

Ohio Mushroom Society



The Mushroom Log

FORAY REPORTS

Saturday 10 July 2021 Foray in Columbiana Co.

by Walt Sturgeon

Seven forayers enjoyed good weather and better-than-expected collecting. There were not large quantities of any one species. The most common species were *Cerioporus leptocephalus* and *Russula compacta*. We found chanterelles, both *Cantharellus lateritius* and *Cantharellus appalachiensis*. Edible milk mushrooms included *Lactifluus volemus* and *Lactifluus hygrophoroides*. Some uncommon finds included *Crinipellis zonata* and *Amanita onusta*.

A shout-out goes out to Anna, our youngest forayer at age 2. She carried her basket and took to the woods!

Sunday 11 July 2021 Foray in Portage Co.

by Debra Shankland

This was a day of steady rain, one of many we'd been having the past week. Even so, thirteen intrepid individuals found their way to the Portage Park District Operations Center in Ravenna, where we were welcomed by Executive Director Christine Craycroft. She provided an overview of this rapidly-growing park district, and the habitat we were soon to visit. Like all regional park districts ("Metroparks") in Ohio, harvesting activities like mushroom or berry picking are not allowed in order to protect the resource. We thank PPD for hosting this survey of their mushroom diversity.

This was the first OMS foray for nearly all the attendees, and the majority professed to be just beginning their study of mushrooms. Because of this, I spent nearly an hour discussing how to collect individual mushrooms for identification, distinctive characteristics to note, how to make spore prints and why, pros and cons of various field guides, and more.

I also delayed our foraging in hopes that the rain would let up, but to no avail.

So, off we went! We drove to our starting point and entered the wet woods. In spite of the unrelenting rain, more than 25 species were found! A number of them were faded and broken by the rain, but we took our finds back to the Operations Center for examination and identification.

We spent some time going over diagnostic features of different mushrooms, sometimes cutting into them to check flesh color and texture, and comparing specimens with their descriptions in field guides.

I want to thank the participants for their enthusiasm, patience and good cheer, which made this foray a success in spite of the weather! These are the species we recorded for the day:

<i>Amanita</i> sp. (<i>A. flavoconia</i> ?)	
<i>Boletus</i> sp. (<i>B. bicolor</i> ?)	
<i>Cantharellus lateritius</i>	smooth chanterell
<i>Cerioporus leptocephalus</i>	= <i>Polyporus varius</i>
	elegant polypore or little black foot
<i>Cerrena unicolor</i>	mossy maze polypore
<i>Crepidotus</i> sp.	
<i>Hapalopilus nidulans</i>	tender nesting polypore
<i>Hymenopellis megalospora</i>	rooting collybia
<i>Marasmius rotula</i>	pinwheel
<i>Megacollybia rodmani</i>	platterful or broad gill
mushroom	
<i>Neofavolus alveolaris</i>	hexagonal-pored polypore
<i>Panellus stipticus</i>	luminescent panellus
<i>Resupinatus</i> sp.	
<i>Russula compacta</i>	firm russula
<i>Russula</i> spp. (at least 2)	
<i>Schizophyllum commune</i>	split gill
<i>Stereum ostrea</i>	false turkey tail
<i>Trametes versicolor</i>	turkey tail
<i>Trichaptum biforme</i>	violet tooth
<i>Tyromyces chioneus</i>	white cheese polypore

FORAY REPORTS, Cont.

Sunday 18 July 2021 Foray in Fairfield Co.

by Debra Shankland

Ample rains prior to this foray at Coyote Run Farm, and the beautiful, sunny weather on this Sunday, made for a fun foray. Our generous host, David Hague and his wife, Tammy Miller, have been working for many years to restore the wetlands and woodlands (more than 100 acres of which have not been timbered for 100 years or more) on this property by removing invasive species and treating at-risk trees (ash & others) to thwart invasive pests. They have been documenting the living species at Coyote Run for years thru an iNaturalist project, and we are honored to contribute to it.

