



Fall 2019

Fungi Kingdom News

The newsletter of the Pioneer Valley Mycological Association



© Dianna Smith

During PVMA's White Mountains foray this August, one of the finds was this *Clitocybula oculus* growing on birch. This was a first for Dianna Smith! See article on page 3.

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Don't miss out on the last few PVMA walks of the 2019 season!

There are still a few club walks scheduled for this fall. Even with the relatively dry weather, there is always something interesting to see!

Sunday, October 20, 1:00 p.m. at Mt. Toby in Sunderland, MA with Dianna Smith. Take Rte. 91 to Deerfield Exit, go East on Rte. 116. After crossing the bridge over the Connecticut River make a left onto Route 47 (N. Main St.) Bear right onto Montague Rd. At border of N. Sunderland and Montague, make a right onto Reservation Rd. Park on the right near the metal gates. (If you go down the road to the lake, you have gone too far).

Sunday, October 27, 1:00 p.m., Rock House in West Brookfield, MA with Mary Obrzut and Lloyd Hubbard. Details and map can be found here:
<http://www.thetrustees.org/places-to-visit/central-ma/rock-house-reservation.html>

Sunday, November 3, 1:00 p.m., Fitzgerald Lake Conservation Area in Northampton, MA with Dianna Smith. Cooke Ave entrance. Go to http://www.broadbrookcoalition.org/files/Fitzgerald_Lake.pdf for map. Meet at parking area on Cooke Ave. Shady mixed hardwood and conifer forest with streams and marked easy trails.



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OUR MISSION STATEMENT

The Pioneer Valley Mycological Association is dedicated to enhancing the public's knowledge and appreciation of the fungal kingdom by providing ongoing educational programming in the form of guided mushroom walks, lectures, newsletters, information on multi-day regional and national forays, and citizen science projects. Because fungi are integral components of complex ecosystems, we are committed to advocating for responsible and sustainable study and collection methods. We focus on, but are not limited to, the three counties of the Pioneer Valley in western Massachusetts (Franklin, Hampshire and Hampden).

PVMA is a member of the Northeast Mycological Federation (www.nemf.org) and the North American Mycological Association (www.namyo.org).

www.fungikingdom.net

We Welcome Your Submissions!

This is your newsletter; we'd love to have you contribute to it!

Prose, verse, photos, drawings, recipes, scientific observations – send them all to:

jessicabensonevans@gmail.com
sue.lancelle@gmail.com

From the President...

Just like that, Fall has arrived again! What a strange mushroom season this has been, in comparison with last year's abundance. We began summer hopeful that we'd see prolific fruitings of our favorite species, but that hasn't generally been the case for most of us. I spent most of the summer over-exuberant for every *Russula* species and *Tyromyces chioneus* I spotted! Not quite the species diversity I was longing for, but I remain grateful for every treasure found.



It has been a busy summer and early fall for me, with the beginning of a new job, attendance at the COMA foray over Labor Day weekend, presentations at my local library and Arcadia Wildlife Sanctuary, and as many hikes as I could manage in between. Now that the cooler weather is arriving, I can look forward to time spent studying and perhaps searching for interesting late Fall species. We still have a few walks left this season – perhaps we can still find the elusive *Tricholoma magnivelare*!

- Jessica



One of our offerings this year was a public walk at Stanley Park in Westfield, hosted by Phil Hadley. Here, the participants are admiring a nice fruiting of *Ischnoderma resinsum*.

Thank you to our 2019 walk leaders!

A big thanks to Dean Colpack, Jess Evans, Phil Hadley, Lloyd Hubbard, Mary Obrzut, Mike Ostrowski, Dianna Smith and Paul Thomas for leading PVMA walks this season. Having a number of people hosting walks gets us out into a wide variety of areas in the Pioneer Valley. Please consider sharing a favorite spot next year!

PVMA White Mountains Foray 2019

Five days of Intensive Fun & Learning!

By Claus Schlund



Claus Schlund

With respect to mushrooms, I'm nothing more than a beginner. When I heard I had a chance to spend five days in August out in the woods, foraging every day with a bunch of mushroom experts, well, you didn't have to ask me twice!

That's exactly what we all did – twelve of us went up to Bethlehem NH and stayed at Dianna Smith's house. Each day, we went on two forays – the morning foray was usually about 2 hours or so, then we paused to take a break and ate the lunch we packed for ourselves before we left the house, and then another (shorter) foray on a second trail for that day. All along the way, we collected samples to bring back for identification, and when luck smiled upon us we also brought back some delicious edibles to prepare for the dinner table that night.

While it's great to be among mushroom experts, it's even better when you have two local guides available to take you around. Ginny and Roz came with us; they are both mushroom experts, but more importantly, they knew the ins and outs of every single trail we walked.

