



Ohio Mushroom Society

# The Mushroom Log

**OMS 2019 SUMMER FORAY**

By Jerry Pepara

Date: August 17-18

Location: Lake

MetroParks Penitentiary  
Glen Nature Center

8668 Kirtland-Chardon Rd  
Kirtland, OH 44094  
440-256-1404

Website:

<http://www.lakemetroparks.com/parks-trails/penitentiary-glen-reservation>

Google Maps:

<https://www.google.com/maps/dir//8668+Kirtland+Chardon+Rd,+Willoughby,+OH+44094>

**August 17 (Saturday)**

8:30-9:30 AM

Meet at Lake MetroParks Penitentiary Nature Center for registration and coffee. Please bring a reusable cup and a cash donation

to cover costs of coffee, rolls, etc.

You must be an OMS member to participate in the Saturday program. Club membership is very inexpensive (\$15/yr per family) and it helps us cover our program costs. We will have membership forms handy and you can join at the foray.

10:00 AM

Forays will begin. We will foray onsite at Penitentiary Glen and carpool to nearby Chapin Forest. Please bring hiking gear, mushroom basket, small pocket knife, water bottle, and whistle.

12:15 PM

We will have a potluck lunch, so please bring something to share. Please bring your own iced cooler for items that require refrigeration.

**Please note that NO CROCKPOTS are allowed.**

The kitchen facility is limited and has a refrigerator, sink, microwave and 2 electric outlets. Please be responsible for all preparation and clean-up of your contribution. Please bring your dish ready to serve with a label and ingredient list, and serving utensils. Any wild mushrooms for consumption must be verified by expert collectors. Please do not bring any home-canned foods. We will have some tables setup outside the kitchen to set food on.

1:45 PM

John Plischke, III will present: A program on Ascomycetes or Edible Fungi & How to Prepare Them.

2:45 PM

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Afternoon forays depart.  
Onsite at Penitentiary  
Glen and offsite at Holden  
Arboretum.

5:30 PM

Table talk with explanation  
of the day's collections.

6:30 PM

Dinner at the following  
local restaurant:

Tavern Six  
7592 Chardon Rd  
Kirtland, OH 44094  
Tel: (440) 256-1100  
<https://www.tavernsixkirtland.com/>

We will have a sign-up  
sheet during registration  
on Saturday morning and  
phone in our registration  
after lunch. The area we  
have reserved can  
comfortably seat 20-35  
people. We will be indoors  
and can order off of the  
menu. They have a huge  
patio area but they will not  
serve us outside unless  
we limit the menu and  
cater the event. The door  
to the patio is adjacent to  
our dining area so, we  
could mingle with drinks  
outside if we wish.

### **August 18 (Sunday)**

12:00PM - 2:00PM -  
Public Invited Beginners  
Mushroom Program

The OMS will present a  
beginners slide show on  
common Ohio mushrooms  
followed by a table walk  
discussion of the

mushrooms on display.  
Attendees are encouraged  
to bring mushrooms from  
home in paper bags or  
wax wrap. No plastic  
please.

### **Accommodations:**

#### **Hotels:**

All Hotels are near the I90/  
SR306 Exit.

Mentor Home Inn & Suites  
8370 Broadmoor Rd.  
Mentor, OH. 44060  
(440) 953-8835  
<https://mentorhomeinnsuites.com/>

Red Roof Inn Cleveland -  
Mentor/Willoughby  
4166 State Route 306  
Willoughby, OH 44094  
440 946-9872  
<https://www.redroof.com/property/oh/willoughby/RR053>

Days Inn by Wyndham  
Willoughby/Cleveland  
4145 State Rout 306  
Willoughby, OH 44094  
440 520-1773  
<https://www.wyndhamhotels.com/days-inn/willoughby-ohio/days-inn-willoughby-cleveland/overview?CID=LC:DI:20160927:RIO:Local:SM-dient>

#### **Camping:**

There are no nearby  
private or public  
campgrounds. Both Lake  
and Geauga Metroparks

have reservable tent  
campsites at various parks  
in the area. See below for  
more details:

<http://www.lakemetroparks.com/register-reserve/reserve-a-shelter/tent-camping>  
<https://reservations.geaugaparkdistrict.org/camping/>

