NJMA NEWS

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NJMA EVENTS HOTLINE

908-227-0872 for information on NJMA events or cancellations due to bad weather. *It is NOT for general inquiries or to contact officers!*

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PRESIDENT'S MESSAGE

For many people, the masks are coming off. But more importantly for us, the gatherings of mushroomers that entice people to travel are back!

Our NJMA travel event, the Victor Gambino Weekend, had to be cancelled in 2020, but is now rescheduled for June 24-26, 2022 in Bangor, PA. We can thank Dorothy Smullen for volunteering to organize the event, in place of Liz Broderick, who we lost last year in a tragic accident. The event will be different, as the resort location still has not resumed catering service, so an attendee potluck will be a highlight.

Another event organized for years by Liz, the September Fungus Fest, will not happen this year. The Frelinghuysen buildings are still closed, and our club is still without a replacement coordinator for that event. I remember Liz attempting to discontinue the volunteer potluck dinner before the last Fungus Fest event. She wanted to shorten an already long day for the dozens of volunteers, many of whom travel a long distance. But an uproar quickly ensued, and the post-event potluck stayed for Fungus Fest 2019. I hope the Victor Gambino 2022 attendees will enjoy their shared potluck dinner and its kitchen camaraderie just as much.

If you want to travel farther (or travel even more), here are more planned gatherings:

NEMF Foray, September 16 - 19, 2022
in Quebec
(***https://tinyurl.com/2p9dxbvz***)

NAMA, September 29 - October 2, 2022
in Potosi, Missouri
(***https://namyco.org/annual_foray.php***)

Eagle Hill Mushroom Seminar, July 24 - 30, 2022
in Stuben, Maine
(***https://tinyurl.com/mpe8phfp***)

If you are not yet hooked on "all things fungi" enough to be around mycophiles 24/7 or spend precious vacation time with fungi, I hope you will plan to attend at least one in-person foray this season.

– Sue McClary

Join us this Tuesday!

TAXONOMY TUESDAYS

Online every Tuesday evening at 7:00PM on ZOOM!

Download the ZOOM app to your phone, computer, or tablet and have digital photos of your mushrooms ready to present to the group.

Watch your email for details!

EDITOR'S NOTES

Hello everyone! First things first: I apologize for the timing of this newsletter. Life, as it tends to do, got in the way; I started a new job, moved to a new state, and my duties as a mushroom magazine editor were put on the back burner. The silver lining in all of this, however, is that I have moved to a state that produces the most mushrooms in the entire nation — Pennsylvania! The terrain is totally unmapped for me, and I couldn't be more excited to start discovering the best parks in the state for foraging fungi. If anyone has any parts they'd recommend (no pressure of course; I know that you mushroom hunters are particularly tight lipped about your spots!) feel free to let me know!

As a reminder: I still have a few books looking for someone to give them a review for the newsletter! Reviews can be around 1,000-1,500+ words, but all books must be returned to the club so other members can give them a spin. If you'd like to review one of our books, feel free to shoot me an email at ***njmaeditor@njmyco.org***.

Also, happy (very late) morel season! I've been incredibly impressed by the amount of people in the club finding tons of morels and posting them on the Facebook page. Full disclosure: I searched high and low during April and May, and couldn't find any. So, if you'd like, you could conjure up the mental image of me, begrudgingly liking your pictures of freshly picked bushels of morels as I sit in my apartment, morel-less. Not in the sense that I'm lacking morals [*noun*: a person's standards of behavior or beliefs concerning what is and is not acceptable for them to do], but in the literal sense that I have no morels. You get it.

So without further ado, we present the newsletter! See you wonderful folks during the foray this summer, and happy hunting!

– Sydney Hilton

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.

FUNGI MAY BE COMMUNICATING IN A WAY THAT LOOKS UNCANNILY LIKE HUMAN SPEECH

by David Nield

(Reprinted from the April 2022 edition of ***The Spore Print****, The Journal of the Los Angeles Mycological Society)*

A new study has identified patterns of nerve-like electrical activity being produced by fungi. What's more, patterns within the activity appear to be comparable to similar structures in human's speech.

Assuming the impulses might be influencing other cellular activities in a network of fungi, it's a finding that could shed new light on communication in mycological organisms.