After returning to the house, we spent the late afternoon hours inspecting and identifying the huge array of mushroom samples that came back with us. At first I thought, well, I'm such a beginner, what can I contribute? Eventually it dawned on me I should just pick up a mushroom off the table, a field guide, and get to work! Once identified, every species on the table got a small paper label. At the end of the five days, we had gathered and identified a total of 286 different species – wow!



Hungry? How about some oyster mushroom slices on freshly made garlic bread...

Breakfast and lunch were generally do-it-yourself affairs, put together at the house. But dinner was a very different experience – we had a luxurious meal every night! Before arriving, we had a sign-up sheet for dinner menu items, so people could bring whatever ingredients and special supplies they might need. We made side dishes with any tasty



Out on the trail

mushrooms that we found that day on a catch-as-catch-can basis, since you never know what you are going to stumble across on that day's foray. A different team did the cooking each night, and afterward anyone who DIDN'T do the cooking that night helped with chores and dirty dishes and clean-up. And the best part was, nobody needed to be the boss, everyone simply got up and found a useful task to do – many hands really do make for light work! Our sleeping



Mary and Lloyd in the kitchen. Evening meals were spectacular!

arrangements consisted of shared bedrooms and floor space on air mattresses, and this was a perfect way to get to know your "bunkmates" a little better.

To further add to the learning experience, each morning



Dianna explains some of the finer points of mushroom identification to the crowd during a morning table talk – we had placed identification tags next to each mushroom the day before.

Dianna gave a talk about what we found the day before, highlighting any noteworthy or new species and answering questions like "how do you tell this apart from that?" For myself, I remember looking at the table with 80 to 100 different mushrooms on it, and it seemed just overwhelming to me – I knew I couldn't possibly remember everything that was there. Dianna pulled me aside and she made this suggestion to me: "You can't memorize the whole table, so don't even try. Instead, every day, just select three or four species from the table that are of interest to you. Look them over, and learn them really, really well, to the point where you can unmistakably recognize them again going forward. Do this every day, and you'll begin to build

the required basis to become proficient." And now more than a month out from that trip, I find myself walking in the Massachusetts woods and thinking to myself – Oh yeah, I remember, we saw that same species in New Hampshire!

Dianna with a gigantic *Ganoderma applanatum*.



While searching for mushrooms, we got to visit some spectacular sights, like the Basin Cascade in nearby Lincoln NH

"I think the foray was fabulous. The participants were engaged and appeared to learn a lot. I had a great microscopy session with Jess (Whitaker). The food was exceptional. And it got me out in the woods! With so many eyes, we did very well. Everyone greatly appreciated Dianna sharing her house. Thank you for including me!" – Roz Lowen

"The walks, all in beautiful places, and the table talks were a great place to learn from Dianna, Roz, and fellow members. The meals were excellent, with everyone doing their part in preparation and clean up. The foray was everything I expected it to be and more. I am very grateful to Dianna for her generosity in sharing her vacation home with us."

– Mary Obrzut



The happy mushroom hunting crew!

List of Fungi Identified at the PVMA White Mountains Foray (August 19-23, 2019)

286 species total

BOLETE-LIKE

Boletellus merulioides
Boletus longicurvipes
Chalciporus pseudorubrinellus
Chaciporus rubinellus
Gyroporus castaneus
Gyroporus cyanescens
Gyroporus purpurinus
Harrya chromapes
Hemileccinum subglabripes
Hortiboletus rubellus
Hygrophoropsis aurantiaca
Leccinum insigne
Leccinum scabrum
Leccinum snellii
Leccinum versipelle
Leccinum vulpinum
Phylloporus rhodoxanthus
Retiboletus ornatipes
Strobilomyces strobilaceous
Suillus sp.
Suillus acidus
Suillus granulatus
Suillus placidus
Suillus spraguei (pictus)
Sutorius eximius
Tapinella atrotomentosa
Tylopilus felleus
Xanthoconium affine
Xerocomellus chrysenteron

CANTHARELLOID

Cantharellus cibarius group
Cantharellus enelensis
Craterellus tubaeformis
Turbinellus floccosus

CORALS

Artomyces pyxidata
Clavulina cinerea
Clavulina coralloides
Clavulinopsis
aurantiocinnabarina
Clavulinopsis fusiformis
Clavulinopsis helvola
Ramaria formosa
Ramaria stricta
Sebacina schweinitzii

GILLED FUNGI

Amanita sp.
Amanita banningiana
Amanita bisporigera
Amanita brunnescens
Amanita ceceliae group
Amanita flavoconia
Amanita fulva group
Amanita muscaria var.
guessowii
Amanita porphyria