## **Shedding Light on Fungal Bioluminescence**

By Bob Antibus

If you are an avid  
mushroom photographer  
you've likely seen Tayler  
Lockwood's amazing  
photos of bioluminescent  
fungi. While visiting Costa  
Rica this past winter my  
wife, daughter and I  
decided to spend a couple  
of nights searching the  
Monteverde rain forest for  
"glowing fungi".  
Unfortunately we never  
encountered any  
bioluminescent  
mushrooms; we did  
however see some  
interesting light reflecting  
spiders! During our visit  
we were fortunate enough  
to witness the bursts of  
green light in breaking  
waves of the Pacific  
Ocean; these bursts are  
produced by  
bioluminescent planktonic  
dinoflagellates. In recent  
years there has been a  
resurgence in interest in

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the production of light or bioluminescence for two major reasons. On one hand the genes coding for light production are increasingly used as signaling molecules in genetic transformation experiments. Perhaps you have seen pictures of genetically transformed bioluminescent tobacco plants. On the other hand, other researchers hope that by learning the details of light production in biological systems we might design more efficient devices to light our homes and cities. But how and why do organisms produce light? The production of light is now well established in bacteria, fungi and various groups of invertebrates. Altogether the known species represent 16 phyla. Vertebrates lack the ability to produce light as far as we know. However, some deep-sea fish do host mutualistic bioluminescent bacteria in special organs. As biological light production consumes energy it should provide a benefit in terms of natural selection, and several ideas have been forwarded to explain its function. In some cases, light may be solely a waste product of normal cellular metabolism. The aforementioned deep-sea fish likely use light to

attract prey. Several invertebrates including fireflies certainly use light for communication and mate attraction. Our knowledge of light emission by fungi traces back to observations of glowing rotten wood recorded by Aristotle (384-322 BC). This light, probably what we know today as foxfire, was unusual to Aristotle in that it was cool to the touch unlike fire. Anecdotal stories also exist of ancient peoples using such rotten wood to mark trails for night travel. Today we know of at least 71 species of higher fungi that produce light. All of these are white-rot fungi of the Order Agaricales. All produce a green light with a peak emission wavelength of 225 to 230 nanometers. Species richness is greatest in the tropics but most of us have collected one of several common temperate forest species. The observed brightness and pattern of light emission varies among genera and species. For some like members of *Armillaria* only the mycelium is active, whereas in others like *Mycena* species the entire fruiting body, the cap or stipe alone emits light. In *Panellus stipticus* only the cap margin and gill edges

seem to emit light. Interestingly a range in bioluminescence is found in *P. stipticus* populations. Stains from eastern North America emit light, those from Europe and western North America do not. Single spore isolates of geographically separated strains are compatible when crossed in the lab supporting their inclusion in a single biological species. Recent molecular work by Dennis Desjardin suggests that bioluminescence is limited to four lines of agarics. All were once classified in the Tricholomataceae. The *Armillaria* lineage (Physalacriaceae) contains *Armillaria* the genus we associate with the "Honey fungus". At least 8 recognized species are capable of producing light in cultured mycelium. The Mycenoid lineage is the most diverse with 52 species of *Mycena* and *Panellus* (Mycenaceae). Here bioluminescent species occur scattered among large numbers of nonlight emitting species. The *Omphalotus* lineage contains *Omphalotus* (Omphalotaceae) – the well-known "Jack O'Lantern" fungi and a tropical genus *Neonothopanus*. A group known as Lucentipes contains *Gerronema*

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*viridilucens*. Anyone who attended the OMS summer foray at Lake Hope will remember *Gerronema strombodes* that was collected in profusion. As far as I know our *G. strombodes* isn't bioluminescent.

So how do fungi emit light and do they use the same mechanisms as bacteria and animals? The mechanisms of bioluminescence in fungi have only been studied in detail in the last decade or so and appear to be different than those used by bacteria which likewise differ from animal systems. Whereas scientists employ a similar terminology to describe the system for various phyla, the molecules involved are structurally different and do not share a common ancestry (are not homologous). All bioluminescence pathways require oxygen and utilize metabolic energy to generate light without liberating heat. All systems are comprised of an enzyme luciferase, a substrate luciferin and a reductase enzyme. I won't bother you with the chemistry, but know that while the enzymes and substrates have the same names in fungi and fireflies there are differences in their chemistry. Research

