



The Fungal Gazette

September 2019

Newsletter of the Central New York Mycological Society



Finds from the Verona Beach foray – photos by Blake C.



August Recap

The Verona Beach foray was a wonderland of mushrooms! The dozen people who braved the forecast were rewarded by a plethora of fungi – they were everywhere. But 45 minutes into our hike, the heavens opened and we were caught in a torrential downpour! Because of the rain, we did not get to go over the collection.

- Jean

(Paula Desanto's partial list is attached to the email that came with the newsletter)

Lauren Goldmann's art program was appreciated by over a dozen art and mushroom lovers. Many thanks to Lauren for entertaining and enlightening us!

Our September speaker, **Tusha Yakovleva**, will talk to us about **Wild Edibles**. Tusha is a life-long gatherer, thanks to her family and first home – Russia - where harvesting plants and mushrooms for food and medicine is common practice. She spent years in the *Hudson* River watershed, growing perennials, keeping seeds, running a wild food program, learning the gifts of weeds, and organizing community gardening and forestry efforts. Tusha's work revolves around generating strong, respectful relationships between plants and people. She now lives in the watershed of Onondaga Lake, attending SUNY College of Environmental Science and Forestry where she studies how to build generous bonds between land and people.

The September foray is at the **Rome Sand Plains** on the 22nd. **Directions** from Syracuse: Take I-90 E to exit 34 for NY-13 toward Canastota/Oneida. Turn right onto NY-13 N/N Peterboro St. and continue for 5.3 miles. Turn right onto NY-31 E/State Rte 31 E and follow this for 3.6 miles. Turn left onto NY-46 N and continue east for 6.4 miles toward Rome. When NY-46 and NY-49 combine, continue for another 3 miles and look for Oswego Road on the left. Travel less than one mile on Oswego Road and turn left on Hogsback Road. At about 1.5 miles, on the right, is the parking area for the Sand Dune Trail and at 2 miles, on the left hand side of the road, is the parking area of the Wood Creek Trail.

Note: The **Mushroom Festival** is coming up soon. Start giving some thought to attending, volunteering, and/or dropping off mushrooms!

2019 Calendar of Events

Meetings are on the 3rd Monday of the month at **7:30 pm**, room 334 Illick Hall at ESF on the SU campus.

Forays are on Sunday at **1:00 pm** unless otherwise announced. (If there is an all-day pouring rain or another hurricane, the foray will be held the following Sunday. If in doubt, call Jean Fahey to find out when the trip will take place.)

September 16th Meeting at 7:30 pm, Illick Hall. ESF grad student **Tusha Yakovleva** will share her expertise collecting **Wild Edibles**.

September 22nd Rome Sand Plains Foray

October 13th The 11th Annual Vince O'Neil **Mushroom Festival** at Beaver Lake Nature Center. All members are needed to help! More information later.

October 20th Cazenovia Preservation Foundation Foray

October 21st Meeting at 7:30 pm, Illick Hall. The last meeting of the season will be a **Mushroom Identification** session. Bring your specimens!

November 10th Mexico Point Foray

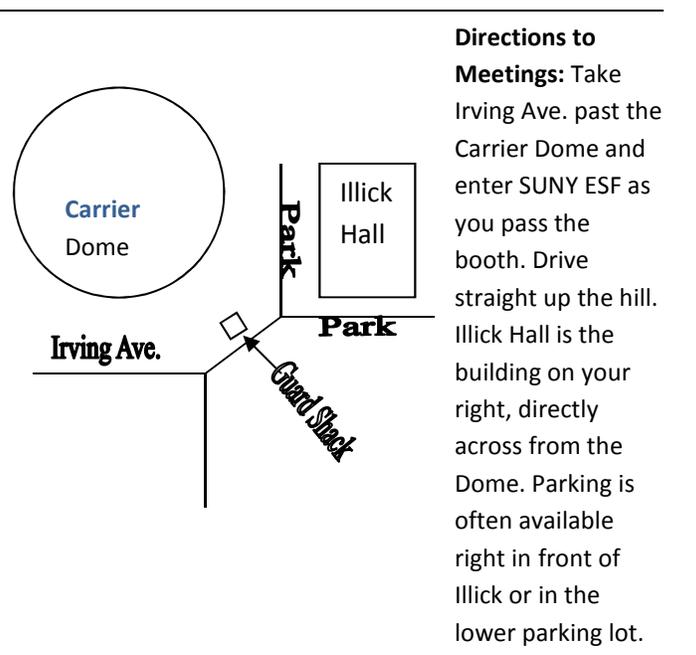
After all these years . . . Membership in CNYMS is still only \$10. **Membership includes your newsletter - what a bargain!** If possible, it's easier and more efficient if members pay for 2 years at once by sending \$20 to: **Rick Colvin, 1848 Whiting Road, Memphis, NY 13112.**

Contact Rick or me if you don't know your membership status so you can keep the news and schedules coming!



*****NOTE to new members: Newsletters are sent electronically – you MUST include an email address to receive The Fungal Gazette and other notifications*****

Any questions, or input for newsletters, contact:
Jean Fahey (President) at (315) 446- 1463 (after 9am)
Rick Colvin (Treasurer) at (315) 569-5771 or rcolvin@twcny.rr.com
Mark Griffen (Publicity) at mgriffen@twcny.rr.com
Julie Siler (Newsletter) at (607) 749-2915 or jds88@cornell.edu



When Fungi Fight Back

<https://www.nytimes.com/2019/01/15/science/fungus-threat-detection.html>

By JoAnna Klein

A mushroom species was found to sense predators and sent warning signals to other parts of its body, but how it does that remains a mystery.