Amanita rubescens
Amanita vaginata group
Arrhenia epichysium
Cantharellula umbonata
Chromosera cyanophila
Clitocella (*Rhodocybe*)
mundula
Clitocybula oculata
Clitocybe sp.
Clitocybe gibba
Clitopilus prunulus
Collybia cirrhata
Collybia tuberosa
Coprinopsis atramentarius
Cortinarius sp.
Cortinarius armillatus
Cortinarius azurus
Cortinarius camphoratus
Cortinarius caperatus
Cortinarius violaceus
Crepidotus applanatus
Crepidotus stipitatus
Cyptotrama asprata
Cystoderma amianthinum
Entoloma sp.
Entoloma albidum
Entoloma asprellum
Entoloma conicum
Entoloma luteus
Entoloma murrayi
Entoloma salmoneum
(*quadratum*)
Entoloma serrulatum
Entoloma strictius
Entoloma umbonatum
Flammulina velutipes
Gerronema strombodes
Gliophorus laetus
Gliophorus pssitacinus
Gloioxanthomyces nitidus
Gymnopilus junonius
Gymnopilus
penetrans/sapineus
Gymnopus andrsaceus
Gymnopus confluens
Gymnopus dichrous
Gymnopus dryophilus
Hebeloma sp.
Hemistropharia albocrenulata
Humidicutis marginata var.
concolor
Humidicutis marginata var.
marginata
Humidicutis marginatus var.
olivacea
Hygrocybe sp.
Hygrocybe cantharellus
Hygrocybe coccinea
Hygrocybe flavescens
Hygrocybe miniata

Hygrocybe minutula
Hygrocybe parvula
Hygrocybe punicea
Hymenopellis furfuracea
Hypholoma lateritium
Inocybe sp.
Inocybe calamistrata
Inocybe languinosa
Inocybe rimosa
Inocybe tachquamenonensis
Lacrymaria lachrymabunda
Laccaria sp.
Laccaria bicolor
Laccaria laccata
Laccaria nobilis
Laccaria ochropurpurea
Laccaria pallidifolia
Laccaria pumilla
Laccaria striatula
Lachrymaria lachrymabunda
Lactarius sp.
Lactarius argillaceifolius
Lactarius camphoratus
Lactarius deterrimus
Lactarius fumosus
Lactarius griseus
Lactarius mucidus
Lactarius mutabilis
Lactarius thynos
Lactifluus deceptivus
Lactifluus gerardii
Lactifluus hygrophoroides
Lactifluus lignyotus
Lactifluus subvellereus
Lactifluus subvellereus var.
subdistans
Leninellus cochleatus
Lentinellus ursinus
Lentinellus vulpinus
Lepiota subincarnata
Marasmius sp.
Marasmius cohaerens
Marasmius epiphyllus
Marasmius fulvoferruginosus
Marasmius pallidocephalus
Marasmius pulcherripes
Marasmius rotula
Marasmius siccus
Megacollybia rodmanii
Mycena alcalina
Mycena leaiana
Mycena leptocephala
Panellus stipticus
Paxillus involutus
Pholiota granulosa
Phyllotopsis nidulans
Pleurocybella porrigens
Pleurotus pulmonarius
Pluteus sp.
Pluteus cervinus

Pluteus eos
Pluteus thompsonii
Psathyrella sp.
Psathyrella hydrophila
Pseudoclitocybe cyathyformis
Rhodocollybia butyracea
Rhodocollybia lentinoides
Rhodocollybia maculata
Rhodocollybia maculata var.
scorozoneria
Rickenella fibula
Russula sp.
Russula aeruginea
Russula betula
Russula brevipes
Russula brunneoviolacea
Russula claroflava
Russula compacta
Russula decolorans
Russula dissimulans
Russula emetica group
Russula fucosa
Russula gracilis
Russula grata
Russula heterophylla
Russula incarnaticeps
Russula mariae
Russula olivacea
Russula peckii
Russula roseacea
Russula sanguinea
Russula silvicola
Russula variata
Russula vinacea
Tapinella atrotomentosa
Tricholomopsis decora
Tricholomopsis rutilans
Tubaria confragosa

JELLY FUNGI

Dacrymyces chrysospermus
Helicogloea compressa
Pseudohydnum gelatinosum
Syzygospora mycetophila

POLYPORES, CRUSTS, STEREUMS

Cerioporus leptocephalus
Cerioporus varius
Coltricia cinnamomea
Coltricia perennis
Daedalea quercina
Daedaleopsis confragosa
Donkia pulcherrimus
Fomes fomentarius
Fomitopsis betulinus
Fomitopsis ochracea
Fomitopsis mounceae
(*pinicola*)
Ganoderma applanatum