Computer scientist Andrew Adamatzky, from the University of the West of England in the UK, was able to spot up to 50 different electrodes inserted across areas where the fungi had colonized, and spikes in activity were then organized into groups. Each type of 'words' or groups of spikes of activity produced by the fungi networks that were studied.

Electrical buzzes in fungi have been known about for years, but analyzing this activity as if it were a language could stand to reveal many things we don't know about what this fungi phenomena represents.

"Assuming that spikes of electrical activity are used by fungi to communicate and process information in mycelium networks, we group spikes into words and provide a linguistic and information complexity analysis of the fungal spiking activity," writes Adamatzky in his new paper.

Adamatzky looked at electrical activity across four types of fungi, looking for patterns in ghost fungi (*Omphalotus nidiformis*), Enoki (*Flammulina velutipes*), split gill fungus (*Schizophyllum commune*), and caterpillar fungus (*Cordyceps militaris*).

Electrical activity was detected and recorded using tiny microelectrodes inserted across areas where the fungi had colonized, and spikes in activity were then organized into groups. Each type of fungi varied in terms of its spike duration and length, with some spikes lasting up to 21 hours.

Split gill mushrooms were shown to put together the most complex 'sentences,' but overall, the average fungal 'word length' of 5.97 – measured by spike groups – matched up with languages such as English (4.8) and Russian (6).

"We do not know if there is a direct relationship between spiking patterns in fungi and human speech," Adamatzky told *The Guardian*. "Possibly not. On the other hand, there are many similarities in information processing in living substrates of different classes, families and species. I was just curious to compare."

Although the comparisons with human speech are notable, the research doesn't give any indication of what the fungus network might be communicating, if at all, or why these organisms might need to keep in touch across a wider area.

Considering fungi live rather simple lives, there aren't too many possibilities that come to mind. It's possible that these signals are ways in which mushrooms are able to warn about threats to their survival, or about a change in available resources, for example.

Ecologist Dan Bebber from the University of Exeter in the UK, who wasn't involved with the study, says that there's a long way to go before we can be sure that fungi are talking to each other.

"Though interesting, the interpretation as language seems somewhat overenthusiastic, and would require far more research and testing of critical hypotheses before we see 'fungus' on *Google Translate*," Bebber told *The Guardian*.

The research has been published in *Royal Society Open Science*. April, 2022. msn.com

Visit the NJMA Discussion Group

facebook

http://tinyurl.com/jjualgz

Important announcement!

SUBMISSION DEADLINES for *NJMA NEWS*

As you may have heard, *NJMA News* has converted to a quarterly publication timed roughly to correspond with the middle of each season. The new issue dates and deadlines for 2022/23 are as follow:

SUMMER (August) issue: Deadline is 7/15/2022
FALL (October) issue: Deadline is 10/15/2022
WINTER (February) issue: Deadline is 1/15/2023
SPRING (May) issue: Deadline is 4/15/2023

IT'S MOREL SEASON! LET'S LOOK AT THEIR NAMES

by Dianna Smith

(reprinted from the Spring 2022 edition of ***Fungi Kingdom News****, the newsletter of the Pioneer Valley Mycological Association)*

There are at least twenty or so different species of morels in North America. Prior to 2012, we tended to call them by their common names, or we used the well-known binomial names established by European mycologists. With DNA analysis, it has been shown that there are roughly four or five species of morels common to our region in the Northeast, and they are genetically different from the European versions. I will try to help you figure out what species we have and the current terminology we should consider using for what we find. Of course, remember that calling them by their common names won't offend the mushrooms themselves. Our various morel species are addressed below in the order in which they tend to appear in the spring.

Formerly known as *Morchella elata*, the black morel, now known as *Morchella angusticeps*, has a conical or sub-conical cap and at maturity exhibits dark, vertically arranged ridges and paler pits. The cap barely overhangs the granular stalk to which it is attached. Like all true morels, *M. angusticeps* has a hollow cap and stalk.

Morchella angusticeps

M. angusticeps is typically the first of the four or five main eastern morels to appear in the spring. It is found growing solitary or grouped under several different species of hardwood and conifer trees, including tulip poplars, pines and oaks.

Morchella punctipes (formerly known as *Morchella semilibera*), the "half-free morel," is found growing scattered about or solitary under a variety of hardwoods from the Great Plains eastward. The name was changed because it was discovered that *M. semilibera* is a European species genetically different than our half-free morel. Like our black morel, it tends to appear earlier in the season than the yellow morels. It has a relatively small cap compared with other morels and a comparatively long, thin, somewhat granular stalk. The cap is attached to the stalk for about half its length, resulting in the "half-free" moniker.