OMS board volunteers Shirley McClelland, Lonelle Yoder and Debra Shankland, along with David, welcomed the dozen participants, and advised the group on the methods used to collect specimens for identification, as opposed to cooking. Like most of our forays, and nearly all on private property, harvesting mushrooms for personal use is not allowed.

Armed with knives, baskets and wax bags, we searched the woods for almost two hours, resulting in a yield of over 33 species. We want to thank new members Kyle Canan and Sophie Chang for their awesome assistance with identification and clean-up. Many hands make light work! Here's what we found:

<i>Amanita flavoconia</i>	yellow patches
<i>A. frostiana</i> (?)	Frost's amanita
<i>A. rubescens</i>	the blusher
<i>A. vaginata</i>	grisette
<i>Amanita</i> sp.	
<i>Boletus</i> spp. (at least 4)	
<i>Cantharellus cibarius</i> complex	chanterelle
<i>C. lateritius</i>	smooth chanterelle
<i>C. minor</i>	small chanterelle
<i>Clavicornia pyxidata</i>	crown-tipped coral
<i>Crepidotus applanatus</i>	brown-gilled crep
<i>C. mollis</i> (?)	white-gilled crep
<i>Ductifera pululahuana</i>	white jelly
<i>Gymnopus iocephalus</i>	violet collybia
<i>Lactarius croceus</i>	
<i>Marasmius capillaris</i>	leaf-loving pinwheel
<i>M. rotula</i>	pinwheel
<i>M. siccus</i> (?)	
<i>Neofavolus alveolaris</i>	hexagonal-pored polypore
<i>Pleurotus ostriatus</i>	oyster
<i>Russula</i> sp.	
<i>Schizophyllum commune</i>	split gill
<i>Sparassus</i> sp.	
<i>Stereum ostrea</i>	false turkey tail
<i>Trametes versicolor</i>	turkey tail
<i>Trametes</i> sp.	
<i>Trichaptum bifforme</i>	violet tooth
<i>Xylaria polymorpha</i>	dead man's fingers
+ 3 additional polypores	

Also *Tubifera ferruginosa*, raspberry slime mold

Saturday 31 July 2021 Foray in Hancock Co.

by Bob Antibus

An enthusiastic group of ten folks enjoyed a pleasant July day at Van Buren State Park in search of fungi in the mixed oak forests along the shores of Van Buren Lake. OMS President Debra Shankland joined the group and offered insights into the mission of OMS for several new club members. Abundant July rains produced a nice crop of fungi and a plethora of mosquitoes. Amanitas and Bitter boletes of enormous size were particularly common finds. Note that our species list may not be complete as the wind may have blown some specimens off the plates before they could be recorded! Many thanks to John Zalewski for his helpful insights about the park and for helping clean up after the foray. Likewise to Kelly Alge for helping with clean up and educating us on Monarch butterfly conservation efforts.

Amanita farinosa
Amanita flavoconia or *elongata*
Amanita multisquamosa
Amanita sp. subgenus *Lepidella*
Amanita rubescens
Boletus pallidus
Boletus rubinellus
Boletus subvelutipes (group)
Cantharellus cibarius complex
Crepidotus mollis
Geastrum rufescens
Gleophyllum sepiarium
Gymnopus sp.
Hygrophorus sp.
Hypomyces on *Phylloporus*
Hypomyces chrysospermum on *Boletus*
Laccaria ochropurpurea
Lactarius sp.
Lactarius camphoratus
L. hygrophoroides
L. psammicola
Lycogala lepidendron
Lycoperdon perlatum
L. pyriforme
Marasmius sp.
Phaeolus schweinitzii
Polyporus (Picipes) badius
Sarcodon imbricatus
Scleroderma citrinum
Stereum sp.
Strobilomyces floccopus
Suillus americanus
Ramaria sp.
Russula sp.
Tremellodendron schweinitzii
Tricholomopsis rutilans
Tylopilus rubrobrunneus
Xyula radicata

FORAY REPORTS, cont'd.