Ganoderma megaloma
Gelatoporia dichroa
Gloeophyllum sepiarium
Hymenochaetopsis olivacea
Inonotus obliquus
Lenzites betulinus
Oxyporus populinus
Phaeolus schweinitzii
Phlebia tremellosa
Phellinus bakeri
Phellinus chrysoloma
Phellinus igniarius
Picipes badius
Picipes tubaeformis
Postia caesia
Pycnoporus cinnabarinus
Rhodofomes cajanderi
Stereum complicatum
Trametes versicolor
Trichaptum abietinum

Trichaptum biforme
Tyromyces chioneus

PUFFBALLS & ALLIES

Crucibulum laeve
Lycoperdon curtisii
Lycoperdon perlatum
Lycoperdon pyriforme
Scleroderma citrinum

TOOTHED FUNGI

Heridium coralloides
Hydnellum aurantiacum
Hydnellum concrescens
Hydnum albinum
Hydnum repandum
Hydnum rufescens
Phellodon alboniger
Phellodon confluens
Phellodon niger

ASCOMYCETES

Bisporella citrina
Chloreciboria aeruginascens
Cordyceps militaris
Coryne (Leotia) atrovirens
Cudonia circinans
Geoglossum sp.
Helvella acetabulum
Hymenoscyphus epiphellus
Hypomyces chrysospermus
Hypomyces completus
Hypomyces lactifluorum
Hypomyces leoticola
Hypoxylon frigidiforme
Leotia lubrica
Leotia viscosa
Microglossum rufum
Mollisia cinerea
Otidea onotica

Phaeocalicium polyporeum
Scutellinia sp.
Spathulariopsis lutea
Spathulariopsis velutipes
Tatrea macrospora
Tolypocladium militaris
Tolypocladium ophioglossoides
Trichoglossum hirsutum
Xylaria hypoxylon
Xylaria longipes
Xylaria polymorpha

MYXOGASTRIA

Ceratiomyxa fruticulosa
Ceratiomyxa poroides
Hemitrichia caliculata
Hemitrichia serpulata
Lycogala epidendrum
Stemonitis sp.

The Amyloid Blues

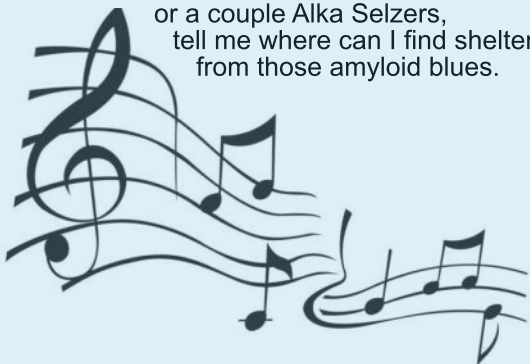
Lyrics by Sarah Silverman

(once an undergraduate student of Tim Baroni's)

I've got the amyloid blues
 and my spores are draggin'
 I'm feelin' green around the gills
 and my stipe is saggin',
 I begin to know the essence
 of humble deliquescence,
 I'm in need of *brunnescens*,
 I've got those amyloid blues.

I've got those amyloid blues,
 I've seen some strange mycelium,
 my head's way up in the clouds ears,
 my body's filled with helium,

I could use a hit of Melzer's
 or a couple Alka Seltzers,
 tell me where can I find shelter
 from those amyloid blues.



I got the amyloid blues,
 I wish I had flagella,
 I got a trauma in my trama,
 I feel a bit *Helvella*,
 I forgot what type of lamella
 has the genus *Psathyrella*,
 won't you give me one more *Morchella*
 for my amyloid blues.

When I first came to Huntington Camp,
 I was infundibuliform,
 my pileal margin was broadly uplift
 and my health was above the norm,
 now let me get this straight,
 I was strictly stipitate, and everything was great
 'til I got those amyloid blues.

Come here quick won't ya,
 Dr. B just discovered a brand new species,
 a *Psathyrella* with angular pink spores
 and it's only found on feces.
 Ain't you never seen a stroma
 with the spores of an *Entoloma*,
 baby I just want to go home
 and leave those amyloid blues behind.

*This song was performed by Roy Halling and Tim Baroni,
 among others, at NAMA's 2019 Foray at Paul Smith's College
 in the Adirondacks.*

Mycoheterotrophs: Plants that feed on fungi

Image © S Lancelle

By Sue Lancelle

We usually think of plants as being green because most of them contain chlorophyll. This chlorophyll allows green plants to “fix” carbon from carbon dioxide into useable organic carbon compounds, utilizing the energy of sunlight. But if you’ve been out hunting for mushrooms, you have undoubtedly come across organisms such as those pictured above, which are white or pale pink, and don’t contain a hint of green. You may have even wondered if it was a plant or a fungus or something else! In fact the organism in the photo is *Monotropa uniflora*, the “ghost pipe” or “Indian pipe,” a flowering plant that does not produce chlorophyll. So how does it get carbon?