employing pure cultures and mushroom extracts has shown that substrates and enzymes extracted from the major fungal lineages described above can be mixed and matched to produce light *in vitro*. The work suggests that bioluminescence evolved once in a common fungal ancestor. The requirement for oxygen to produce light explains why we see the green flash of light by dinoflagellates in breaking waves. Likewise sailors and cruise ship passengers report seeing luminescence in the wakes of ships when the propellers act to oxygenate water. This brings us to the question of why fungi expend energy to produce green light. At least some researchers feel that light production is simply a necessary byproduct of metabolism. The enzymatic degradation of lignin results in the release of peroxides that could damage cells. It may be that a link exists between peroxide use in pathways of light production and peroxide elimination in white-rot fungi. As far as we know the bioluminescent fungi are all lignin degraders. Anderson Oliveira and others think light emission could be involved in spore

dispersal. Many of these fungi, especially in the tropics, grow in dense forests with little air movement that would reduce spore dispersal. Also, *Mycena* sporocarps are quite small and produce low numbers of spores. We know that at least some kinds of insects are attracted to blue and green light. Recently Oliveira and colleagues set out to test the insect-spore dispersal idea. They examined *Neonothopanus gardneri* which grows on decaying leaf bases of palms near the forest floor in Brazil. Sporocarps and cultures both produce green light. *N. gardneri* cultures show a circadian rhythm of 22 hours of bioluminescence when trained on a 12-hour light/dark cycle. The pattern is maintained when trained under a range of temperatures. The findings alone suggest the fungus in nature will expend most of its energy for light production during the darkest hours when most visible to potential dispersers. The authors then constructed dummy acrylic resin mushrooms with embedded green LEDs. The LEDs had an emission spectrum matching naturally occurring emission. Models were coated with

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scentless glue and placed in a natural habitat. Some were lit to emit light at an intensity similar to mushrooms while controls weren't. Upon retrieval the insects were counted and identified. The results indicated that illumination significantly increased the numbers of beetles (Coleoptera), flies (Diptera), true bugs (Hemiptera) and wasps and ants (Hymenoptera) captured. The data nicely support the idea that clock-driven light emission makes fruiting bodies more attractive to potential spore dispersing insects. Hence, for at least some tropical fungi we see support for a selective advantage of bioluminescence, and observe one more example of the fascinating complexity of the world of fungi.

### **SOUTH AFRICAN FUNGUS HOLDS BLUEPRINT FOR RECYCLING**

lol.co.za, Feb. 2019 via *The Spore Print*, L. A. Myco. Soc., Mar. 2019

*Cells of the wood-eating fungus Coniochaeta pulveracea exhibit both yeast- and fungus-type characteristics while*

*breaking down twigs from an Acacia tree.*

CAPE TOWN, South Africa - *Coniochaeta pulveracea*, a relatively unknown fungus accidentally found growing on an Acacia tree in the Northern Cape, has emerged as a voracious wood-munching organism with enormous potential in industries based on renewable resources, according to Stellenbosch University.

The first time someone took note of *C. pulveracea* was more than 200 years ago, when South African-born mycologist Dr. Christiaan Hendrik Persoon mentioned it in his 1797 book on the classification of fungi. Now *C. pulveracea* has had its whole genome sequenced by microbiologists at Stellenbosch University.

Prof. Alf Botha, a microbiologist in the Department of Microbiology at the university, said in the age of biotechnology, biofuels, and the usage of renewable raw materials, the fungus was important to take note of.

Botha said over the past 25 years there had been a number of reports on the ability of species in the *Coniochaeta* genus to rapidly degrade lignocellulose into

fermentable simple sugars.

But so far, Botha's lab is the only one to be working on *Coniochaeta pulveracea*. "At the time we were looking for fungi and yeasts that can break down wood, so I knew this was something special when I decided to keep the twig," Botha said on his finding the fungus in 2011.

Back in the lab, there was great excitement when they observed that the species in the *Coniochaeta* genus was munching its way through birchwood toothpicks.

Even more astounding was its ability to change form between a filamentous fungus and a yeast, depending on the environment.

"This is highly unusual for a fungus. We'd typically expect this kind of behavior from some fungal pathogens," Botha said. Over the past decade, Botha and his postgraduate students focused on unravelling the behavior of the yeast-like fungus.

In 2011, Dr. Andrea van Heerden found that it produced enzymes that degraded the complex structures of wood into simple sugars,

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feeding a community of surrounding fungi that did not have the ability to degrade wood.