Sunday 22 August 2021 Foray in Huron Co.

by Pete Richards

Bellwether Farm is a very nice property nestled in the meanders of the Vermilion River just north of Wakeman, Ohio. It is owned by the Episcopal Diocese of Ohio, and managed as a Farm-to-Table enterprise, retreat center, and nature preserve. Since its beginnings five years ago, the staff at Bellwether have welcomed OMS forays for the information they provide about the mushrooms present on the property, part of their effort to characterize the entire natural biota of the property.

Ten brave OMS members accepted a forecast of 50% chance of rain (which did not occur) and upper-80's temperatures (which were exceeded) to search for fungi on the afternoon of August 22. Despite promising rains in early August, the preceding week was dry, sunny, and breezy, leading to rather dry soil conditions. Despite this, we managed to collect and identify more than 30 species of mushrooms, the majority growing on wood. These are field identifications, without the benefit of spore morphology or even spore color in most cases, and sometimes with only one or a few specimens to look at, and not in the best condition. With these disclaimers and excuses, we offer the following list of observed species.

As the leader of this foray, I thank board members Jerry Pepera and Debra Shankland and board-member designate Kyle Canan for being part of the crew and helping greatly with identification.

Gilled Mushrooms

<i>Agaricus cf placomyces</i>	Inky Mushroom
<i>Coprinus micaceus</i>	Mica Cap
<i>Crepidotus cf applanatus</i>	Grounded Oysterling
<i>Hymenopellis megalospora</i>	Rooting Collybia
<i>Inocephalus murrainii</i>	Yellow Unicorn
<i>Marasmius cf delectans</i>	
<i>Marasmius cf rotula</i>	Collared Parachute
<i>Panellus stipticus</i>	Luminescent Panellus
<i>Pleutus cervinus</i>	Deer Mushroom

Various others

<i>Auricularia "americana"</i>	Wood Ear
<i>Cantharellus lateritius</i>	Smooth Chanterelle
<i>Hydnellum cf conrescens</i>	Zoned Tooth
<i>Sclerodema bovista</i>	Potato Earthball
<i>Sclerodema citrinum</i>	Pigskin Earthball
<i>Tremellodendron pallidum?</i>	Jellied False Coral Fungus
<i>Daldinia concentrica</i>	King Alfred's Cake
<i>Xylaria polymorpha</i>	Dead-man's Finger

(Photos by Pete Richards)

Boletes

<i>Boletus unidentified species</i>	
<i>Boletus cf bicolor</i>	Two-colored Bolete
<i>Boletus cf illudens</i>	
<i>Gyroporus castaneus</i>	Chestnut Bolete

Polypores

<i>Cerioporus squamosis</i>	Dryad's Saddle
<i>Daedaleopsis cf confragosa</i>	Thin-walled Maze Polypore
<i>Ganoderma applanatum</i>	Artist's Conch
<i>Phellinus robiniae</i>	Cracked Cap Polypore
<i>Polyporus varius</i>	Elegant Polypore
<i>Stereum ostrea</i>	False Turkey-tail
<i>Trametes betulina</i>	Gilled polypore
<i>Trametes versicolor</i>	Turkey-tail
<i>Tyromyces chioneus</i>	White Cheese Polypore
Russulas and Lactarius	Russulas and Lactarius
<i>Russula sp., red</i>	Red Brittlegills



Daedaleopsis confragosa (Thin-walled Maze Polypore).



Kynlee Canan (age 8)
intently learning how to tell
different mushrooms apart

Lobster Mushroom Biology

By Bob Antibus

My first encounter with the lobster mushroom was a stunning photograph of a group of bright orange mushrooms with aborted gills in Orson Miller's *Mushrooms of North America*. Over the years I had seen the mushroom show up at forays but never collected it myself. Then a group of us at a mycorrhizae meeting-associated foray in Arizona came upon hundreds of specimens growing as bumps (mushrumps) in deep duff of a subalpine pine forest. I was not disappointed with their taste when fresh.