Morchella punctipess

Morchella diminutiva has been commonly called a gray, small yellow or tulip morel. It typically appears under tulip poplars, but is also not uncommon under ash, hickory and old apple trees. It is not found under pine. As might be guessed from the name, it is more petite than the large morels favored by most morel hunters. In fact, it most closely resembles the black morel, *M. angusticeps*, except that its sterile ridges and fertile pits

Morchella diminutiva

are paler in comparison. Also, it may or may not have a smooth stipe. *M. diminutiva* is common from the Great Plains eastward.

I am not positive about the identification of the morel depicted in the image shown here, though its habitat and morphological features are suggestive of *Morchella prava*. The dark pits and pale ridges of *M. prava* are more randomly arranged than our other morel species. This mushroom tends to be found under pines and oaks and in wet, sandy environments near water from the 43rd degree latitude North.

Possibly ***Morchella prava***

Morchella americana (syn. *M. esculentoides*) is the meaty yellow morel most desired and sought after by morel hunters. It is the easiest of all our morels to serve stuffed with favorite cooking ingredients. *Morchella americana* is common east of the Rocky Mountains, and is found under dying American elms, living ash trees, and under very mature apple trees. It is also found in river bottoms and urban locations in the west. Note its pale infertile ridges and the irregularly shaped fertile pits. The base of the cap is attached to the stipe. There is a lookalike found a bit further west called *Morchella cryptica*. It is apparently impossible to distinguish the two species without DNA analysis. There are a few so-called "lookalikes" of morels found in our area.

Morchella americana

Verpa bohemica resembles the "half-free morel" or *Morchella punctipes*, but the cap is attached to the stem only at the apex, while the caps of *M. punctipes* are attached to the stem over about half of their length. For a detailed discussion of *V. bohemica*, see this entry at iNaturalist: ***https://tinyurl.com/yc2w58s5***

The convoluted-capped *Gyromitra* sp. don't resemble any morel, but they are nevertheless often confused with them by inexperienced mushroom hunters. Both have a stuffed rather than hollow interior. Both contain

Gyromitra fastigiata

toxins and can reportedly be deadly eaten raw. The compounds in *Gyromitra* break down into monomethyl hydrazine, a key component of rocket fuel. Although the amount and toxicity vary by species and from fruitbody to fruitbody, it is possible that the effects of consuming *Gyromitra* may be cumulative.

While all morels are considered choice edibles by most of us, the large yellow *Morchella americana* (M. esculentoides) is a world-wide favorite. Often it is paired with wild leeks, which appear at the same time of year. Most of us prefer them cooked in butter or cream rather than in oil. Be aware that, like *Gyromitra*, they are known to cause severe gastric distress when eaten raw or partially cooked. Also, note that some people have reported becoming sick after eating morels accompanied by a drink or two of an alcoholic beverage. So whatever you call them, be sure to cook them all thoroughly and savor their complex flavors.

For more detailed descriptions of any of these mushrooms, please consult Michael Kuo's website ***mushroom-expert.com*** and Michael Beug, Arleen Bessette, and Alan Bessette's reference book, *Ascomycete Fungi of North America*. A search on *iNaturalist* will also lead you to detailed discussions of these various species.

A FEW MORE PRETTY MOREL PICTURES...

PHOTO COURTESY OF NICOLE ENGEL

PHOTO COURTESY OF SCOTT BEAM

PHOTO COURTESY OF KELLY KEGAN

WHO'S IN A NAME?
The Tulasne brothers

by John Dawson (eighty-sixth in a series)

The order *Tulasnellales*, the genera Tulasnella and *Tulasnia*, and a host of species bearing the epithets *tulasnelloideum*, *tulasneanum* or *tulasnei* all commemorate the fundamental mycological work carried out by two French brothers, Louis René and Charles Tulasne.

They were born almost exactly a year apart, Louis René (also called Edmond) on 12 September 1815 in Azay-le-Rideau, a commune in Indre-et-Loire, and Charles on 5 September 1816 in Langeais, another commune in the same département. None of the sources I have found[1] say anything about their parents except that the family was Catholic and that Louis René inherited a substantial amount of money after his father's death in 1839 — enough to enable him to join his brother in Paris and pursue his interest in botany, rather than become a solicitor as his father had desired.