In the past, scientists thought that plants without chlorophyll were “saprophytic,” meaning that they obtained carbon directly from decaying organic matter. But it turns out that there are no saprophytic land plants¹. Instead, plants that don’t have chlorophyll fall into one of two categories: those that are parasitic on other plants via direct root-root interactions, and those that get their carbon from fungi. The latter plants are called “mycoheterotrophs,” meaning “fungus feeders.” In contrast, green plants are termed “autotrophs” or “self-feeders” because they can fix carbon themselves.

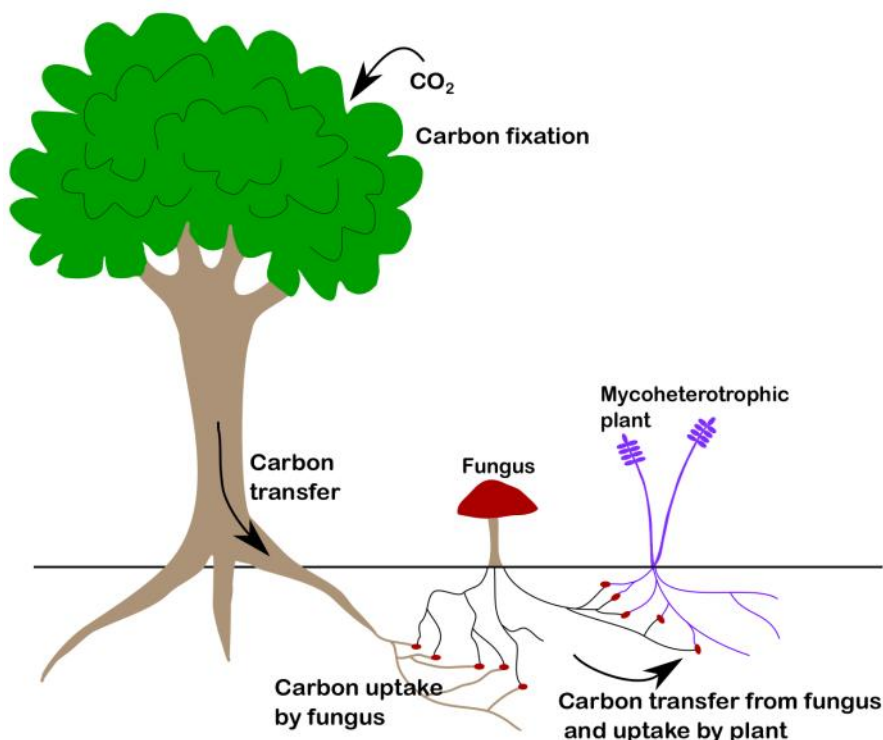


Figure 1. Carbon transfer from a tree to a plant via a fungus, the most common form of mycoheterotrophy. Drawn after Hynson, 2018².

Mycoheterotrophy (MHT) probably evolved from initially mycorrhizal interactions³. Recall that mycorrhizae are associations between a plant's roots and a fungal partner. Approximately 90% of vascular land plants have a mycorrhizal association⁴. The fungus provides increased water and nutrients to the plant while the plant provides organic carbon to the fungus. This is an example of a mutualistic symbiosis, where both partners benefit. In contrast, MHT appears to be one-way in that the plant nabs carbon and possibly other nutrients from the fungus but apparently doesn't provide anything to the fungus in return (Figure 1). The carbon is initially fixed by the autotrophic plant, and flows through the mycorrhizal fungus to the MHT plant. Thus, these plants are sometimes referred to as "cheats" on the process of mycorrhizal symbiosis¹.

An exception to the mycorrhizal origin of MHT is that of a few tropical orchids that are known to obtain their carbon from saprobic fungi⁵, often aggressive pathogens such as *Armillaria*¹ rather than through a mycorrhizal association.

In practice, there is a whole range of degrees of MHT. Interestingly, the orchid family displays all of these! *Fully mycoheterotrophic* plants have no chlorophyll and obtain all of their carbon from fungi. Plants that are only *initially mycoheterotrophic* utilize MHT during seed or spore germination and then may switch to autotrophy later in development. *Partially mycoheterotrophic* plants develop chlorophyll and are able to produce at least some of their own organic carbon while obtaining the rest from fungi. There exists among partial MHT species a continuum of dependence on MHT for carbon needs; some are almost fully MHT while others extract only a small amount of their necessary carbon this way⁶. Interestingly, the degree of MHT in some plants can change seasonally as light levels change^{7,8}. The various degrees of partial MHT that plants exhibit probably reflect the evolutionary steps that led to full MHT^{1,9}.