Lobster mushrooms are not a species in the traditional sense but result when an ascomycete *Hypomyces lactifluorum* parasitizes a mushroom fruiting body usually in the genus *Russula* or *Lactarius*. The lobsters we found in Arizona most likely infected *Russula brevipes* as some noninfected specimens of this species were found. Here in Ohio we see other species of *Hypomyces* on boletes and amantias but they don't appear to enhance the edibility of the host as *H. lactifluorum* does. Infection by *H. lactifluorum* tends to abort the gills of the host, creates an orange crust with small pustules and yet leaves the mushroom interior relatively unchanged. The pustules are the perithecia, flasked-shaped ascocarps of the parasite.

Genevieve Laperriere and colleagues have used molecular techniques to study the changes that occur with infection over time that lead to the distinct appearance and taste of the mature lobster mushroom. They collected visibly infected and uninfected *R. brevipes* and grouped these into three developmental stages. They then quantified changes in DNA belonging to each species at each stage. In addition they analyzed various metabolite classes at each stage.

They found that *H. lactifluorum* DNA was widespread at the earliest signs of infection. The parasite's DNA increased as a fraction of the total DNA as infection developed. Host DNA declined in concert until it was present in only small amounts in decaying sporocarps. Although the parasite is evident only as an orange crust its DNA appeared throughout the mushroom. From a metabolic perspective terpenoids present in the uninfected host were replaced by diverse lipids, different fatty acids and pigments in lobsters. Free amino acids increased with infection including ones associated with umami taste in other mushrooms. Generally, the changes explained well the loss of bitter flavors typical of *R. brevipes* and development of pleasant aspects of the lobster mushroom.

***Finding the Mother Tree: Discovering the Wisdom of the Forest.* By Suzanne Simard, Published by Knopf, 368 pages.**

By Bob Antibus

If you have seen the film *Fantastic Fungi* you may remember Suzanne Simard speaking on fungal networks underpinning soils of old growth forests in the Pacific Northwest. Simard is a forestry professor and well-known mycorrhizal researcher. Her book is an autobiographical look at her transition from early life in a Canadian family involved in small scale logging to becoming an outspoken advocate for changes in the way western forests are harvested and subsequently reforested. Early in her career she realized the importance of ectomycorrhizae in tree seedling survival and subsequently worked to demonstrate how connections via mycorrhizal networks to mature trees are advantageous to successful seedling establishment. Her ideas challenged the dogma/policy of clearcutting and using herbicides to remove vegetation that might compete with planted nursery-grown seedlings. The book explores the evolution of her ideas and the struggle to be heard. I personally am not fond of anthropomorphizing, however many will find her concepts of tree kin to be an appealing path to conveying her timely message. I believe you will find the book is very readable and you can't help but root for her as she overcomes so many barriers to success. Like Hope Jahren's book *Lab Girl*, we see a woman swimming against the current in a male dominated field of science, and if you liked Jahren's book you will enjoy this one as well.

New Penn State Study Reveals Protective Effects of Mushrooms Against Cancer

By Emily Henderson, April, 2021

Next time you make a salad, you might want to consider adding mushrooms to it. That's because higher mushroom consumption is associated with a lower risk of cancer, according to a new Penn State study, published on March 16 in *Advances in Nutrition*. The systematic review and meta-analysis examined 17 cancer studies published from 1966 to 2020.

Analyzing data from more than 19,500 cancer patients, researchers explored the relationship between mushroom consumption and cancer risk.

Mushrooms are rich in vitamins, nutrients and antioxidants. The team's findings show that these super foods may also help guard against cancer. Even though shiitake, oyster, maitake and king oyster mushrooms have higher amounts of the amino acid ergothioneine than white button, cremini and portabello mushrooms, the researchers found that people who incorporated any variety of mushrooms into their daily diets had a lower risk of cancer. According to the findings, individuals who ate 18 grams of mushrooms - about 1/8 to 1/4 cup - daily had a 45% lower risk of cancer compared to those who did not eat mushrooms.

When specific cancers were examined, the researchers noted the strongest associations for breast cancer as individuals who regularly ate

mushrooms had a significantly lower risk of breast cancer. Dr. Ba explained that this could be because most of the studies did not include other forms of cancer. Moving forward, this research could be helpful in further exploring the protective effects that mushrooms have and helping to establish healthier diets that prevent cancer.