In deference to his father, Louis René did study law at Poitiers, and he served as a second clerk or notary in a law office there until his father's death. But, he was ill-suited to a career in law because he was very shy. In the mean time, his brother Charles, also quite shy, had become a medical doctor. He received his Dr. Med. in 1840 and practiced medicine in Paris from 1843 until 1854, the year that Louis René was elected to the French Academy of Sciences on the basis of his outstanding work in botany and mycology. Thereafter, Charles devoted himself to assisting his brother in his endeavors, primarily as an illustrator. His drawings of fungi are still regarded as "some of the finest and most detailed ... ever created," [2] and he has sometimes been called "the Audubon of fungi", a comparison, however, that fails to acknowledge the exactitude of Tulasne's drawings, for many of Audubon's paintings, however artistic, show birds in anatomically impossible positions.

Soon after his arrival in Paris, Louis René began attending lectures by, among others, the botanist Adrien de Jussieu and the mycologist Joseph-Henri Léveillé. He assisted the botanist August St. Hilaire in the preparation of the latter's *Flora of Brazil* and, in 1841, published his own first paper, "Observations sur le genre *Elaphomyces*, et description de quelques espèces nouvelles" (Observations on the genus *Elaphomyces*, and a description of some new species). The following year, he secured a position as an aide-naturalist (research associate) at the Muséum National d'Histoire Naturelle. He remained in the employ of that institution for 13 years, during which he published 57 papers in botany and mycology, including four books on the flora of Colombia, a series of notes on the flora of Madagascar, two memoirs on rusts and smuts, and ten memoirs extending the work of Miles Joseph Berkeley on hypogeous gastromyecetes, the last of which, *Fungi hypogaei*, "remains one of the foundations of the modern study" of that group.[3]

Louis René also made important studies of lichens and powdery mildews, described the genus *Hypoxylon*, and recognized that some fungi exhibited pleomorphy, having distinct forms, such as anamorphs and teleomorphs, or different types of spores (in the case of rusts) at different stages of their life cycles or in response to different environmental conditions.

The brothers' final and most important work, with text primarily by Louis René and illustrations by Charles, was *Selecta fungorum carpologia*, in three volumes that were published between the years 1857 and 1865. Upon its completion, recognizing that his health had begun to decline, Louis René donated his herbarium to the Muséum National d'Histoire Naturelle and his library to the Catholic University of Paris. He and Charles then moved to the commune of Hyères, on the Mediterranean in the Val département of southeastern France, where they lived together in quiet retirement the rest of their lives, devoting their remaining energies to the service of the Catholic Church and to the founding of a number of charitable institutions, including schools, churches and almshouses.

The brothers' deaths were separated only a few months longer than their births were, but in reverse order: Charles died on 21 August 1884 and Louis René on 22 December 1985.

Note: I have found no portraits of either of the brothers of sufficient quality to reproduce here.

[1] The entry on Louis-René by G. Viennot-Bourgin in the *Dictionary of Scientific Biography*; the *Wikipedia* entries on each of the brothers; the obituary notice of Louis-René by William Gilson Farlow in the *Botanical Gazette*, April 1886, pp. 93–95 (available online at ***https://www.journals.uchicago.edu/doi/pdf/10.1086/325933***); and the biographical sketch of both brothers in the announcement "Tulasne brothers exhibit" by Lisa DeCesare, *Newsletter of Friends of the Farlow*, no. 47 (Harvard Herbarium, Spring 2006), pp. 6–7 (available online at ***https://web.archive.org/web/20121113100902/http://www.huh.harvard.edu/collections/fof/newsletters/newslspring2006.pdf***).

[2] DeCesare, *op. cit.*

[2] Quoted from Viennot-Bourgin, *op. cit.*

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NJMA History Highlights

by Dorothy Smullen

Victor Gambino (1928-1989) loved mushrooms, and he spread his enthusiasm to others. On forays, he always wore a knitted orange hat (a warning to hunters), even in warmer weather.

Our club started in 1971 and soon became the Lakeland Mycology Club. In 1974, Victor was Vice President. From 1975 to 1976, Vic was president, and our club's new name became the New Jersey Mycological Association. Vic was also editor of the newsletter from 1974-76 and 1984-85. At some time he moved from Landing, NJ (Lakeland area) to Princeton.