Locally, there are at least three fully MHT plants that you might come across while out searching for fungi. The ghost pipe or Indian pipe (*Monotropa uniflora*) pictured on the previous page is a member of the Monotropoideae, a subfamily of the Ericaceae, or heath family, one that includes such common green plants as blueberries and rhododendrons. All members of the Monotropoideae are mycoheterotrophic. Another member of this subfamily, *Hypopitys monotropa* or pinesap (Figure 2), is a beautiful plant that appears in various shades of yellow, pink, or orange. It blooms from midsummer into fall. The orchid family contains by far the highest number of MHT species, and a local one that you might see blooming in midsummer is spotted coral root (*Corallorhiza maculata*, Figure 3). Notice that MHT plants tend to have very reduced, scaly leaves if they have any at all (because they don't really need them); the most prominent thing you notice is the flowers.

Unlike mutualistic mycorrhizal associations, the MHT-fungal association is generally highly specific¹. Ghost pipes and spotted coral root only associate with a few species from the Russulaceae family, pinesap with certain species of *Tricholoma*.

Why would it be advantageous for a plant to adapt this lifestyle? After all, obtaining carbon this way limits the size that these species can attain, and being very specific as to the fungal host means MHT plant distribution is reliant on distribution of the fungus¹. As a result, although MHT is widespread, numbers of individuals are relatively low. However, because the trees from which MHT plants indirectly obtain carbon are much taller and have easier access to the sun, utilizing MHT allows the smaller plants to grow and reproduce on dimly lit forest floors, where other plants might have trouble thriving³. Think about ghost plants and pinesap, for instance. They start to appear in midsummer after the tree canopy has closed, and they



Figure 2. *Hypopitys monotropa*, or pinesap, a member of the Monotropoideae.



Figure 3. *Corallorhiza maculata*, or spotted coral root, an orchid.

continue blooming into the fall. Spotted coral root also blooms in midsummer on the forest floor. This is a very different strategy from, for instance, spring ephemeral plants, which bloom and set fruit before the trees have fully leafed out. In tropical forests, the forest floor can be very dark, and plants must utilize various strategies to survive there, mycoheterotrophy among them. In fact, the majority of mycoheterotrophic plants live in tropical regions¹⁰.

Mycoheterotrophy is not rare and it has evolved independently at least 46 times throughout the plant kingdom². There are at least 500 known species of plants worldwide that utilize MHT⁵, and there are undoubtedly many more awaiting discovery. Green plants that are able to thrive in very low light conditions on the forest floor are good candidates⁵.

Mycoheterotrophy is another example of the fascinating, intertwined, and important roles that fungi play in our ecosystems. It seems that the more we learn about fungi, the more we realize there is so much more to discover!

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Joint walks with other clubs

Participating in a joint walk with another club allows you to make new mycophile friends and share interesting collecting spots. This season, we were involved in two such ventures. The first was at Arunah Hill Nature Center in Cummington, held with the Connecticut Valley Mycological Society. This event combined mushroom hunting with overnight camping and star gazing! Although it was rather cloudy, club member Mary Obrzut reported being able to spot Saturn, satellites, and an overall view of the Milky Way.



Beyond the company of many excellent BMC members at The Harvard Forest, we were also joined by expert mycologist David Hibbett from Clark University (center) and his mostly willing group of students who'd been invited along for a field trip. At the conclusion of the event we were treated to table talks by Dianna Smith, David Hibbett, and Chris Neefus.

small groups of attendees fanning out through the Harvard Forest trails in search of a wide variety of fungi. In spite of generally dry conditions, participants of this joint walk brought back a large number of mushrooms representing a high level of species diversity."



At the display/ID tables at Arunah Hill. PVMA member Brenda Clark is in the yellow shirt.

The second joint event was with the Boston Mycological Club at The Harvard Forest in Petersham. As Jess Evans reports, "As I arrived at the Harvard Forest in Petersham on Sunday, September 8th, I noted a large gathering of BMC members already assembled and studying the wood chips surrounding a tree near the parking area. The main attraction was a collection of robust *Phallus impudicus* (my second mention of that famous fungus in one newsletter edition – a new record!) The walk commenced from that point, with

Mushroom Fest 2019

By Jessica Benson Evans

A few weeks ago, Mycoterra Farm and Fungi Ally hosted a mushroom festival in South Deerfield at Mycoterra's beautiful farm property. Our club was invited to participate, and we agreed to host the wild mushroom identification table at the event. Vice President Mary Obrzut and member Carrie Mantha provided an excellent membership table with information on our club alongside the ID table, and members Claus Schlund and Marty Klein volunteered to help me with mushroom identification.