In 2016, she published the results of her investigation into its ability to switch to a yeast-like growth. Understanding this process would be important to the potential use of this fungus in industrial processes, the university said. Dr. Heinrich Volschenk, an expert molecular biologist, said the next step was to understand the fungus's mechanism of breaking down wood and producing sugars on a molecular level.

### **A Mysterious Infection, Spanning the Globe in a Climate of Secrecy**

**By Matt Richtel and Andrew Jacobs  
April 6, 2019**

Last May, an elderly man was admitted to the Brooklyn branch of Mount Sinai Hospital for abdominal surgery. A blood test revealed that he was infected with a newly discovered germ as deadly as it was mysterious. Doctors swiftly isolated him in the intensive care unit.

The germ, a fungus called *Candida auris*, preys on people with

weakened immune systems, and it is quietly spreading across the globe. Over the last five years, it has hit a neonatal unit in Venezuela, swept through a hospital in Spa of the NYT in, forced a prestigious British medical center to shut down its intensive care unit, and taken root in India, Pakistan and [South Africa](#).

Recently *C. auris* reached [New York](#), [New Jersey](#) and Illinois, leading the federal Centers for Disease Control and Prevention to add it to a list of germs deemed “urgent threat.” The man at Mount Sinai died after 90 days in the hospital, but *C. auris* did not. Tests showed it was everywhere in his room, so invasive that the hospital needed special cleaning equipment and had to rip out some of the ceiling and floor tiles to eradicate it.

“Everything was positive — the walls, the bed, the doors, the curtains, the phones, the sink, the whiteboard, the poles, the pump,” said Dr. Scott Lorin, the hospital’s president.

“The mattress, the bed rails, the canister holes, the window shades, the ceiling, everything in the room was positive.”

*C. auris* is so tenacious, in part, because it is impervious to major antifungal medications, making it a new example of one of the world’s most intractable health threats: the rise of drug-resistant infections.

For decades, public health experts have warned that the overuse of antibiotics was reducing the effectiveness of drugs that have lengthened life spans by curing bacterial infections once commonly fatal. But lately, there has been an explosion of resistant fungi as well, adding a new and frightening dimension to a phenomenon that is undermining a pillar of modern medicine.

“It’s an enormous problem,” said Matthew Fisher, a professor of fungal epidemiology at Imperial College London, who was a co-author of [a recent scientific review](#) on the rise of resistant fungi. “We depend on being able to treat those

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patients with antifungals.”

Simply put, fungi, just like bacteria, are evolving defenses to survive modern medicines.

This is only a small part of a very long NYT article from April 7, 2019. To access the rest of it, see

<https://www.nytimes.com/2019/04/06/health/drug-resistant-candida-auris.html?smid=nytcore-ios-share>

to get more info.

Candida is a genus of yeasts, which has another pathogen, *C. albicans* which can cause thrush, a yeast infection in women's vaginas. This usually occurs when excessive use is made of antibiotics, which kill off the beneficial bacteria in the vagina so the yeast has no competitors. Not unlike *C. auris*. Auris is the name for the ear and it was a Japanese man from whom it was first isolated. Cloud ears (Auricularia) anyone?

I reread Nik Money's latest book (The Rise of Yeast) to bone up on

Candida and other yeasts which can become pathogens, usually when someone's immune system is compromised.

### **GENETIC ANALYSIS REVEALS MYSTERIOUS EVOLUTION OF BREWER'S YEAST THAT MAKES BEER POSSIBLE**

Andrew Masterson *Cosmos* via <https://geneticliteracyproject.org/>, Mar. 13, 2019

The strain of brewers' yeast used to make beer, *Saccharomyces cerevisiae*, derives from versions used over thousands of years to make grape wine in Europe and rice wine in Asia, a new genetic analysis shows.

The analysis, which involved sequencing the genomes of 47 strains of brewers' (or bakers') yeast and 65 other strains of the same species, is published in the journal *PLOS Biology*. The results reveal that beer-making *S. cerevisiae* is a very special fungus, indeed. In addition to being, as the researchers say, "the product of a historical melting pot of fermentation technology," it also contains genes derived from a mysterious, unknown, and possibly extinct additional strain, and overall bears very little resemblance to any surviving wild strain.

Marita King turned me on to this. Many thanks, Marita.

### **Editorial Musings**

My thanks to Bob Antibus for his article on bioluminescence. The 2 articles from SPORE PRINTS demonstrate the diversity of fungi's metabolic skills.