"Overall, these findings provide important evidence for the protective effects of mushrooms against cancer," said coauthor John Richie, a Penn State Cancer Institute researcher and professor of public health sciences and pharmacology. "Future studies are needed to better pinpoint the mechanisms involved and specific cancers that may be impacted."

Ba, D.M., *et al.* (2021) Higher Mushroom Consumption Is Associated with Lower Risk of Cancer: A Systematic Review and Meta-Analysis of Observational Studies. *Advances in Nutrition*. doi.org/10.1093/advances/nmab015.

**"Their roots spread under the forest floor
like veins across old hands, cycling granite
into wood, feeding the plants and animals."**

Suzanne Simard

Finding the Mother Tree

EDITORIAL MUSINGS

The OMS Board recently lost two valuable members in Bryan Lewis and Laura Wilson. They will be greatly missed as will their contributions to our website and work they performed at and behind the scenes at OMS forays. Wishing them all the best in their new home in Maryland and hopefully they'll pop in at a future foray.

The Board recently elected two highly qualified and enthusiastic replacements in Crystal Davidson and Kyle Canan. We can look forward to seeing them at forays and welcome their energies and fresh ideas. The Board also awarded Emeritus status to David Miller for his long and distinguished service to OMS. Thank you David and Marie.

The bookcase next to my desk is currently loaded with wonderful, regional, full color mushroom field guides. Most were purchased at a very reasonable cost and are of high quality. It's now nearly 50 years since I bought my first color field guide Orson Miller's *Mushrooms of North America*. Prior to that I had only A.H. Smith's *The Mushroom Hunter's Field Guide*. In comparison to recent mushroom books my worn copy of Orson's book looks primitive, however at the time revelatory. Commercially it was an immediate success because it was one of the first books to use all color photos, to include keys to species and to cover such an expansive area. The book made Orson a mushroom rockstar. He was suddenly in demand as a invited speaker, graduate advisor and at mushroom forays both in the US and abroad. I'm told Orson even appeared on the popular television show *What's My Line*. I think it would be safe to say that *Mushrooms of North America* forms an important node in the evolutionary tree of mushroom field guides.

New Member/Membership Renewal Form

Name:(printed) _____ Address: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Email Address: _____

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

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

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

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

How did you hear about our group? _____

OMS will not share your information with any other group, business or individual, ever.

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

CALENDAR OF EVENTS

OMS 2021 Forays

Advance registration is required for all mini-forays! *Mini-forays are subject to cancellation and/or rescheduling due weather and other conditions.* Group size is limited. All non-vaccinated participants must wear face masks over the mouth and nose. *Be sure to call the host in advance.*

Additional forays will likely be announced. Check the OMS website for the most current information.

All registrants must be current OMS members. Non-members may join OMS at the foray at the discretion of the host. We encourage you to join now to take full advantage of newsletters and email blasts!

Central Ohio (Perry Co) - **Sun 12 September, 2:00 p.m.**
Please RSVP by text to Shirley McClelland at 740-215-5883

Northwest Ohio (Hancock Co) – **Sat 25 September, 1-4:00 p.m.**
Please contact Bob Antibus at antibusr@gmail.com to register.

Southwest Ohio (Darke Co) – **Sat 16 October, 1-4:00 p.m.**
Please contact Kyle Canan for details at kylemancanan@yahoo.com

Northcentral Ohio (Lorain Co) – **Sun 17 October, 1-4:00 p.m.**
Please call Debra Shankland for details at 440-263-2334



Other 2021 Forays and Events

Annual Gary Lincoff Memorial Foray - Sep 18 - 19 near Pittsburgh, PA.
See wpamushroomclub.org/events for more information.

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Board Member Emeritus

Dave Miller

CALL FOR SUBMISSIONS

Have you read or written something interesting and fungus-related that you think other members would enjoy? Please send it in for consideration for future newsletters! We welcome any submissions, from anecdotes to scientific reports.

Ohio Mushroom Society
The Mushroom Log

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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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DATED MATERIAL

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