One of my first memories as a club member in December 1975 was a heavy snow storm on our meeting date. We met at the Morris County Outdoor Education Center in those days. There were 3 or 4 of us that braved the roads – but the center was closed. Well, Vic was there, and the meeting still took place in my blue and white VW bus.

I do believe that Vic and other club members were instrumental in beginning a weekend foray for our own club. For many years, we met at the end of June at the Pocono Environmental Center. When Victor died suddenly in 1989, the foray was named in his honor.

Vic at a Lakeland officers meeting

Enjoying morels (L to R) Neal Macdonald, Paul Meyer, and Vic

Vic teaching at Fungus Fest

THE VICTOR GAMBINO WEEKEND TRIP IS BACK!

An early summer weekend foray tradition for NJMA members to get to know each other and meet new members while casually reviewing the world of fungi has returned after a two-year hiatus due to COVID-19. Held every few years, the Victor Gambio weekend brings together mycophiles from our area for a weekend of hands-on foraying and learning.

Liz Broderick, late member of NJMA, explained the origins of the Victor Gambino weekend in a 2018 edition of the *NJMA News*, saying "[As an] early member of the fledgling New Jersey Mycological Association, Victor's enthusiasm for photographing, gathering and identifying wild mushrooms was contagious. After forays, he enjoyed getting together with his fellow mycophiles to cook and enjoy the edible mushrooms they found. In his spirit, our club sponsors a weekend foray to learn more about fungi and enjoy the fellowship of other mycologists."

*(continues on **page 11**)*

BYTES, BITS, & BITES

TASTY LITTLE TIDBITS FROM OUR MEMBERS

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

from Jim Richards:

Maze Solving Slime Molds:

https://tinyurl.com/4fj4bu2x

from Jim Richards:

What the World's Largest Organism Reveals About Fires and Forest Health – In Oregon, the Humongous Fungus plays a complex role in an ecosystem reshaped by humans:

https://tinyurl.com/3e8bvsdm

from Jim Richards:

A Secret Forest Grew for Millennia in North America Without Anyone Noticing – Cedar trees living on steep cliffs were centuries old, and no one knew.

https://tinyurl.com/2kj5vspk

from the Editor:

Mushrooms are the next big 'house plant' trend to emerge from RHS Chelsea Flower Show – The most surprising statement of 2022 has made its debut at Chelsea, and it comes in the shape of fungi:

https://tinyurl.com/2p97dzsv

from the Editor:

Friendly Fungi "Say Hello" to Their Hosts –When it comes to commensal populations of the fungus *Candida albicans*, the dreaded invader may be better seen as a helpful friend arriving with gifts:

https://tinyurl.com/yh8t5x9n

from the Editor:

Why one startup says fungi-based meat is the next wave of alternative proteins – A new startup, Meati, creates alternative meat made from mushroom root, a super-food protein similar to the root structure of mushrooms:

https://tinyurl.com/28byby2f

from the Editor:

Under the Sea: Shipwrecks Expand Microbial Diversity--The millions of shipwrecks resting in the world's oceans are increasing the surrounding areas' microbial richness, according to new research:

https://tinyurl.com/2p3v4kzk

Meet Mateo Narvaez...future mycologist?

NJMA member Candice Narvaez sent us this "spread" featuring her son, who created these drawings of fungi, and his artwork. "My ten-year-old son Mateo, loves mycology and nature. He wants to be a mycologist, illustrator and naturalist when he grows up. He has always been at home in the woods, and he is the one who got my family into mycology. I'd like to submit a few of his recent illustrations for possible publication."