Despite the on-and-off rain and overall gray skies, we had a fantastic day! Visits to the identification table were steady, and I spent almost six hours identifying mushrooms collected by our small team or brought in by visitors to the festival and discussing them with the passersby. Claus and Marty worked tirelessly to label fungi, talk about differences in morphology, and get folks excited about mushrooms!

The weather preceding the event had been predominantly dry, so our identification table was light on species diversity and heavy on *Armillaria*. We were also gifted with a full box of stinkhorns from onsite, which mysteriously kept getting closer to my spot at the table. The most exciting specimens included *Gyroporus cyanescens*, several *Amanita bisporigera* to alternately delight and horrify visitors, and one tiny *Grifola frondosa*.

We're hopeful that this event will become a yearly tradition in the Pioneer Valley; the combination of cultivated mushroom vendors, craftspeople, food options, and musical acts throughout the day made this a family-friendly enjoyable day for all!



2019 Summer Foray Experiences

By Dianna Smith

Our excellent newsletter editor asked me to compose an article on my summer foray experiences, so here goes!

The NAMA Foray was August 8-11 in the Adirondacks at Paul Smith's College, a favorite location for both NAMA and NEMF forays in the past. Although I planned to be there for the full four days, I uncharacteristically decided to cut the experience short and stayed only one full day and night. Mushrooms were few, due to the long-term absence of rain. I attended some interesting talks but mostly enjoyed hanging around the collection and identification tables in the sorting room, where I saw quite a few fungi that others encountered on their respective walk locations. Here I became aware of a name change to one of my favorite polypores, *Fomitopsis pinicola*, the "red-belted polypore," now known as *Fomitopsis mounceae*. Another common fungus with a new name is *Apioperdon pyriforme* (formerly *Lycoperdon pyriforme*). Unlike the many other species of *Lycoperdon* puffballs, it is the only one that grows on wood and that has white rhizomorphs at its base. The name has changed, but they taste the same!



Fomitopsis pinicola, now known as *F. mounceae*, the "red-belted polypore."



The NEMF foray in Lock Haven, Pennsylvania, took place Aug 1-4. Unfortunately, I had to cancel attending it, due to a back-sprain acquired from spending four days in the garden attempting to rid a 200-foot by 6-8-foot inclined



Apioperdon pyriforme, formerly *Lycoperdon pyriforme*. Note the white rhizomorphs at the base, a defining characteristic of this species.

expanse of wildflower plants of noxious weeds before leaving for the foray. I heard it was well-attended, but the quality and quantity of fungal specimens we always hope to find at multi-day forays was a bit disappointing.

The COMA Foray in eastern CT over Labor Day weekend was fantastic, especially because I had an opportunity to reconnect with old myco friends and make several new ones. I love COMA forays because they are relatively small, fun, well-organized, comfortable, and they feature uncommonly delicious food! The principle mycologist was Alan Bessette, who along with his wife Arleen have written numerous field guides for different regions of North America, as well as books focused on particular genera. Alan spent most of his time at the sorting tables working with the guest mycologists, Arleen, and astute participants on identifying specimens brought in. There were lots of Russulas, several unknown to me, which were identified by a member of the Connecticut Valley Mycological Society, who spent much of her time at the microscope examining spores and tissues. Encountering fungi new to me is the highlight of any foray!

On September 21st, I was involved with two wonderful events: the Amherst College BioBlitz and a New England Botanical Society's educational event organized by the biology department at Smith College. I love doing these functions, because I get to introduce people to the fungi kingdom. Both experiences were as satisfying as giving a talk or leading a walk for PVMA members and visiting guests! Of course, my favorite foray this year was our PVMA foray in the White Mountains of New Hampshire. It was both enjoyable and rewarding. Despite the lack of precipitation, we managed to find a record number of species – many quite different than found in previous years (see article and list beginning on page 3).

For the most recent list of updated fungal names, please check out www.fungikingdom.net or www.pvma.fungikingdom.org. Unfortunately, my web program will no longer permit me to post downloadable pdf documents. However, you can easily make yourself a copy by selecting all the names listed, copy and then paste them into a writing program like Microsoft Word.

Attending COMA's Clark Rogerson Foray

By Jessica Benson Evans

I began the summer with plans to attend both the NAMA foray at Paul Smith's College in New York and the COMA foray in Hebron, CT. Unfortunately, unexpected illness kept me from making it to NAMA. By the end of August, I was feeling much better and more than ready to make my way to COMA's Clark Rogerson Foray. This foray was held from August 30th to September 2nd and was hosted by the Connecticut-Westchester Mycological Association. COMA members Joe and Kathy Brandt served as welcome ambassadors and event coordinators, and a whole team of club members and others volunteered to make this event an incredible one!

