricula
Auricularia nigricans
Calocera cornea
Calocera viscosa
Dacrymyces chrysospermus (=palmatus)
Dacryopinax spathularia
Ditiola pezizaformis
Exidia recisa
Gloeotromera alba
Leucogloea compressa
Myxarium subhyalinum
Phaeotremella foliacea
Pseudohydnum gelatinosum
Sebacina pululahuana
Tremella mesenterica
Tremellodendron schweinitzii

NJMA 2019 FORAYS SPECIES LIST (page 5)

(names in **bold** *indicate species which are new to our list)*

ASCOMYCETES - Cup fungi, Earth-tongues, and Pyrenomycete Allies

Acanthohelicospora aurea
Annulohypoxylon multiforme
Apiosporina morbosa
Ascocoryne sarcoides
Biscogniauxia atropunctata
Bisporella citrina
Chlorociboria aeruginascens
Chromelosporium carneum
Chromelosporium fulvum
Chromelosporium terrestris
Cordyceps militaris
Daldinia childiae
Dasyscyphus sp.
Dasyscyphus virgineus
Diatrype stigma
Dothiophora sp.
Elaphocordyceps ophioglossoides
Eutypa spinosa
Galiella rufa
Geoglossum simile
Gliocladium polyporicola
Glutinoglossum glutinosum
Helvella crispa
Helvella elastica
Helvella sp.
Humaria hemisphaerica
Hypocrea americana
Hypocrea citrina
Hypocrea gelatinosa
Hypocrea sp.
Hypocrea sulphurea
Hypomyces aurantius
Hypomyces boletiphagus
Hypomyces chrysospermus
Hypomyces hyalinus
Hypomyces luteovirens
Hypoxylon fragiforme
Hypoxylon fuscum
Hypoxylon howeianum
Hypoxylon sp.
Hysterium pulicare
Immotthia atrograna
Kretzschmaria deusta
Lachnellula subtililissima
Lasiosphaeris hirsuta
Leotia lubrica
Microglossum rufum
Mitrula elegans
Mollisia sp.
Morchella diminutiva
Morchella elata
Morchella sp.
Mycosphaerella colorata
Nectriopsis violacea
Orbilia sp.
Otidea onotica
Otidea sp.
Peziza arvernensis
Peziza badioconfusa
Peziza sp.
Peziza varia
Phaeocalicium polyporaeum
Polycephalomyces tomentosus
Pucciniastrum vaccinii
Rosellinia subiculata
Sarcoscypha occidentalis
Scorias spongiosa
Scutellinia erinaceus
Scutellinia scutellata
Sowerbyella unicisa
Spathularia velutipes
Sphaerostilbella sp.
Tubakia suttoniana
Urnula craterium
Vibrissea truncorum
Xylaria cubensis
Xylaria hypoxylon
Xylaria liquidambaris
Xylaria longipes
Xylaria polymorpha

MYXOMYCETES

Ceratiomyxa fruticulosa
Dictydiaethalium plumbeum
Fuligo muscorum
Fuligo septica
Hemitrichia calyculata
Hemitrichia serpula
Lycogala epidendrum
Lycogala terrestre
Reticularia lycoperdon
Stemonitis axifera
Syzygites megalocarpus
Trichia decipiens
Tubifera ferruginosa

ZYGOMYCETES

Spinellus fusiger

RUST / CANKER

Cronartium harknessii
Cronartium quercuum
Puccinia podophylli

2019 FORAY LOCATIONS AND DATES

Princeton Institute Woods	Mercer	Saturday, May 4, 2019
New Jersey School of Conservation	Sussex	Friday, June 28, 2019
Stokes State Forest Lake Ocquittunk	Sussex	Sunday, July 14, 2019
Meadowoods Park	Morris	Saturday, July 20, 2019
Stephens State Park	Warren	Sunday, July 28, 2019
Thompson/Helmetta County Park	Middlesex	Sunday, August 18, 2019
Teetertown Ravine/Crystal Spring	Hunterdon	Sunday, August 25, 2019
Stokes State Forest Kittle Field	Sussex	Sunday, September 8. 2019
Chestnut Branch Park	Gloucester	Sunday, September 15, 2019

Fungus Fest	[diverse]	Sunday, September 22, 2019
Wawayanda State Park	Passaic	Saturday, September 28, 2019
Wells Mills County Park	Ocean	Sunday, October 6, 2019
Cattus Island County Park	Ocean	Sunday, October 13, 2019
Estell Manor Park	Atlantic	Sunday, October 20, 2019
Forest Resource Education Center	Ocean	Saturday, October 26, 2019
Belleplain State Forest	Cape May	Sunday, November 3, 2019
Franklin Parker Preserve	Burlington	18 visits February-November 2019