CALENDAR OF UPCOMING EVENTS

Saturday, June 25 **10:00am**	**FORAY – STOKES STATE FOREST – LAKE OCQUITTUNK** **(Branchville, Sussex County)**
June 24 -26	**VICTOR GAMBINO WEEKEND FORAY** **(Pre-registration and additional payment required; deadline was June 3.)**
Saturday, July 9 **10:00am**	**FORAY – MEADOWOOD PARK** **(Mendham, Morris County).**
Sunday, July 17 **10:00am**	**FORAY – BALDPATE MOUNTAIN** **(Hopewell Township, Mercer County).**
Sunday, July 24 **10:00am**	**FORAY – HORSESHOE BEND PARK – SOUTH** **(Kingston Township, Hunterdon County)**
July 24-30	**EAGLE HILL MUSHROOM MUSHROOM SEMINAR** **(Stuben, Maine) (*https://tinyurl.com/mpe8phfp*)**
Saturday, July 30 **10:00am**	**FORAY – GREEN TURTLE POND** **(West Milford Township, Passaic County))**
Sunday, August 7 **10:00am**	**FORAY – TEETERTOWN RAVINE** **(Lebanon Township, Hunterdon County)**
Saturday, August 13 **10:00am**	**FORAY – THOMPSON/HELMETTA PARK** **(Jamesburg, Middlesex County)**
Saturday, August 20 **10:00am**	**FORAY – WHITE LAKE NATURAL RESOURCE AREA** **(Hardwick Township, Warren County)**
Sunday, August 28 **10:00am**	**GRETE TURCHICK FORAY AND PICNIC** **Stokes State Forest, Kittle Field Picnic Area** **(Branchville, Sussex County)**


PHOTO BY MARICEL PATINO

Mitrula lunulatospora
The Swamp Beacon


PHOTO BY MARICEL PATINO

Gloeophyllum sepiarium
Conifer Mazegill

IOWA MUSHROOM HUNTERS FIND MOTHERLODE OF MORELS, PICK 175 POUNDS IN TWO DAYS

by Phil Bourjaily
(reprinted from the June 2022 edition of Spore Prints: Bulletin of the Puget Sounds Mycological Society)

Rusty Gates of Alexandria, Missouri, and Jimmy Johnson of rural Keokuk, Iowa, hunt morels together every spring. On Saturday, May 7, the two friends found and harvested an incredible 131 pounds of the highly-sought mushrooms while walking the woods of Lee County in southeastern Iowa. Johnson has hunted morels since he was a boy and has never found more than 75 pounds in an entire season, which usually lasts about a month. He told *The Burlington Hawk Eye* that the hunt began without any indication that they were in for a once-in-a-lifetime day.

Gates and Johnson found just three morels between the two of them in the first hour of the hunt. They kept going — and found a virtual carpet of mushrooms in the woods. "It was just non-stop as we were walking," Johnson told *The Hawk Eye*, "We just see four or five here, then take a few steps and see more. It was continuous."

Experienced hunters like Johnson usually key on dead elm trees. An elm with the bark still slipping off the trunk often means morels nearby, and while Johnson and Gates found mushrooms near elms, they found them near maples and white oaks as well, which Johnson noted for future hunts. As they picked and picked and their burden grew, they called Johnson's son, Trenton, and told him to bring a vehicle to the woods to haul some of the bags of morels home. Johnson and Gates picked for six hours, then went out the next day and found another 44 pounds.

Johnson said they just got lucky, that soil temperatures and moisture conditions just happened to be right for a bumper crop of morels in southeastern Iowa this year. Morels usually come up when daytime temperatures reach the 60s and low 70s, and nighttime lows get above 40. Conditions on May 7 were ideal, with highs around 70, following several days when nighttime lows had been in the mid-40s. Johnson and Gates divided their huge haul of mushrooms evenly, as they always do. Johnson kept 20 pounds for himself, gave many to family and friends, and sold the last 16 pounds at the going rate of $25 per pound. He plans to spend the $400 on some kind of mushroom hunting gear, but he doesn't know what it will be yet. If he keeps making finds like this one, he might want to think about saving up for a dump truck.

A Cordyceps species found by Juniper Perlis at the Victor Gambino foray, 2018

VICTOR GAMBINO WEEKEND *(continued from **page 8**)*

Guest mycologists like Tom Bigelow, who was the speaker for the last weekend foray, ensure both novices and experienced mushrooms can learn something new, while everyone gets to meet each other in-person and not just online.

During the 2018 foray, some of NJMA's expert taxonomists, as well as a mix of other experienced club members (and several newbies) were deputized as citizen scientists to help collect data for both the National Park Service and Rutgers Chrysler Herbarium.

If you signed up, arrival begins Friday June 24 at 2:00pm at the Kirkridge Retreat and Study Center in Bangor, Pennsylvania. The cost of the trip covered a two night stay and food prepared by our members, including a Saturday potluck dinner, where members bring an entrée, salad or dessert (with the use of wild mushrooms to be approved!)

During the last Gambino foray, NJMA members documented 170 collections and identified 132 to genus and species, of which 14 of these were new to our cumulative NJMA list. Nina and John dried 47 specimens for deposit in the NPS and Rutgers Chrysler Herbarium, and shared the club findings with the National Park Service.