### **TEXAS WOMAN SUES OLIVE GARDEN AFTER STUFFED MUSHROOMS CAUSE SEVERE BURNS TO THROAT Nichole Manna** <https://www.charlotteobserver.com/>, Mar. 12, 2019

A Fort Worth woman is suing Olive Garden after she says an extremely hot stuffed mushroom got lodged in her throat, which caused her to temporarily stop breathing and resulted in severe burns.

Danny Howard filed a lawsuit against the restaurant on March 8 in Tarrant County District Court. She alleges that the restaurant didn't warn her that the mushrooms were extremely hot. Her attorney, Jess Lotspeich, declined to comment.

On Aug. 11, 2017, Howard went to an Olive Garden in Tarrant County and ordered the stuffed mushroom appetizer. When it was served to her, there was no warning that would indicate that the "mushrooms were particularly hot or (carried) the risk to cause severe burns," according to the lawsuit.

Howard took a bite of the mushroom, and it immediately burned her mouth. The burning mushroom then became lodged in her throat, which caused her to choke and stop breathing. The lawsuit says that Howard "frantically shuffled through the restaurant in need of help," but was unable to speak. She eventually vomited in a kitchen station.

# Calendar of Events

Check your most recent issue of the *Mushroom Log* or our website for more detailed information.

Please plan to join us. All mini-forays are subject to cancellation. Call first to confirm.

Please bring a whistle and compass and an **RSVP to the host is mandatory so they have cancellation flexibility.**

Morel and other mini-forays, are subject to change, especially the former. Leaders will be checking the woods to assess their progress, so you should contact them at least a week prior to the announced mini-foray for any updates.

### Miniforays: (RSVP required)

Beside those listed below, other mini-forays are likely during the summer/fall..

**See later issues of the Log or the OMS website for later postings of these miniforays.**

### OMS "Mini" Forays for 2019

**June 8,9** – Morgan Park, Portage Park District. Contact Bryan Lewis at [bwaynelewis@gmail.com](mailto:bwaynelewis@gmail.com) or (917) 475-6135 for more information.

**Friday, June 14** – 8 AM Portage Park District Bioblitz – Towner's Woods Park

The main entrance to the park is located at 2264 Ravenna Rd., Kent, 44240 Franklin Twp., OH. Parking will also be available at 2241 Ravenna Rd., which is the location of our field office and where lunch will be provided at noon. Both locations can only be accessed by coming from the northwest on Ravenna Road due to a bridge closure. Please RSVP the Nat. Areas Steward, Bob Lange:

[blange@portageparkdistrict.org](http://blange@portageparkdistrict.org)



330-808-0758 **July 6th**, Saturday @ 1PM at Hellbender Bluff, Lones Rd. near East Liverpool in Lisbon Do not confuse the foray site with the main park. Contact Walt Sturgeon at [mycowalt@comcast.net](mailto:mycowalt@comcast.net) to register.

July 14, 1PM mini foray; central area near Granville or Hocking Hills.

Contact Shirley McClelland at (740) 215-5883 to register. **July 14**, 2 PM; Scenic Vista public hunting area near Lisbon Ohio Mushroom display and walk. Contact Walt Sturgeon at [mycowalt@comcast.net](mailto:mycowalt@comcast.net) to register.

**Sunday, July 28**, 11 a.m. – 2 p.m. – Coyote Run Farm, Pickerington Contact Debra Shankland at [dks@clevelandmetroparks.com](mailto:dks@clevelandmetroparks.com) to register. **Oct. 12** (Tentative), Krohn's Conservatory Mushroom Fest, Cincinnati, OH This will be advertised as a major event. Contact Walt Sturgeon at [mycowalt@comcast.net](mailto:mycowalt@comcast.net) for more

information. **Sept 7th** at Caesar Creek State Park – Waynesville, OH

Contact Crystal Davidson for more information:

[crystal davidson@gmail.com](mailto:crystal davidson@gmail.com) **OMS 2019 Summer Foray.** See pp. 1 & 2 this Log

### 2019 Fall Foray at Dawes

Arboretum near Newark on Oct 5-6. Details tba Contact Debora Shankland at [dks@clevelandmetroparks.com](mailto:dks@clevelandmetroparks.com)

### Aug 1-4 NEMF in Lochaven PA

<https://wpamushroomclub.org/events/nemf-foray/>

### Sept 26-29 2019 Wildacres

Regional Foray, Wildacres Retreat, located just off the BlueRidge Parkway near Little Switzerland NC

### July 19-21 Davis West Virginia

<https://www.westvirginiamushroomclub.net/single-post/2018/10/11/2019WV-Mushroom-Foray-News>

### Sat. Sept 21 Miniforay at

Bellweather Farm. Time tbd Pete Richards.