It's known as fight or flight — the message the brain sends your body when it detects something frightening. Something like it happens to plants when they are under attack, too. And then there are fungi — perhaps the most mysterious kingdom of multicellular life.

Fungi too can sense attackers and manufacture powerful weapons to combat them, including the toxins and poisons that can send you to the emergency room if you eat the wrong mushroom. But little is known about the built-in threat detectors of these limbless, brainless beings. Humans send messages through their nervous systems. A plant's vascular system is its relay apparatus. But fungi have neither.

Scientists trying to solve this mystery recently grew mushrooms in the lab, unleashed fungi-eating nematodes on them and videotaped the aftermath.

[See the link above for video]

They found that the fungi somehow sensed the predators and sent signals to other parts of their bodies. Their findings, published recently in *Current Biology*, shed new light on how the many cells within even primitive organisms communicate like plants or animals.

“They may appear simple, but they share features that are also known for more complicated organisms,” said Markus Künzler, a microbiologist at ETH Zürich in Switzerland who led the study. “There is internal communication going on that we know very little about.”

What we do know is that fungi-loving nematodes ingest their dinner like creepy, syringe-wielding serial killers. The worm uses a needle on its head to puncture the mushroom's hyphae — the stringy

filaments that make up its mycelium, or vegetative body — and suck out its cellular content.

Under attack, *Coprinopsis cinerea*, the mushroom commonly known as the “gray shag” or “inky cap” and often used in fungi research, puts up a slow, but steady fight.

Dr. Künzler and his colleagues paired the fungi and nematodes in a lab setting, and also added a dye to the mushrooms that glows under a microscope. They watched the mushroom's response travel in the form of genes activating, lighting up as its warning message propagated up and down the fungus's fattest hyphae. It did so every few hours — and it switched directions. As they switched on in succession, the genes produced a nasty toxin the nematodes don't like.

It makes sense that to survive, a fungus would need to send defense signals throughout its body rather than only at the site of attack. For example, defending its reproductive caps above the soil, even preemptively, would help its legacy continue. But much remains unknown about the fungus's signal and how it travels.

“In both plants and animals, electrical and chemical signaling is known,” Dr. Künzler said. “It's not very clear what happens in the fungus.” Fungal architecture is quite different from that of plants and animals. Dr. Künzler's results suggest that the cells within a fungus's hyphae communicate using chemical signals, but additional research will be required to confirm the finding.

“We think the signal has to travel from one cell to another across the cytoplasm of the cells, which is very special or different from how the signaling is done in a plant or animal body,” he said. While fungi may be simple compared with animals and plants, they're multicellular too, and what's the point of making all those cells stick together if they can't somehow communicate?

Save the Dates Update

Peck Foray: This year it will be about 3 hours away in the Catskills, on the weekend of Sept 27-29 at the YMCA Greenkill Retreat Center, Huguenot, NY. See <http://www.plantpath.cornell.edu/CUPpages/Peck/index.html> or for further information contact Paul Sadowski 212-675-1630 or pabloski1@verizon.net

NAMA (Note - NAMA membership is required to attend annual and regional forays):

Wildacres Regional Foray

The Wildacres 2019 Foray, scheduled for September 26-29, will be held at Wildacres Retreat, located just off the Blue Ridge Parkway near Little Switzerland, not too far from Spruce Pine, North Carolina. Dr. Andy Metheny returns as the mycologist. For more information and to register, contact Glenda O'Neal, phone (423) 863-2742 or glendakoneal@yahoo.com.

https://mms.namyc.org/members/evr/reg_event.php?orgcode=NAMA&evid=15384659

19th Annual Gary Lincoff Foray: Saturday, September 21 with walks, presentations, auction, book signing, sales, table-walk, and a mushroom feast in North Park (Pittsburgh) Pennsylvania. **For more information,** visit <https://wpamushroomclub.org/lincoff-foray/>



Putting the Fun in Fungi

In Lithuania, getting lost while picking mushrooms happens often enough to have its own word:

nugrybauti.

Black Trumpet Mushroom Puff Pastries <http://bevcooks.com/2016/02/black-trumpet-mushroom-puff-pastries/>



Ingredients

- 2 cups dried Black Trumpet Mushrooms
- 2 Tbs. butter
- 1 Tbs. extra-virgin olive oil
- 3 cloves garlic, minced
- 2 tsp chopped fresh rosemary
- 1 sheet frozen puff pastry, thawed and cut into 8 rounds (you might need both sheets)
- 1/2 cup-ish grated Asiago cheese, plus more for garnish
- salt and pepper

Instructions

1. Place the mushrooms in a bowl of tepid water and let reconstitute for 20 minutes. Drain and pat as dry as you can.
2. Melt the butter and oil in a medium skillet over medium-high heat. Once the butter foams, add the mushrooms, garlic and chopped rosemary. Sauté for about three minutes, until the mushrooms turn very dark and the garlic is fragrant. Season with a pinch of salt and pepper.
3. Place a little bit of grated cheese on each pastry round, following by a Tbs. of sautéed mushrooms. Place on a baking sheet and bake 15 to 20 minutes, or until the puff pastry is golden brown and nicely puffed.
4. Once you take it out of the oven the pastries will fall a little, but that's good. Makes the bites easier to inhale.
5. Garnish with more grated Asiago cheese, and a scattering of rosemary leaves. Devour.
6. Makes 8.