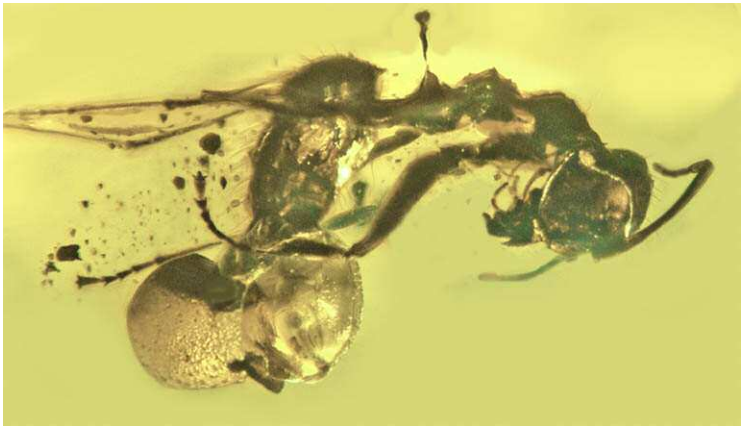
Although registration is now closed, if you have questions regarding the event, please contact Dorothy Smullen at 908-647-5740, or via email: ***victorgambinoweekend@njmyco.org***. For even more information about the Victor Gambino foray, the archives of *NJMA News* are available up to 2021 and the last Gambino weekend foray took place in June of 2018.

And, if you weren't one of the few to snag a spot on the Victor Gambino trip, keep in mind that our regular club forays begin on Saturday, June 25. We will be hunting in the Lake Ocquittunk area of Stokes State Forest in Sussex County. Hope to see you there!

MYCOLOGICAL DISCOVERIES IN FOSSILIZED AMBER

*(reprinted from the May 2022 edition of **Spores Afield**, newsletter of the Colorado Mycological Association)*

When analyzing an ant preserved in 50-million-year-old amber, researchers at Oregon University recently made a surprising mycological discovery. The specimen was collected from Europe's Baltic region, which historically has been important for the study of small prehistoric plants and animals, beginning with the work of Nathaniel Sendel in the eighteenth century. When observing the ant trapped in the amber, researchers observed a parasitic species of fungi.



Amber expert George Poinar Jr., from the Oregon State University College of Science, stated when describing it "We can see a large, orange, cup-shaped ascoma with developing perithecia – flask-shaped structures that let the spores out – emerging from the rectum of the ant. The vegetative part of the fungus is coming out of the abdomen and the base of the neck. We see freestanding fungal bodies also bearing what looks like perithecia, and in addition, we see what look like the sacs where spores develop. All of the stages, those attached to the ant and the freestanding ones, are of the same species."

The species was identified as a type of Ascomycota fungi. This is a phylum of fungi that is defined by its sack-like structure, and well-known members include truffles and morels. While many Ascomycota are plant pathogens, some species such as the species identified may also be animal pathogens.

Carpenter ants during ancient and modern times are commonly infected with fungal pathogens which infect the insect by slowly 'zombifying' it. When analyzing the specimen, researchers at the University of Oregon were initially unsure how to describe the fungi. It was noted that it shared certain features with *Ophiocordyceps*. Carpenter ants are very susceptible to *Ophiocordyceps* fungi infections. However, the species observed anddisplayed different developmental stages from *Ophiocordyceps*. In addition, it emerged from the rectum of the ant rather than the head or the neck.

Therefore, it was identified as belonging to the same order, Hypocreales, but was part of a new genus identified by the researchers at the University of Oregon. The new genus was named *"Allocordyceps".*

In terms of naming, Alloios, the word for "new" in Greek, was combined with the name of another genus, *Cordyceps*.

Sources:

• George Poinar, Yves-Marie Maltier, *Allocordyceps baltica* gen. *et sp. nov.* (Hypocreales: Clavicipitaceae), an ancient fungal parasite of an ant in Baltic amber, *Fungal Biology*, volume 125, issue 11, 2021, pages 886-890, ISSN 1878-6146, ***https://doi.org/10.1016/j.funbio.2021.06.002***.

• The Editors of *Encyclopaedia Britannica*, "Ascomycota", *Encyclopedia Britannica*, 21 December 2017 ***https://www.britannica.com/science/Ascomycota***. Accessed 7 May 2022.