**OMS 2019 Summer Foray** See pp 1 & 2 of this Log.

David Miller  
17402 Dorchester Drive,  
Cleveland OH 44119  
[dmiller@oberlin.edu](mailto:dmiller@oberlin.edu)

**Articles for the next Log due July , 2019**

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Name:(printed) \_\_\_\_\_ Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Telephone: \_\_\_\_\_

Fax: \_\_\_\_\_ Email Address: \_\_\_\_\_

Enclosed please find check or money order (check one):

\_\_\_\_ \$15.00 annual family membership (newsletter via email and website only)

\_\_\_\_ \$20.00 annual family membership (newsletter via paper, email, and website)

\_\_\_\_ \$150.00 life family membership (newsletter via paper, email, and website)

My interests are: Mushroom Eating/Cookery \_\_\_\_\_ Photography \_\_\_\_\_ Nature Study \_\_\_\_\_ Mushroom  
ID \_\_\_\_\_ Cultivation \_\_\_\_\_ Other (specify) \_\_\_\_\_

Would you like to be an OMS volunteer? In what way? \_\_\_\_\_

How did you hear about our group? \_\_\_\_\_

May OMS provide your name to other mushroom related businesses? Yes \_\_\_\_\_ No \_\_\_\_\_

### **LIABILITY RELEASE AND PROMISE NOT TO SUE:**

I understand that participating in the activities of a mushroom club involves a moderate amount of risk. This includes all of the risks of being away from home, risks associated with moving about in fields and woods, risks of encountering inclement weather, risks involved in eating wild mushrooms, risks of losing personal property by theft or misplacement, and all other expected and unexpected risks, including illness or injury. While a member of the Ohio Mushroom Society; or as a non-member attending any event hosted by the Ohio Mushroom Society, I agree to assume total responsibility for my own safety and well-being; and that of any minor children under my care, and for the protection of my and their personal property. I release the Ohio Mushroom Society, its board members, club members, contractors, and any and all entities such as parks or preserves, or any private property owner who may host an Ohio Mushroom Society event, and all other persons assisting in the planning and presentation of any Ohio Mushroom Society event, from liability for any sickness, injury, or loss I or any minor children under my care may suffer during any event or as a result of attending or participating. I further promise not to file a lawsuit or make a claim against any of the persons or entities set forth above, even if they negligently cause me or my minor children injury or loss. I agree to hold the Ohio Mushroom Society harmless from any liability they may incur as a result of any damages to any property I may cause. This release and promise is part of the consideration I give in order to be a member of the Ohio Mushroom Society, or to attend any event which they host or attend, whether a member or a non-member. I understand this affects my legal rights. I intend it to apply not only to me but to anyone who may have the right to make a claim on my behalf.

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Return form and check or money order to: Ohio Mushroom Society, c/o Jerry Pepera, 8915 Knotty Pine Lane, Chardon, OH 44024

## 2019 Ohio Mushroom Society Volunteers

*Chairperson*

Debra Shankland  
(440) 253-2152  
[dks@clevelandmetroparks.com](mailto:dks@clevelandmetroparks.com)

*Treasurer/Membership/  
Circulation*

Jerry Pepera  
membership@ohiomushroomlog.org

*Jack-of-All-Trades*

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*Program Planner*

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*Lake MetroParks Liaison*

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[pmorse@lakemetroparks.com](mailto:pmorse@lakemetroparks.com)

*Hospitality Chair*

Sharon Greenberg  
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[d.greenberg@att.net](mailto:d.greenberg@att.net)

*Other Board Members:*

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(740) 215-5883 (c)  
[shirleymcclelland@msn.com](mailto:shirleymcclelland@msn.com)

Martha Bishop  
mycena@icloud.com

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DATED MATERIAL

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**Ohio Mushroom Society**

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[www.ohiomushroom.org](http://www.ohiomushroom.org)

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Contributions of articles and ideas for columns are always welcome. Articles may be edited for length and content.

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