I arrived at Camp Hemlocks early Saturday morning, missing out on the Friday afternoon/evening festivities but ready to jump right in to all the foray had to offer. I quickly signed in, found my room for the weekend, and laced up my boots. Several walk locations were offered for the morning, and club member Brenda Clark and I signed up to visit Day Pond State Park in Colchester. We hitched a ride with Bolete Bill, known to many as PVMA friend Bill Yule, and headed off for a morning of foraging.



Brenda Clark with corals.

Brenda and I have forayed together before, and we have a similar style. We're "off-the-beaten-path" kind of hikers, and we usually leave the pack and head off together in search of hidden treasures. At Day Pond, Bill suggested that we might find our kind of "trail" by following the stream beyond the dam. His suggestion was a good one; we traversed rocks and fallen trees for about three hours and never encountered any other hikers but found a wide variety of fungi to collect and share. All was quiet in the deep woods, except for our calls back and forth to each other to insure we didn't get separated. I usually call "Marco," while Brenda responds with "Polo!" from somewhere off in the forest. Ridiculous to some, perhaps, but we haven't lost each other since developing this comical system. It's fine to foray away from the group, but important not to become lost.

We returned to the other forayers for a simple bag lunch, provided by the excellent hosts of this year's foray. None of us was quite ready to call it quits for the day, though, so we headed back out via car to the other side of the park. Brenda spotted a collection of boletes along the side of the road and called out, "There's boletes over there!" Surprisingly, Bill kept driving, but Brenda and I made a point to journey on foot back towards her automobile-assisted find. It was worth the

extra effort: Brenda's collection of *Aureoboletus innixus* is pictured below. I'd never seen these before in such pristine condition!



Aureoboletus innixus

Tired but happy, we journeyed back to Camp Hemlocks to sort and identify the day's finds. One of the best things about this particular foray is its casual pace; there was no rush to be back on site for any particular event unless we set those parameters for ourselves. Brenda and I settled in at one of the cafeteria tables to begin working on our various treasures. As we labeled our fungi, we brought them in to the identification room to be checked and sorted by the team of foray mycologists and registrars. This was an area in which I volunteered my time; I carried identified and registered fungi over to their places on the ID tables, which was a great way to support my growing knowledge!



Brenda consulting the experts at the ID table. Left to right, Arleen Bessette, Dianna Smith, Brenda Clark, Robert Gergulics and Terry Stoleson

Saturday evening's potluck was incredible; the ninety or so foray participants brought a wide variety of food options for all

preferences. There were vegetarian, vegan, and gluten-free delights, including a delicious vegan pozole by The 3 Foragers. I am certain that no one went hungry after a long day of fungi foraging! Overnight accommodations were equally delightful; although the rooms were dorm-style with shared bathrooms, I slept soundly and awoke refreshed and ready for another day of hiking.

Sunday's schedule of events brought more enjoyable mushroom foraging and delicious dining. In the morning, Brenda and I accompanied Robert Gergulics to Blackledge Falls, part of Gay City State Park, and scrambled up and down hillsides in search of interesting fungi. We didn't have to search long; Brenda spotted a new-to-us species early on in our hike. Our novel find turned out to be *Claviaradelphus pistillaris*, an uncommon club-shaped Basidiomycete. These bitter-tasting clubs are found in beech forests. Robert was delighted to see these as well: their gregarious fruiting offered great photographic opportunities!

Sunday evening concluded with a mycophagy banquet featuring numerous fungi, including stuffed mushrooms, vegan lasagna, and more. Awards were also given that evening, for most interesting finds of the foray. Brenda and I received awards as well, for the "most diligent amateur identifiers" of the foray. We'd spent several hours each afternoon working on our finds, with the goal of identifying each mushroom at least to genus. For me, that's the best part

of a foray – spending time with friends working on finding and identifying fungi. In all, the foray brought in 353 distinct species of fungi and lichens!

From my perspective, this was the most enjoyable foray I've attended. A small number of participants, a foray location with all facilities located in a small area, and excellent natural areas for hiking make the Clark Rogerson Foray at Camp Hemlocks a must-attend event for me in the future. My deepest thanks to PVMA for awarding me a scholarship to attend this incredible foray. I highly recommend this foray to club members next year – hope to see you there!



Robert Gergulics at the bolete table

© Jessica Benson Evans



While the variety and number of mushrooms fruiting this season hasn't approached the banner year we experienced last season, various species of *Pholiota* have been making an impressive showing. Shown above is a beautiful clump of *Pholiota squarrosoides* on a rotting birch log.